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The

Official Year Book

of

New South Wales.

1927-28.



T. WAITES.

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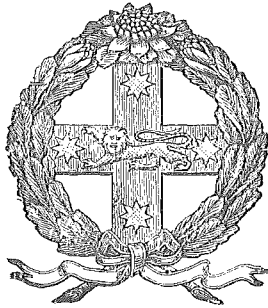
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THE  
OFFICIAL YEAR BOOK  
OF  
NEW SOUTH WALES.

1927-28.



PREFACE AND INDEX.

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T. WAITES,  
GOVERNMENT STATISTICIAN.

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## PREFACE.

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THIS is the thirty-fifth issue of the Official Year Book, which from the first issue in 1886 to 1904 was known as the "Wealth and Progress of New South Wales."

In order to render as prompt service as possible, the contents of the volume have been published already in eight parts, as they became available from the printer at dates between August, 1928, and February, 1929. Each part contains the latest information available at the time it was sent to press. Much of the text, therefore, relates to the year 1928.

Every care has been taken to keep the work free from errors, but if any be noticed by readers, notification regarding them would be appreciated.

A diagram map of New South Wales is published with the volume to show the railways, the land and statistical divisions, the shire boundaries, and the wheat belt. The boundaries of the statistical divisions coincide with those of Shires instead of Counties as in issues prior to 1923, because it is thought desirable that statistics generally should be compiled with the local governing area as the geographical unit.

The graphs and diagrams which appeared in the previous issue have been retained.

The "Statistical Register of New South Wales," published annually from this Bureau, will prove serviceable to those who wish to obtain more detailed information regarding the matters treated generally in this Year Book. The "Statistical Bulletin," issued quarterly, contains a summary of the latest available statistics of the State.

My thanks are tendered to the responsible officers of the various State and Commonwealth Departments, and to others who have kindly supplied information, often at considerable trouble.

Finally, I wish to express my appreciation of the services rendered by those officers of the Bureau who have been associated with me in the preparation of this volume.

T. WAITES,  
Government Statistician.

Bureau of Statistics,  
Sydney, 18th February, 1929.

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# GEOGRAPHY.

**N**EW SOUTH WALES is situated entirely in the temperate zone of the Southern Hemisphere, and is on the opposite side of the world from the seat of the British Empire, of which it forms a part. It is distant from London 11,200 miles by the Suez Canal—the shortest shipping route.

The name “New South Wales” was given to the eastern part of Australia (then known as New Holland) on its discovery by Captain Cook in 1770, and for fifty-seven years all Australian territory east of longitude 135° east was known by that name. In 1825, shortly after the separation of Tasmania (Van Diemen’s Land), the western boundary was moved to longitude 129°. The steps by which the territory of the State assumed its present boundaries and dimensions are shown below:—

Date.	Nature of Territorial Adjustment.	Area involved in adjustment.	Area of New South Wales after adjustment §	Population of Territory known as New South Wales at end of year.
1788	New South Wales defined as whole of Australasia east of longitude 135° east.*	sq. miles. ...	sq. miles. 1,584,389	1,024
1825	Tasmania practically separated from New South Wales.	26,215	1,558,174	} 33,500†
1825	Western boundary of New South Wales moved to longitude 129° east.	518,134	2,076,308	
1836	South Australia founded as a separate colony.	309,850	1,766,458	78,929
1841	New Zealand proclaimed a separate colony...	103,862	1,662,596	145,303
1851	Victoria proclaimed a separate colony ...	87,884	1,574,712	197,265
1859	Queensland proclaimed a separate colony ...	554,300	1,020,412	327,459
1861-3	Northern Territory and territory between longitude 129° and 132° east separated.	710,040	310,372	377,712
1911	Federal Capital Territory ceded to Commonwealth.	912	309,460	1,701,736
1915	Territory at Jervis Bay ceded to Commonwealth.	28	309,432	1,895,603

\* Literally interpreted the boundaries defined included Fiji, Samoa, and some neighbouring islands.  
 † Approximate. § Exclusive of area of Pacific Islands, except New Zealand.

The area of New South Wales in the years 1788 to 1841, as shown above, is approximate only.

### BOUNDARIES AND DIMENSIONS.

The present boundaries of New South Wales are as follow:—On the east, the coastline from Point Danger to Cape Howe; on the west, the 141st meridian of east longitude; on the north, the 29th parallel of south latitude, proceeding east to the Barwon River, and thereafter along the Macintyre and Dumaresq Rivers to the junction with Tenterfield Creek; thence along the crest of a spur of the great Dividing Range, the crest of that range north to the Macpherson Range, and along the crest of the Macpherson Range east to the sea; on the south, the southern bank of the Murray River to its source at the head of the river Indi, and thence by a direct marked line to Cape Howe.



From Point Danger, along a diagonal line, to the south-west corner of the State—a distance of 850 miles—the greatest dimension of the State is found. The length of coast, measured direct from Point Danger to Cape Howe, is 683 miles, the actual length of seaboard being 907 miles. The greatest breadth, measured along the 29th parallel of latitude, is 756 miles. The shortest dimension, along the western boundary, is about 340 miles.

#### AREA.

The total area of New South Wales, including Lord Howe Island, but excluding the Federal Territory, is 309,432 square miles, or 198,036,480 acres, being rather more than one-tenth of the area of Australia. About 4,639 square miles, or 2,969,080 acres, of the total surface is covered by water, including 176 square miles, or 112,750 acres, by the principal harbours. The area of Lord Howe Island is 5 square miles.

The area of New South Wales in relation to the total area of Australia is shown in the following statement:—

State or Territory.	Area.	Per cent. of total Area.
	sq. miles.	
New South Wales ... ..	309,432	10·40
Victoria ... ..	87,884	2·96
Queensland ... ..	670,500	22·54
South Australia ... ..	380,070	12·78
Western Australia ... ..	975,920	32·81
Tasmania ... ..	26,215	·88
Northern Territory ... ..	523,620	17·60
Federal Capital Territory ... ..	912	·03
Federal Territory at Jervis Bay ... ..	28	·00
Commonwealth ... ..	2,974,581	100·00

New South Wales is approximately three and a half times as large as Victoria, nearly twelve times as large as Tasmania, and somewhat smaller than South Australia. Queensland is about twice and Western Australia three times as large as New South Wales.

The following table shows the extent of the State of New South Wales and of the Commonwealth of Australia in comparison with the total area of all countries of the world, the British Empire, and certain individual countries:—

Country.	Area.	Ratio of Area to Area of New South Wales.	Ratio of Area to Area of Australia.
	sq. miles.		
New South Wales ... ..	309,432	1·000	·104
Commonwealth... ..	2,974,581	9·613	1·000
Great Britain ... ..	89,041	·288	·030
Canada ... ..	3,729,665	12·053	1·254
Argentina ... ..	1,153,119	3·729	·388
United States ... ..	3,026,789	9·782	1·018
British Empire ... ..	13,257,584	42·845	4·456
The World ... ..	52,055,879	168·231	17·500

#### LORD HOWE ISLAND.

Lord Howe Island is a dependency of New South Wales, and is included in the electorate of Sydney; it is situated about 300 miles east of Port Macquarie, and 436 miles north-east of Sydney. The island was discovered

in 1788; it is of volcanic origin, and Mount Gower, the highest point, reaches an altitude of 2,840 feet. The climate and soil are favourable to the growth of subtropical products, but on account of the rocky formation of the greater part of the surface of 3,220 acres, only about 300 acres are arable. The land has not been alienated, and is occupied rent free on sufferance, being utilised mainly for the production of *Kentia* palm seed. A Board of Control at Sydney manages the affairs of the island and supervises the palm seed industry. At the Census of 1921 the population numbered 111 persons.

#### PHYSICAL FEATURES.

The outline here given relates only to physiography of the State. More particular reference to the distribution of industries and settlement will be found in "Rural Settlement" of this or previous issues of the Year Book and in the chapters relating to individual industries. A map showing the distribution of rainfall, rural population, and the principal industries was published at page 728 of the Year Book for 1924.

#### *Coastline.*

The coastline of New South Wales is remarkably regular, trending almost uniformly from north-north-east to south-south-west and displaying few striking topographical features. It consists of rugged cliffs, alternating with sandy beaches and numerous inlets, with here and there a river estuary.

The operations of important physiographical factors have prevented the coast from acquiring features such as projecting deltas and wide river valleys and estuaries, which so commonly give natural access to the interior of other countries. These factors are the close proximity of the watershed to the coast, the consequent shortness of the rivers, and the presence of a constant though slow-moving southerly ocean current, which sweeps along the coast and prevents the formation of deltas beyond the line of protection afforded by headlands. In a number of instances the volume of the coastal rivers is not great enough to carry their silt far to sea, with the result that, where they meet the dead water of the coast at their mouths, matter is deposited, forming a ground-work for "sand-bars," which constitute impediments to navigation even by coastal vessels.

The central portion of the coast, however, is well furnished with spacious inlets, distinguished by winding foreshores and ample roadsteads, so that within a space of about 150 miles there are four large natural harbours. Some of them rank among the finest in the world, and only await economic development. Port Stephens, the most northerly, lies a little to the north of the central point of the coast; it possesses a great expanse of water exceeding 30 feet in depth. Broken Bay is a submerged river valley, with three arms and spacious anchorage, at the mouth of the Hawkesbury. Port Jackson (Sydney Harbour), perhaps the finest harbour in the world, is the commercial centre of the State, and an important shipping port with a large volume of trade. Jervis Bay possesses deep water throughout its great extent, and is a naval base destined to be the port of the Federal Capital at Canberra, with which it will be connected by rail. Further south, Twofold Bay, near the southern boundary, is a potential harbour, with a convenient entrance.

The coastal formation of Port Kembla and the estuary of the Hunter River (Port Hunter) have been converted into harbours serviceable to growing manufacturing centres. At frequent intervals along the coast numerous inlets provide shelter and facilities for coastal shipping.

Further particulars regarding the harbours and anchorages are shown in the chapter relating to shipping.

Strewn along the coast at intervals there are eight lakes, partly marine and partly estuarine, connected with the sea by narrow channels. It is believed that they were formerly coastal valleys at a higher level than they occupy at present, and that they became "drowned" by the sea when the subsidence occurred which formed the existing harbours and the present coastal levels. Their entrances in most cases are narrow and shallow, and are usually blocked by the action of the sea and wind upon the sand.

Most of these lakes are surrounded by picturesque scenery. They attract tourists and holiday-makers, and provide extensive fishing grounds. The largest, Lake Macquarie, 8 miles south of Newcastle, is 44 square miles in area. A chain of beautiful lakes, of which the principal are the Myall and Wallis Lakes, lies between Port Stephens and Cape Hawke.

### *The Surface.*

The story, as told by geologists, of the manner in which the surface of New South Wales assumed its present shape is very interesting.

In past ages a great part of the interior of Australia was occupied by a vast mediterranean sea, bounded by a line of highlands, which probably extended considerably to the east of the present coastline. Their slope was towards the west, and rivers flowed down from them into the inland sea, carrying thither the sand and silt which now seals down the artesian basin. In a later age a gradual uplift took place in the northern part of Australia, accompanied by a depression in the southern portion; and streams which formerly flowed north-west and entered the sea by separate mouths became diverted to the south and conjoined with the Darling River.

The southern depression allowed the sea to encroach inland from the south and to spread over the region now known as the Riverina, but a subsequent uplift pushed the southern sea back to its present boundary and caused a combination of the western rivers into the one great system of Australia—the Murray-Darling.

During the upward movement in the interior a marked elevation took place in the coastal portion, the uplift being greater towards the coast, and an elevated plateau with a short steep slope to the eastern seaboard was produced. Rivers which then commenced to flow down this slope evidently possessed great erosive power, and, by a gradual process of denudation, worked their way inland, extending the coastal district into what were formerly the eastern portions of the Great Dividing Range.

Subsequently a submergence of the coast took place and the valleys of the coastal rivers were converted into harbours, such as Port Jackson, Broken Bay, and Port Stephens.

The surface of New South Wales bears signs of having passed through lengthy periods of erosion. It possesses less diversity than any of the continents, and there are no lofty mountain ranges, few peaks of importance, and no large lakes of permanent fresh water. Nearly the whole of the State consists of extensive plains and hilly patches at varying levels. The surface is divided naturally into four main divisions—the Coast District, the Tablelands, the Western Slopes, and the extensive Plains. The tablelands form the Great Dividing Range, which traverses the State from north to south, and marks the division between the coast district and the plains.

The coastal strip is undulating and well watered. The average width is about 50 miles in the north and 20 miles in the south. At Clifton the tableland abuts on the ocean, while the widest part (150 miles) is in the valley of the Hunter River, where the relatively soft rocks of the coal basin have offered least obstruction to river erosion.

The coastal region is bounded on the west by steep, often inaccessible, escarpments, where the highlands rise suddenly from the lower levels of the coast; the declivities are furrowed by deep and rugged valleys sloping toward the sea, and here and there a mountain spur projects eastward. These natural features have made access to the tablelands from the coast a matter of formidable difficulty in many districts, so that the highlands are crossed only at three points by the railway and at few more by roads.

The coast line is fringed with a narrow and fertile plain extending from north to south and broken only at Clifton. This plain juts along the Hunter Valley for a distance of 60 miles. A considerable strip north and south of the Clarence River is 30 to 40 miles wide, thence south to Port Stephens it is 10 to 15 miles in width; thereafter it gradually broadens to a width of 35 miles, then narrowing again until it is broken at Clifton. The South Coast continuation of the plain is nowhere wider than 15 miles, the average width being about 10 miles.

There are two tablelands—the northern and southern—comprising an extensive plateau region, divided near the middle by the Cassilis or Hunter Gap. Generally they present on the eastern side a steep descent towards the ocean, while on the west they slope gradually towards the plains. They vary in width from 30 to 100 miles. The northern tableland commences in Queensland and terminates on the northern side of the Peel River Valley; its average height is 2,500 feet. The southern tableland extends from the Victorian border, and slopes gradually to the Cudgegong and Colo Rivers; its average height is slightly less than the northern tableland, although the Kosciusko Plateau, the most elevated portion of the State, is within its limits.

At various levels gently undulating upland plains occur throughout the tableland division, such as the Dorrigo, which forms the elevated hinterland of the coastal tract around Coff's Harbour; and the Bathurst, Goulburn, Yass, and Monaro Plains on the central and southern tablelands. Notable features of the southern tableland are the limestone belt, in which the famous Jenolan and other limestone caves occur, and the grandeur of the scenery in the numerous sunken valleys, such as those of the Blue Mountains, the Burragorang Valley, through which the Wollondilly River flows, the Kangaroo Valley, between Moss Vale and the Shoalhaven River, and the Araluen Valley further south.

The Great Plain district covers nearly two-thirds of the area of New South Wales. It stretches from the base of the slopes of the tablelands to the western boundary of the State, and thence north, south, and west as the Great Central Plain of Australia. The plains are not quite level, but rise very gently from the bed of the Darling eastward towards the Great Dividing Range and westward towards the South Australian border. Only a few trifling elevations occur, but in the centre the Cobar plain, 150 miles wide, stretches for 300 miles in a north-westerly direction towards the Darling River, its altitude ranging from 500 feet to 1,000 feet above sea level. Owing to scanty rainfall the plains are practically devoid of forests.\*

The plains are watered by the rivers of the Murray-Darling system; the Darling and its tributaries are liable to considerable shrinkage in periods of dry weather; but, on the other hand, in wet seasons, these streams overflow their banks and flood the surrounding country for miles, producing a luxuriant growth of grasses.

The surface of the plains consists of fertile red and black soils, the former being particularly rich in plant food. The black soil formations represent the silted-up channels of old rivers which, when flooded, spread a fertile

\* See page 743 Official Year Book, 1926-27.

silt over the surrounding district. The black soil plains occupy large areas along the middle courses of the Macquarie, Castlereagh, Namoi, and Gwydir Rivers.

Several portions of the plains are distinguished by special names, such as the Liverpool Plains, between the Peel and Liverpool Ranges; the Riverina, stretching northward from the Murray and intersected by a network of streams; the Bulloo Plain, between the Paroo River and the Grey and Barrier Ranges; the Bland, between Cootamundra and Lake Cowal; and the Pilliga Scrub, between Narrabri and Coonabarabran. The name Western Plains is applied generally to the Western Division as shown on the map in the frontispiece, while the plain country of the Central Land Division is referred to as the Central Plains, the southern portion receiving the special name Riverina.

#### *Mountains.*

The mountains of New South Wales may be classified in two main groups—the Great Dividing Range with its coastal spurs, and the ranges of the interior.

The Great Dividing Range is the name given to a continuous chain of highlands stretching along the whole eastern portion of Australia. In a strict acceptance of the term the portion within New South Wales is not a range of mountains, but a succession of extensive plateaux. Except for a westerly bend skirting the valley of the Hunter River, it runs for the most part parallel to the coast-line, and a number of lateral spurs branch from either side.

Proceeding from north to south, the names distinguishing the various portions of the Great Dividing Range in New South Wales are:—Macpherson, New England, Liverpool, Main or Blue Mountain, Cullarin, Gourock, Monaro, and the Muniung Ranges.

The Northern Tableland, comprising principally the highlands known as the New England Range, is the largest positive physical feature of the State. It has a considerable area at a greater altitude than 4,000 feet, and its highest point, Ben Lomond, is 5,000 feet above sea level. The highest parts of the Great Dividing Range are situated in the extreme south of the State, and are known as the Muniung Range. Several peaks attain an altitude of about 7,000 feet, the highest being Mount Kosciuszko, 7,328 feet.

The other mountains of the State, representing the remnants of ancient ranges, possess little importance.

The Warrumbungle Range is practically a continuation of the Liverpool, extending in a north-westerly direction for a distance of nearly 100 miles. These mountains represent the denuded stumps of a series of volcanoes, which burst into activity near the shores of the old inland sea before it became silted up. The sandstone beds of the Warrumbungle Range form part of the intake beds of the great artesian basin.

Two ranges—the Barrier and Grey—of an average elevation of about 1,500 feet, and rising 800 feet above the surrounding plains, lie near the extreme west and north-west of the State. They form the western boundary of the vast depression through which the Darling River and its tributaries flow. The Barrier Range contains rich silver-lead deposits, and some of its rocks are possibly the oldest in Australia, if not in the world.

#### *Rivers.*

New South Wales does not possess any great rivers, and for this there are three main causes, viz., the position of the watershed; the absence of lofty peaks, whose snowy caps in melting might feed large streams; and the spasmodic, and unreliable nature of the rainfall in the western interior.

The Great Dividing Range, which constitutes the main watershed, has formed an absolute boundary between two river groups—the eastern or coastal, and the western—which are entirely distinct and possess dissimilar characteristics.

The coastal rivers flow east into the Pacific Ocean, and, on account of the proximity of the mountains to the ocean, the majority are short, rapid, independent streams; the Hawkesbury (293 miles) and the Hunter (287 miles) by reason of their winding courses are the longest. Generally, the rivers south of Sydney, where the coastal strip narrows considerably, are of less importance than those of the north.

The physical aspects of all the eastern rivers are similar. Their upper courses are amidst broken and mountainous country, and the lower basins consist usually of undulating land with rich alluvial flats. Where uncultivated, the land is densely timbered.

There are eight principal coastal rivers and numerous minor streams. Some are navigable for various distances; thus ocean-going vessels drawing 4 feet of water may proceed along the Tweed for 24 miles, the Richmond for 68 miles, the Clarence for 67 miles, the Bellinger for 15 miles, the Nambucca for 9 miles, the Macleay for 39 miles, the Hastings for 19 miles, the Manning for 29 miles, the Hunter for 35 miles, the Hawkesbury for 70 miles, and the Shoalhaven (including Crookhaven) for 22 miles.

The rivers of the western slope belong to the Murray-Darling system. The Gwydir, Namoi, Castlereagh, Macquarie, and Bogan discharge their waters into the Darling, which in turn carries them to the Murray, which receives also the waters of the Lachlan and Murrumbidgee. They drain an immense area, including the whole of the western portion of New South Wales, and large portions of Queensland and Victoria, and they discharge into the sea through a single mouth. In consequence of the gradual slope of the plain country, these rivers, unlike the coastal, are long, meandering, and slow in discharge. They wind for the most part through loose, absorbent soils. In many places they have cut deep channels, which at times are full of heavily-charged, fast-moving water, emptied from their upper basins after heavy rains. On such occasions these streams are impressive rivers. Normally they have not a great volume of flow, being sluggish, clear, shallow streams flowing at the bottom of channels, as much as 30 feet below the ground level. Sometimes, in dry seasons, the flow ceases and there remains nothing but a chain of water-holes. These curious variations in the condition of the western streams are due to the variableness of the rainfall at their sources, the scanty rainfall in their lower basins, the absence of large feeding streams, the great evaporation, and the absorbent nature of the soils, particularly over the artesian basin.

The most important river is the Murray, which forms part of the southern boundary of the State. It has a total length of 1,609 miles, of which 1,203 are within New South Wales, and along this course a more or less regular stream flows, fed by the snows of the southern highlands. For about seven months of the year the river is navigable as far as Wentworth for large riverboats, and for smaller craft as far as Albury, 517 and 1,368 miles respectively from the Murray mouth in South Australia. The Murrumbidgee, 981 miles in length, ranks next to the Murray in regularity and volume of flow. In its lower course it receives the Lachlan, 922 miles in length. The longest river in Australia is the Darling, which measures 1,702 miles, the total length from its source to the mouth of the Murray being 2,219 miles. The Darling flows across western New South Wales from north-east to south-west to join the Murray 111 miles from the South

Australian border. It receives a number of rivers from South Queensland when their volume is sufficiently great, and in New South Wales receives successively the following rivers:—Gwydir, Namoi, Macquarie, Castlereagh, and Bogan. Particulars of the water storage schemes in connection with these rivers are published in chapter "Water Conservation and Irrigation" of this Year Book.

Owing to the existence of conflicting statements as to the lengths of the various rivers of the State steps were taken in 1926 by the Lands Department of New South Wales to compute the lengths of the principal rivers on a uniform basis. Considerable data were obtained from the results of surveys of the greater part of the Murray, Darling, Murrumbidgee and Lachlan Rivers and the remainder of the lengths were carefully measured on the standard parish maps. In every case the starting point was the furthest source of the river. The lengths as determined were as follow:—

Inland Rivers.	Length.	Coastal Rivers.	Length.	Coastal Rivers.	Length.
	miles.		miles.		miles.
Murray ... ..	1,609	Tweed ... ..	50	Wollomba ... ..	46
Darling ... ..	1,702	Richmond .. ..	163	Hunter ... ..	287
Murrumbidgee ... ..	981	Clarence ... ..	245	Hawkesbury ... ..	293
Lachlan ... ..	922	Bellinger ... ..	68	Shoalhaven ... ..	206
Bogan ... ..	451	Nambucca ... ..	69	Clyde ... ..	67
Macquarie ... ..	590	Macleay ... ..	250	Moruya ... ..	97
Castlereagh ... ..	341	Hastings ... ..	108	Tuross ... ..	91
Namoi ... ..	526	Camden Haven ... ..	33	Bega ... ..	53
Gwydir ... ..	415	Manning ... ..	139	Towamba ... ..	57

The relative magnitude of rivers as shown by the average annual volume of water which they carry may be ascertained in respect of some of the more important streams from the records of river gaugings, extending in some cases back to 1885.

The following comparison is based on the records of the period 1905-1924:—

River.	Gauging Station.	Distance from Source of River.	Drainage Area.	Average Annual Run off of Water.
		miles.	sq. miles.	acre-feet.
Murray ... ..	Tocumwal ... ..	435	10,160	5,072,618
Murrumbidgee ... ..	Wagga ... ..	396	10,700	2,850,856
Darling ... ..	Menindie ... ..	1,383	221,700	1,620,194
Macquarie ... ..	Narromine ... ..	313	10,090	623,180
Lachlan... ..	Condobolin ... ..	380	10,420	411,875
Namoi ... ..	Narrabri ... ..	302	9,820	408,387

In making the above comparison gauging stations have been selected with drainage areas of approximately equal extent, except in the case of the Darling. The range of choice has been limited by the number of stations with available records. In the case of the Lachlan River the average run-off at Forbes, 126 miles above Condobolin, is 584,582 acre-feet per annum. Similar particulars are not available in respect of coastal rivers, except the Hunter, which at Singleton has a draining area of 6,580 square miles and an average annual run-off of 609,636 acre-foot of water. An acre-foot of water in such a quantity as would cover an acre of land to a uniform depth of 1 foot.

### Lakes.

The lakes of New South Wales are unimportant, but may be classified in five groups,—the coastal lakes or lagoons, those of the tablelands, and of the Western Plains, the lakes and tarns of the Kosciusko Plateau, and the great artificial lake at Burrinjuck used for irrigation purposes.

The coastal lakes have been described already.

The lakes of the tablelands owe their origin to volcanic and other geological disturbances of former ages, and nearly all are situated in the southern tableland. Lake George, sometimes termed the largest freshwater lake in New South Wales, occupies a depression in the Cullarin Range; it is fed by several small streams, but has no visible outlet. Except after a succession of wet seasons, the lake is shallow, its waters being lost by evaporation and by soakage through the slate formation of its bed. If full, Lake George would cover an area of 60 square miles, but in average seasons a large proportion of its bed is dry and is utilised for grazing stock. Lake Bathurst lies in a circular depression about 7 square miles in area, 10 miles east of Lake George. Both lakes are situated more than 2,000 feet above sea-level.

The lakes of the Western Plains occur usually along the courses of the western rivers. They are mostly natural shallow depressions of considerable extent, which are filled during floods by the overflow of the rivers. Like the western rivers, these lakes vary with the seasons, presenting an appearance of great size in wet seasons, and dwindling to a succession of ponds and mud basins in continued dry weather, but they serve a useful purpose in dry seasons by maintaining the flow of the rivers below the lakes for some months after the upper courses become dry.

Along the Darling River the largest lake beds on the right bank are:—Narran, above Brewarrina; Cawndilla, Menindie, and Tandon, near Menindie; and, on the left bank, Gunyulka in the Wilcannia district.

Within the Lachlan basin the most important are Lake Cowal, which is situated about 40 miles from Forbes, receiving the drainage of the Bland Plain and the overflow of floodwaters from the Lachlan River, and Lake Cudgellico, which also receives the floodwaters of the Lachlan in wet seasons.

Lake Victoria, on the right bank of the Murray River, in the south-western corner of New South Wales, is connected with the Murray by Frenchman's Creek. It covers an area of 26,000 acres, and holds 17,000,000 cubic feet of water when full. It has been converted into a reservoir in connection with the River Murray Irrigation Scheme.

The Kosciusko Lakes are due to the formation of barriers of moraine material left behind by glaciers. They are situated about 6,000 feet above sea-level. The principal are the Blue Lake, Lake Albina, Cootapatamba and Club Lakes, and Hedley Tarn.

The Burrinjuck Dam, near the head of the Murrumbidgee River, is a large lake covering 12,740 acres, with a capacity of 33,612,000,000 cubic feet of water impounded by a retaining wall 240 feet in height. Its outlet is by the Murrumbidgee River, whose flow is regulated thereby to meet the needs of an extensive irrigation area on its bank 240 miles below the dam.\*

There are also large storage dams in connection with the Metropolitan and Hunter River District Water Services.

### Mineral Springs.

Mineral springs of varied composition are found in many parts of the State; in some cases the waters have been marketed as table-waters, and some are of medicinal value. Such springs occur at Mittagong, Ballimore, Roek Flat, Bungonia, Jarvisville, and Yarrangobilly.

\* See Chapter "Water Conservation and Irrigation."



## TRANSPORT AND COMMUNICATION.

The problem of establishing an efficient system of transport in New South Wales is rendered difficult by several causes, viz., the existence of a belt of rugged highlands comparatively near the coast readily passable at only a few points; the consequent difficulty in connecting the coast with the interior; the absence of navigable rivers and waterways; and the scattered nature of the settlement.

The rugged approaches to the Great Dividing Range defied the efforts of explorers until 1813, when an expedition succeeded in crossing the mountains, and the first road over the range was opened in 1815. Shortly afterwards a way was discovered across the mountains in the vicinity of Lake George, near the spot where Goulburn now stands. These routes remained the easiest lines of communication with the interior to the west and south, and when railways were built they followed the roads. Strangely enough, the only real gap in the mountains, situated opposite Newcastle, and discovered by Cunningham in 1825, has not yet been utilised for traffic. The Great Northern Railway traversed the mountains by way of a higher gap at Murrurundi. The interior is connected with the sea by rail at only two points—Sydney and Newcastle.

The early policy of government made Sydney the centre of the whole settlement commercially as well as politically. With its advantageous situation on an unrivalled natural harbour, it became from the earliest times the point from which the roads radiated, and to which trade and commerce were drawn, despite the facts that its immediate district was not well adapted for agriculture and that access to the fertile interior was impeded by difficult mountains. In point of situation Port Stephens and Jervis Bay, excellent natural harbours situated respectively 85 miles north and 82 miles south of Sydney, are both qualified to constitute commercial outlets for the interior, and this remark applies with especial force to Port Stephens, which is the most central port of the State and has the advantage of large coal supplies in close proximity. The development of this port is urged strongly as part of a decentralisation scheme, and it is probable that Jervis Bay also will become a shipping centre when it is opened up in connection with the establishment of the Federal capital at Canberra. There is not a good harbour north of Port Stephens; and Twofold Bay, on the far South Coast, is probably too difficult of access from the interior to develop into an oversea shipping port.

Railway, shipping, postal, cable and telegraphic services all have their centre in Sydney, which with its environs contains more than 1,000,000 inhabitants, nearly one-half of the population of the State.

Localities such as the south-western Riverina, which are not yet connected by rail with the metropolis, the Broken Hill district, and parts of the North Coast, find their outlet in other States, but the railway system of New South Wales is gradually extending into these districts.

In view of its vast open spaces, New South Wales is specially adapted for aviation; air routes between Sydney and the capital cities of other States have been prepared and other work in connection with the organisation of air services is in progress.

Particulars regarding roads, railways, aviation, etc., in New South Wales are given in the chapters of this volume relating to Local Government, and Transport and Communication.

## GEOLOGY, FAUNA, FLORA.

A description of the geological formation of New South Wales, the fauna and the flora, was published in the 1921 issue of this Year Book.

## CLIMATE.

NEW South Wales is situated entirely in the temperate zone, and its climate is generally mild and equable, and free from extremes of heat and cold. Abundant sunshine is experienced in all its seasons, and this factor exercises a strong influence on the lives and character of the people. On an average the capital city is without sunshine on only twenty-three days per year, and the average range of temperature between the hottest and coldest months is only about 17° Fah. In the hinterland there is even more sunshine, and the range of temperature is greater, but observations with the wet bulb thermometer show that the temperature is not maintained at so high a level as to be detrimental to the health and physique of persons engaged in outdoor labour in any part of the State.

Practically the whole of New South Wales is subject to the bracing influence of frosts during five or more months of the year, but although snow has been known to fall over nearly two-thirds of the State, its occurrence is comparatively rare except in the tableland districts. Perennial snow is found only on the highest peaks of the southern tableland.

The seasons are not so well defined in the western interior as on the coast, but are generally as follow:—Spring during September, October, and November; summer during December, January, and February; autumn during March, April, and May; winter during June, July, and August.

### *Meteorological Observations.*

Meteorological observations in New South Wales are directed from Sydney as the centre of a subdivision of Australia, which includes the greater part of New South Wales. A special climatological station is maintained also at Dubbo, and there are many reporting stations throughout the State. Bulletins and weather charts are issued daily from the Meteorological Bureau, and rain maps and isobaric charts are prepared.

Particulars of meteorological observations at various stations in New South Wales are published annually in the Statistical Register of New South Wales. In some cases rainfall records from the year 1860 are given.

Signals are displayed in Sydney to give warnings of storms and to indicate fair weather, rain, and cold or heat waves; forecasts are telegraphed daily to towns in country districts, and the city forecasts are published in the early editions of the press. Special forecasts regarding cyclonic conditions are issued to the press and to the Commonwealth and State Departments of Navigation; this arrangement enables precautions to be taken in regard to shipping. Flood warnings also are given in urgent cases.

### *Winds.*

The weather in New South Wales is determined chiefly by anticyclones, or areas of high barometric pressure, with their attendant tropical and Antarctic depressions, in which the winds blow spirally outward from the centre or maximum. These anticyclones pass almost continuously across the face of the continent of Australia from west to east, and the explanation of the existence of such high-pressure belts lies probably in the fact that this area is within the zone in which polar and equatorial currents meet and circulate for some time before flowing north and south. The easterly movement depends on the revolution of the earth.

A general surging movement occasionally takes place in the atmosphere, sometimes towards, and sometimes from, the equator. The movement causes sudden changes in the weather—heat when the surge is to the south,

and very cold weather when it moves towards the equator. Probably these sudden displacements of the air systems are due to thermal action, resulting in expansion or contraction in the atmospheric belts to the north and south of Australia.

New South Wales is peculiarly free from cyclonic disturbances, although occasionally a cyclone may result from monsoonal disturbances, or may reach the State from the north-east tropics or from the Antarctic low-pressure belt which lies to the south of Australia.

In the summer months the prevailing winds on the coast of New South Wales blow from the north, with an easterly tendency which extends to, and in parts beyond, the highlands; in the western districts the winds are usually from the west. Southerly winds, which are characteristic of the summer weather on the coast, occur most frequently during the months from September to February, and between 7 p.m. and midnight. These winds, which blow from the higher southern latitudes, cause a rapid fall in temperature, and are sometimes accompanied by thunderstorms.

During winter, the prevailing direction of the wind is westerly. In the southern areas of the State the winds are almost due west, but proceeding northwards there is a southerly tendency, while on reaching latitudes north of Sydney the direction is almost due south. When they reach the north-eastern parts of the State, these winds are deflected in a westerly direction, and are merged in the south-east trade winds north of latitude 30°. During the cold months of the year, Australia lies directly in the great high-pressure stream referred to previously, and the high pressure when passing over the continent tends to break up into individual anti-cyclonic circulations.

### Rainfall.

New South Wales is dominated by two rain belts—the tropic and the Antarctic. The amount of rainfall varies very greatly over the wide expanse of territory, the average decreasing from more than 80 inches per annum in the north-eastern corner to less than 7 inches in the north-western corner. This vital factor plays a very powerful part in determining the character of settlement.

Generally, more than half the annual rain falls in the first six months of the year, although at times and in certain districts the most serviceable rains occur in the spring and summer. (See Graphs, page 15.) The coastal districts receive the heaviest falls, ranging from 30 inches in the south to 80 inches in the north. Despite their proximity to the sea, the mountain chains are not of sufficient elevation to cause any great condensation; so that, with slight irregularities, the average rainfall gradually diminishes towards the north-western limits of the State.

An approximate classification of areas in New South Wales (including the Federal Territory) in accordance with the average annual rainfall shows the following distribution:—

Annual Rainfall.	Area.		Proportion per cent. of total area.	Annual Rainfall.	Area.		Proportion per cent. of total area.
	Sq. Miles.	Acres.			Sq. Miles.	Acres.	
inches.				inches.			
Over 70	668	427,520	·2	20 to 30	77,202	49,409,230	24·8
60 to 70	1,765	1,129,600	·6	15 to 20	57,639	36,838,960	18·6
50 to 60	4,329	2,770,560	1·4	10 to 15	77,268	49,451,520	24·9
40 to 50	15,804	10,114,560	5·1	Under 10	44,997	28,798,080	14·5
30 to 40	30,700	19,648,000	9·9	Total ..	310,372	198,638,080	100·0

It is apparent that only 42 per cent. of the area of the State receives rains exceeding on the average 20 inches per year. Over the greater part of the State the annual rainfall varies on the average between 20 per cent. and 30 per cent. from the mean, and protracted periods of dry weather in one part or another are not uncommon. Simultaneous drought over the whole territory of the State has been experienced only very rarely.

Three clearly defined seasonal rain-belts cut diagonally across the State from west to east with a southerly incline. A winter rain region, which includes the southern portion of the Western Plains and about two-thirds of the Riverina, is bounded on the north by a direct line from Broken Hill to Wagga with a curve around Albury. A summer rain region, including the whole of the northern subdivisions, is bounded on the south by a line which waves regularly, first south and then north of a direct line from the north-western corner of the State to Newcastle. Between these, where the two dominating rain-belts merge, there extends a region, including the central and south-eastern portions of the State, where the rains are non-seasonal. A narrow coastal strip between Nowra and Broken Bay receives its heaviest rains in the autumn.

The chief agencies causing rainfall are Antarctic depressions, monsoonal depressions, and anticyclonic systems. Antarctic depressions are the main cause of the good winter rains in the Riverina and on the South-western Slope. A seasonal prevalence of this type of weather would cause a low rainfall on the coast and tablelands, and over that portion of the inland district north of the Lachlan River. A monsoonal prevalence ensures a good season inland north of the Lachlan, but not necessarily in eastern and southern areas. An anticyclonic prevalence results in good rains over coastal and tableland districts, but causes dryness west of the mountains.

The distribution of rainfall is dependent on three factors—(1) the energy present in the atmospheric systems, (2) the rate of movement of the atmospheric stream, and (3) the prevailing latitudes in which the anticyclones are moving.

A map published on page 728 of the 1924 edition of this Year Book shows diagrammatically the distribution of rainfall in New South Wales.

#### *Evaporation.*

Investigations are being made in order to gauge evaporation in New South Wales, and it has been found that the amount is so great as to make it a climatic element only second in importance to rainfall in its influence upon the State. Results so far obtained show that the rate of evaporation (measured by the loss from exposed water) increases from 40 inches per annum on the coast to nearly 100 inches in the north-western corner of the State, that is, the amount of evaporation is inversely related to the rainfall of the respective districts. Indeed, only on a small coastal patch in the north-eastern corner does the rainfall exceed the evaporation measured as above. This fact sheds light on the special needs of New South Wales in conserving surface water and soil moisture not only for successful agriculture, but also in connection with pastoral pursuits.

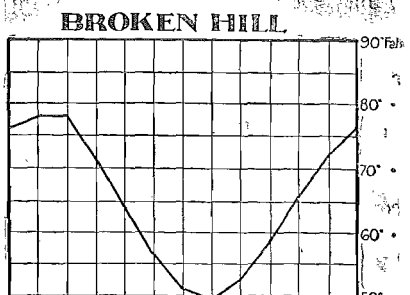
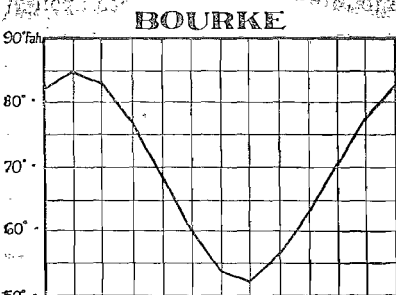
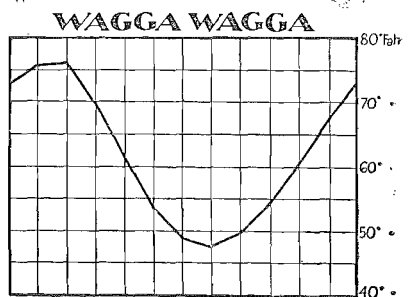
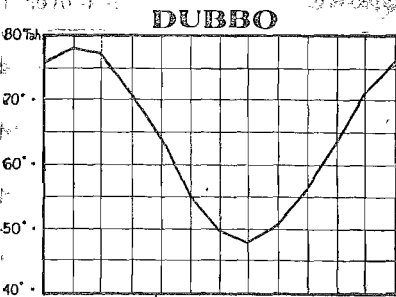
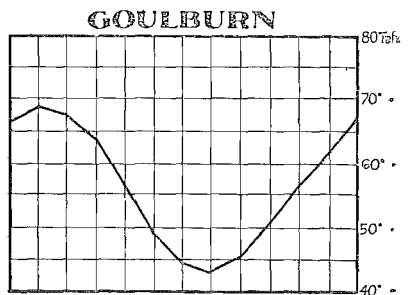
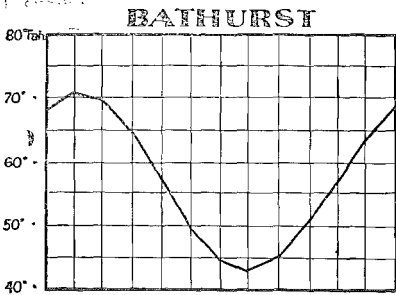
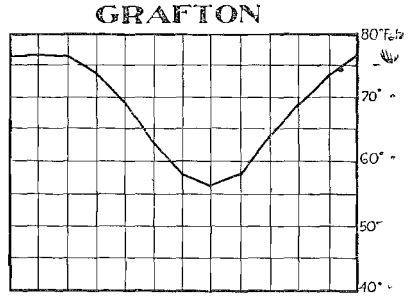
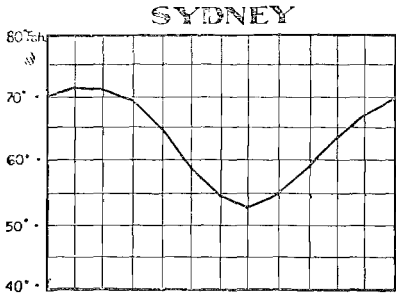
#### CLIMATIC DIVISIONS.

The territory of New South Wales may be divided into four climatic divisions, which correspond with the terrain—the Coast, the Tablelands, the Western Slopes of the Dividing Range, and the Western Plains.\*

The northern parts of the State are generally warmer than the southern, the difference between the average temperatures of the extreme north and

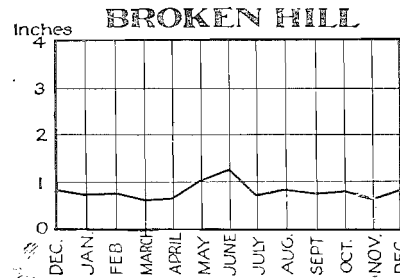
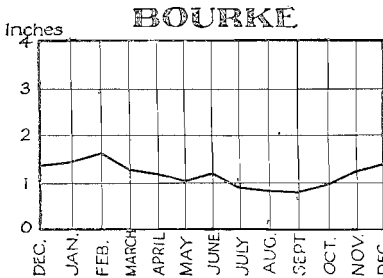
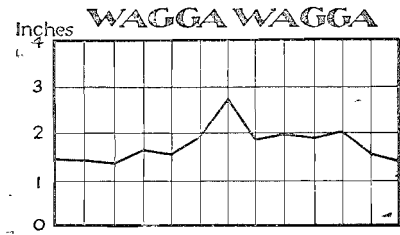
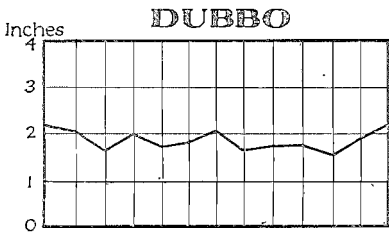
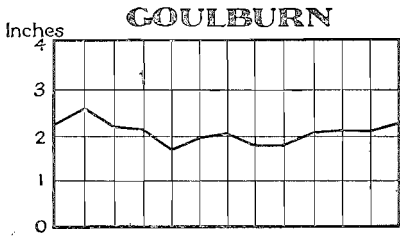
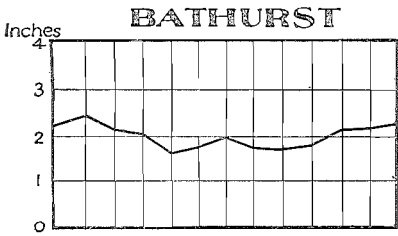
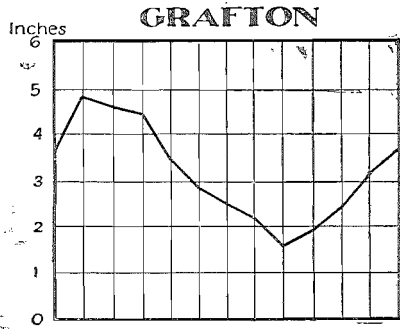
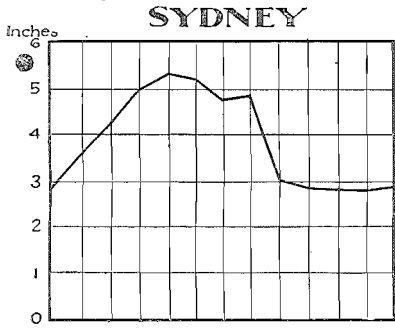
\*See map in frontispiece.

MEAN MONTHLY TEMPERATURE.



The graph shows Mean Temperature in shade (Deg. Fahr.) at each station over a series of years.

MONTHLY RAINFALL.



The graph shows Average Monthly Rainfall (inches) at each station over a series of years.

south being about 7° on the coast, 5° on the tablelands, and 6° on the slopes and plains. It should be noted, however, that the length of the State decreases from nearly 700 miles on the coast to about 340 miles on the western boundary. From east to west the average mean annual temperatures vary little except where altitudes are different, but usually the summer is hotter and the winter colder in the interior than on the coast. Thus at Sydney the average temperatures range from 71° in summer to 54° in winter, as compared with 76° in summer and 51° in winter at Wentworth in the same latitude in the western interior. Similar variations are found in the north. The mean daily range at any station is seldom more than 30° or less than 13°.

#### Coastal Division.

In the Coastal Division, which lies between the Pacific Ocean and the Great Dividing Range, the average rainfall is comparatively high and regular, and the climate, though more humid, is generally milder than in the interior.

The following table shows the meteorological conditions of the principal stations in the Coastal Division, arranged in the order of their latitude. These stations are representative of the whole division, and the figures are the average of a large number of years:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual, 1906-1924.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
<i>North Coast—</i>									
Lismore ...	13	52	68·7	75·0	56·7	22·4	113·0	23·0	45·88
Grafton ...	22	40	67·8	76·2	57·6	24·7	114·0	24·9	34·40
<i>Hunter and Manning—</i>									
Singleton ...	40	135	64·1	76·1	52·1	20·3	113·9	22·0	25·91
West Maitland ...	18	40	64·4	74·7	53·2	21·4	114·0	28·0	33·16
Newcastle ...	1	34	64·6	72·2	55·5	14·9	110·5	31·0	42·20
Sydney ...	5	146	63·2	71·0	54·1	15·8	108·5	35·9	43·45
<i>South Coast—</i>									
Wollongong ...	0	54	63·0	70·2	54·8	17·0	106·0	33·6	47·19
Nowra ...	6	30	62·8	71·1	54·0	19·9	110·0	32·6	37·73
Moruya Heads ...	0	50	61·0	67·9	53·0	18·3	114·8	22·6	32·46
Bega ...	8	50	60·0	69·0	49·9	26·5	109·0	20·0	34·18

Taking the coast as a whole, the difference between the mean summer and mean winter temperature is about 19° only.

The North Coast districts are favoured with a warm, moist climate, the rainfall being from 40 to 80 inches annually. The mean temperature for the year is from 66° to 69°, the summer mean being 75° to 77°, and the winter mean 56° to 59°. On the South Coast the rainfall varies from 30 to 60 inches, and the mean temperature ranges between 60° and 63°, the summer mean being from 66° at the foot of the ranges to 70° on the sea coast, and the winter from 48° to 55° over the same area.

Coastal rains come from the sea with both south-east and north-east winds, being further augmented in the latter part of the year by thunderstorms from the north-west.

Sydney is situated on the coast half-way between the extreme northern and southern limits of the State. Its mean annual temperature is 63° Fahrenheit. The mean seasonal range is only 17°, calculated over a period of sixty-six years, the mean summer temperature being about 71°, and the mean winter temperature 54°.

The following table shows the average meteorological conditions of Sydney, based on the experience of the sixty-eight years ended 1926:—

Month.	Hourly Average Reading of Standard Barometer, corrected to 32° Fah.; Standard Gravity and Mean Sea Level.	Temperature (in shade).			Rainfall.			
		Mean Standard.	Average Reading of Maximum Thermometer.	Average Reading of Minimum Thermometer.	Average.	Greatest.	Least.	Average number of days Rain.
		°	°	°	inches.	inches.	inches.	
January ... ..	29·745	71·6	78·4	64·9	3·67	15·26	0·42	14
February.. ... ..	29·790	71·3	77·6	64·9	4·25	18·56	0·34	14
March ... ..	29·859	69·3	75·7	62·9	4·99	18·70	0·42	15
April ... ..	29·920	64·7	71·2	58·1	5·33	24·49	0·06	13
May ... ..	29·923	58·8	65·3	52·2	5·23	23·03	0·18	15
June ... ..	29·900	54·7	60·9	48·3	4·75	16·30	0·19	13
July ... ..	29·915	52·7	59·4	45·9	4·86	13·21	0·12	12
August ... ..	29·913	55·0	62·5	47·5	3·01	14·89	0·04	11
September ... ..	29·848	59·2	66·9	51·5	2·85	14·05	0·08	12
October ... ..	29·813	63·6	71·2	55·8	2·84	11·14	0·21	12
November ... ..	29·785	67·1	74·5	59·6	2·81	9·88	0·07	12
December ... ..	29·729	70·1	77·4	62·9	2·87	15·82	0·23	13
Annual ... ..	29·845	63·2	70·1	56·2	47·46	82·76	23·01	156

#### Tablelands.

On the Northern Tableland the rainfall is consistent, ranging from 30 inches in the western parts to 40 inches in the eastern. The temperature is cool and bracing, the annual average being between 56° and 60°; the mean summer temperature lies between 67° and 72°, and the mean winter between 44° and 47°. The Southern Tableland is the coldest part of the State, the mean annual temperature being about 56°. In summer the mean ranges from 56° to 70°, and in winter from 33° to 44°. At Kiandra, the elevation of which is 4,640 feet, the mean annual temperature is 44·4°. Near the southern extremity of the tableland, on the Snowy and Muniong Ranges, the snow is usually present throughout the year.



The statement below shows, for the Tableland districts, particulars of average temperature and rainfall at typical stations over a period of years:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual, 1905-1924.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
<i>Northern Tableland—</i>	miles.	feet.	°	°	°	°	°	°	inches.
Tenterfield ... ..	80	2,827	53·6	68·7	46·9	24·	101·0	18·0	29·63
Inverell ... ..	124	1,980	59·6	71·2	47·0	29·	105·5	14·0	30·05
Glen Innes ... ..	90	3,518	56·2	66·8	44·3	24·	101·4	16·0	30·75
<i>Central Tableland—</i>									
Cassilis (Dalkeith) ...	120	1,500	60·1	72·0	47·5	24·4	109·5	19·0	21·26
Mudgee ... ..	121	1,635	60·0	72·4	47·0	28·5	108·0	15·0	24·77
Bathurst ... ..	96	2,200	57·2	69·7	44·3	27·9	112·9	13·0	23·31
Katoomba ... ..	58	3,349	53·8	63·2	43·2	15·3	98·0	26·5	50·97
<i>Southern Tableland—</i>									
Crookwell ... ..	81	2,000	52·8	63·9	41·3	22·1	100·0	20·0	33·14
Goulburn ... ..	54	2,129	56·1	67·8	44·1	23·6	111·0	13·0	23·10
Yass ... ..	92	1,657	57·2	70·2	44·9	24·4	108·0	21·0	23·37
Kiandra ... ..	88	4,640	44·4	55·7	32·6	20·8	91·0	<sup>4</sup> below zero	64·82
Bombala ... ..	37	3,000	52·9	63·1	42·0	24·2	100·5	17·0	23·63

#### Western Slopes.

On the Western Slopes the rainfall is distributed uniformly, varying from an annual average of 20 inches in the western parts to 30 inches in the eastern; the most fertile part of the wheat-growing area of the State is situated on the southern part of these slopes, where the average rainfall is about 25 inches per annum. The mean annual temperature ranges from 68° in the north to 59° in the south; in the summer from 81° to 73°, and in the winter from 53° to 46°.

North of the Lachlan River, good rains are expected from the monsoonal disturbances during February and March, although they may come as late as May, and at times during the remainder of the year. These monsoonal or seasonal rains are caused by radiation in the interior of Australia during the summer months, when the heat suspends the moisture accumulated chiefly from the Southern Ocean.

In the Riverina district, south of the Murrumbidgee generally, and on the South-western Slopes, fairly reliable rains, light but frequent, are experienced during the winter and spring months.

The next statement gives information as to average temperature and rainfall for the principal stations on the Western Slopes over a period of years:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual, 1905-1924.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
<i>North Western—</i>	miles.	feet.	°	°	°	°	°	°	inches.
Moree ... ..	204	680	67·5	80·2	53·4	29·0	117·0	24·0	23·17
Bingara ... ..	153	1,200	64·2	77·1	50·4	28·7	112·5	16·0	30·97
Quirindi ... ..	115	1,278	61·8	74·0	48·4	30·1	107·6	13·0	27·10
<i>Central Western—</i>									
Dubbo ... ..	177	863	63·6	77·4	49·5	27·9	115·4	16·9	20·98
<i>South Western—</i>									
Young... ..	140	1,416	59·4	72·9	46·2	25·3	109·0	21·9	23·96
Wagga Wagga ... ..	158	615	62·0	75·7	48·3	25·3	116·8	22·0	20·93
Urana... ..	213	400	63·2	76·6	49·4	26·6	113·0	27·0	17·57
Albury ... ..	175	531	60·8	74·3	47·8	27·1	117·3	19·9	27·22

*Western Plains.*

The Western District consists of a vast plain, its continuity being broken only by the Grey and Barrier Ranges. Owing to the absence of mountains in the interior, the annual rainfall over a great part of this division, which lies in the zone of perpetual high pressure, does not exceed 10 inches. It increases from 7 inches on the north-western boundary of the State to 10 and 15 inches along the Darling River, and 20 inches on the eastern limits of the plain country. The mean annual temperature ranges from 69° in the north to 62° in the south; in the summer from 84° to 75°, and in the winter from 54° to 49°.

The summer readings of the thermometer in this district are from 10° to 20° higher than those on the coast. Excessive heat is experienced occasionally, and with many summers intervening, its occurrence in all probability being due to a temporary stagnation in the easterly atmospheric drift. Under normal conditions, air entering Western Australia with a temperature of 70° or 80° accumulates only 20° to 25° by contact with the radiation from the soil during its passage across the continent to the western districts of New South Wales.

The winter, with an average temperature over 49°, accompanied by clear skies and an absence of snow, leaves little to be desired from the standpoint of health; while, owing chiefly to the dryness of the climate, these inland regions produce merino wool of the highest quality.

The meteorological conditions of the Western Plains and the Riverina division will be seen from the following statement, corresponding to those given already for the other divisions of the State:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual, 1905-1924.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Brewarrina ... ..	345	430	68·6	82·4	53·8	26·7	120·0	28·0	13·06
Bourke ... ..	386	350	69·2	83·5	54·1	27·5	127·0	25·0	11·57
Wilcannia ... ..	473	246	66·5	80·2	52·3	26·2	120·8	21·8	9·38
Broken Hill ... ..	555	1,000	64·7	77·7	51·4	23·2	115·9	28·5	10·35
Condobolin ... ..	227	700	65·2	78·9	51·2	26·9	115·0	20·0	16·56
Wentworth ... ..	478	144	63·8	76·5	51·6	24·5	117·0	21·0	12·46
Hay ... ..	309	291	63·1	76·0	50·3	26·8	117·3	22·9	14·32
Deniliquin ... ..	287	268	62·0	74·7	49·6	25·1	116·5	22·0	16·06

## OBSERVATORY.

Sydney Observatory, lat. 33° 51' 41·1" south, long. 151° 12' 23·1" east, established in the year 1856, is a State institution. The work of the Observatory is astronomical and the principal instruments are the transit circle, astrophotometer, equatorial, and seismograph. Owing to the unsuitableness of the atmosphere in Sydney the astrophotometer has been removed to Pennant Hills. The principal scientific work is the determination of the position,

distribution, and movement of stars in the region allotted to Sydney (*viz.*, 52° to 65° south declination) in the great international scheme. In addition, occasional observations, such as those of comets, are made with the equatorial, and systematic records of earth tremors are sent to the Earthquake Committee of the British Association for the Advancement of Science. Practical work embraces the determination and notification of the standard time of the State; correspondence of an educational nature on astronomical matters, and day and evening reception of visitors interested in astronomy.

The activities of the Observatory were restricted to the more important branches of research work as from July, 1926.

#### STANDARD TIME.

The mean time of the 150th meridian of east longitude, or 10 hours east of Greenwich, has been adopted as the standard time in New South Wales; which is, therefore, 10 hours ahead of the standard time adopted in England. In the district of Broken Hill, South Australian standard time is generally observed, *viz.*, 142½° of east longitude, or 9 hours 30 minutes east of Greenwich. In the States of Queensland, Victoria, and Tasmania, the standard time is the same as in New South Wales. In Western Australia the standard time is the 120° of east longitude, or 8 hours east of Greenwich.

#### TIDES.

A self-recording tide-gauge has been in operation at Fort Denison, in Port Jackson, since 1867. The tidal datum adopted is Low Water, Ordinary Spring Tide. Taking this as zero, the mean sea-level is 2.52 feet; ordinary low water, 0.78 feet; ordinary high water, 4.20 feet; and the mean daily range is 3 feet 5 inches. The lowest tide was recorded on 16th July, 1916, when the gauge fell 1 foot 3 inches below datum. The highest tide was recorded on 26th May, 1880, *viz.*, 7 feet 6½ inches; in 1876 the gauge recorded 7 feet 4½ inches on 22nd June, and 7 feet 3 inches on 21st July. On 3rd August, 1921, the gauge registered 7 feet 2 inches, and on that day occurred the greatest tidal range on record—6 feet 9½ inches.

At Port Hunter the average rise and fall of ordinary tides is 3 feet 3 inches, and of spring tides 5 feet 4¼ inches; the greatest range being 6 feet 5 inches. The highest tide registered was 7 feet 4 inches in May, 1898.

On the coast the average rise of spring tides is 5 feet 6 inches approximately.

## HISTORY.

THE name "New South Wales" was given to the whole of the eastern part of Australia in 1770 probably by Captain Cook, and for a short period (1814 to 1840) the distant islands of New Zealand were among the dependencies of the colony founded at Port Jackson in 1788.

The early history of New South Wales traces its transition from a Crown Colony, used as a penal settlement, to a self-governing dominion through a period of sixty-eight years. This period was marked by a process of division of its huge area, nearly half the size of Europe, into six smaller political units and by a slow development of settlement carried out, often in defiance of the Government, by the few hardy pioneers who crossed the world to make their homes in this new land of the antipodes. How slow was this development can be appreciated best by contrast with the phenomenal expansion of the United States of America, which already, by 1856, had a population as great as that of the United Kingdom and 100 times greater than that of New South Wales.

New South Wales inherited current British traditions of government and public institutions, and in 1856 received a flexible frame of government on the English model. The democratic spirit natural in a new land moulded the political constitution and the form of society on modern principles of equality without any bitter struggle for freedom. This fact, combined with the absence of virile native races and of foreign aggression, has rendered the history of the State unusually placid, so that its development, at all events until the European War (1914-18), was moulded almost entirely by economic factors.\*

The following statement indicates chronologically the main events in the development of the State up to the introduction of responsible government in 1856:—

- 1770. Captain Cook discovered the eastern coast of Australia.
- 1788. First settlement founded.
- 1791. First grant of land to settlers.
- 1793. Free immigrants arrived.
- 1794. Settlement established on the Hawkesbury River.
- 1795. First plough introduced.
- 1797. Merino sheep imported. Coal discovered at Coal Cliff and Port Hunter.
- 1801. Hunter River coal mines worked.
- 1803. First newspaper published (*Sydney Gazette*).
- 1805. MacArthur began sheep farming at Camden.
- 1807. Merchantable wool first exported (245 lb.).
- 1813. Blue Mountains crossed.
- 1814. Civil Law Courts created. New Zealand proclaimed a dependency of New South Wales.
- 1815. Settlement founded on Bathurst Plains.
- 1817. Exploration of interior begun.
- 1821. Settlement at Port Macquarie.
- 1823. First Constitution. Trial by jury instituted.

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\* A brief review of the expansion of population, and of rural settlement, will be found in later chapters of this Year Book, and of the early forms of Government in the Year Book for 1921.

1824. Censorship of press abolished.
1825. First land regulations issued. Tasmania practically separated from New South Wales. Boundary of New South Wales moved westward.
1827. Colony became self-supporting.
1828. Second Constitution. All English laws applicable to New South Wales brought into force. Assisted immigration introduced. Richmond River discovered.
1831. First land sales.
1834. Settlement established at Twofold Bay.
1836. Religious equality established. South Australia founded as a separate colony.
1838. Assignment of convicts ceased.
1840. Transportation of convicts to New South Wales abolished. New Zealand separated from New South Wales.
1842. Third Constitution—Representative Government. Settlement at Moreton Bay proclaimed.
1843. Financial crisis.
1851. Gold discovered. Victoria separated from New South Wales.
1852. First trade union formed. Sydney University opened.
1855. First railway built.
1856. Fourth Constitution—Responsible Government.

## 1856-1872.

The Constitution Act of 1856 conferred a system of government, closely modelled on that of the United Kingdom, upon a community of one-quarter of a million people in a territory (omitting Queensland) two and a half times as large as the United Kingdom. Of this community one-third had newly arrived in the gold rushes, and of the remainder few had been born in the country. With the continuance of gold finds, a very rapid proportional growth of population set in, and in the next fifteen years the number of inhabitants doubled. It is not surprising, therefore, that in these circumstances and in the lack of an intimate knowledge of the workings of the machinery of parliamentary government the new administration was at first unstable and the times were somewhat lawless. In the first five years no less than seven Ministries held office, and four Parliaments sat. But gradually the workings of the new constitution became smoother. Manhood suffrage and election by secret ballot were introduced in 1858, and at the first constitutional crisis in 1861, involving the fate of the Land Bills, the will of the electorates gained the recognised supremacy which it has since held.

The lawless instincts of certain elements of the population were excited in some measure by the turbulence of the gold rushes, and found expression in the anti-Chinese riots on the gold-fields of Lambing Flat in 1861; in a revival of bushranging from 1861 to 1867 after thirty years' quiescence; and in the wild scramble for land under the loosely enacted laws of 1861, which created bitter conflicts between free selectors and squatters, and left wide scope for malpractices.

But when the gold fever began to subside in the seventies many newcomers settled down as landholders, and sheep-raising rapidly became the staple industry of the State. The industrial depression of the sixties passed away, the new Government took firm control, and an era of prosperity and rapid progress began. With the separation of Queensland in 1859

the territory of New South Wales became confined within its present limits. Religious equality was consummated in 1862 by the abolition of State aid to religion, and in 1866 all schools receiving State aid were placed under Government control. The construction and working of railways were made almost exclusively Government functions, and lines were opened from Newcastle to Maitland (1857), from Sydney to Penrith (1862), and to Goulburn (1869). Telegraphic communication was established between Sydney, Melbourne, and Adelaide in 1858 and Brisbane in 1861, while the cable service to England was opened for business in 1872.

#### 1873-1893.

Rapid as had been the disorderly progress since the discovery of gold, the country now settled down to orderly ways, and yet more rapid headway was made in the next twenty years. Although the activity in gold mining subsided, immigrants continued to arrive freely; but after reaching half a million in 1871, the population only attained the first million in 1887. Flocks grew, and New South Wales soon gained importance as one of the main sources of the world's supply of wool. Indeed, in 1891 the number of sheep in New South Wales reached its highest level. The tin-mining fields were opened in 1872, the richest silver-lead fields of the world were discovered at Broken Hill in 1883, and coal mining steadily increased in importance. This rapid expansion of the primary industries produced rapid expansion throughout the country. A vigorous policy of public works was initiated by the Government in 1872 and continued until 1885; during the period of twenty years under review nearly £50,000,000 were borrowed by the Government and expended upon developmental works, principally railways. Rail communication was established with Orange by 1877, and lines were extended to the southern border by 1883, and the northern by 1889. The first telephonic services were established in Sydney in 1880.

Some national ideals began to take definite shape, and settled policy in many provinces of government became the result. The duration of Parliament was limited finally to three years in 1874; the education question was decided in 1880, when a national system of secular and compulsory education for all children between the ages of 6 and 14 years was introduced; in 1888 the further influx of Asiatics was checked effectively, and the principle of "White Australia" firmly established. At the same time the serious difficulties of the community began to assume formidable proportions in the land and labour problems. Although the bitter struggle for the possession of land subsided as years passed, it was found that the policy of disposing of Crown lands by the free and easy methods of earlier years produced a pronounced shortage of land for settlement. Parliament was engaged frequently with the task of promoting genuine and closer settlement, and of reconciling the conflicting rights and interests of landholders and land seekers. The practice of securing possession of land by "dummying" was prohibited in 1875, and in 1884 stability of tenure was granted to pastoral lessees. In 1885 the present system of land administration by local land boards in land board districts and territorial divisions was introduced, placing the disposal of this most important national asset on an orderly basis, although the problem of promoting closer settlement remained unsolved.

The question of fiscal policy was a prominent issue at Parliamentary elections during this period, and a change of Government sometimes involved a reversal of existing tariff arrangements. Thus in 1874 customs taxes were abolished, except for a few specific duties on liquor and narcotics. A Protectionist tariff, introduced in 1886, was repealed in the following year, but was re-imposed in 1892, to be revoked four years later after a Free-trade Party had gained office.

Immigration from Europe to New South Wales was at no period nearly so great as to the United States, and during the period 1877-1886—the most active decade of immigration ever experienced in New South Wales—the net gain of population by migration was only 200,000. Yet, despite the vast territory of the State, people settled in the towns and city rather than in rural districts, with the consequence that the population steadily became urban rather than rural in character, and the predominant interests industrial in the narrow sense. This development largely determined the course of politics, and progress in the country, and its influence became clearly apparent in a growing industrial agitation. These years were affected by frequent strikes, and in the late eighties the effects of industrial ferment apparent in other countries were marked by the spread of socialistic doctrines, the visit of propagandists advocating a new social order and the strong expressions of sympathy toward the cause of strikes abroad. In 1881 a Trade Union Act was passed removing all existing legal restrictions on combinations of workmen for industrial purposes. These events produced a very rapid growth in trade unionism, which became a most important factor in the economic life of the community, and had its counterpart among organisations of employers.

While these developments were proceeding the commercial prosperity began to show signs of weakening, and after 1885 the volume of trade contracted, the programme of public works was curtailed, and unemployment became rife. These circumstances further embittered industrial relationships, and in the prevailing discontent the efforts of the new unions to improve conditions of employment culminated in the maritime strike of 1890—one of the most momentous industrial events in the history of the State. The strike failed, and unionism began to turn its attention to parliamentary action to further its industrial aims. Recourse to political activity led to the development of a typically Australian form of unionism, and to the rise of the Labour Party as a power in Parliament; it induced a pronounced type of party government, characterised by pledges and "caucuses," and a new cleavage of political interests was formed.

These important events were accompanied by the worst financial crisis experienced in the State. The industrial depression gradually became more severe after 1885, and a series of world financial upheavals, signalised by the Baring crisis of 1890 in England, served to aggravate local conditions. In 1893 the business failures and alarms of two years' duration culminated in the suspension of payments by thirteen out of twenty-five local banks, with consequent disaster to the commerce and industry of the State. This severe experience was productive of much good. More discipline was introduced into the financial system, securities were more carefully scrutinised before acceptance, certain bogus institutions ceased to exist, the banks associated more closely, and an office was opened for daily clearances between banks.

Moreover, the withdrawal of English capital from local investments encouraged local saving and spontaneous internal development.

#### 1894-1900.

After the financial crisis industrial depression became more acute; it was intensified by the continuance of low prices for wool, the withdrawal of British capital from local investments, a succession of bad seasons, and the diminution of Government expenditure from loans. Immigration practically ceased in 1893 and did not revive until 1905, unemployment became prevalent, conditions of employment ceased to improve, and some emigration was evident. At first a number of strikes occurred, with disaster to the strikers; trade unionism lost power and many unions decayed; but although the numerical strength of the Labour Party in Parliament decreased, it was

sufficient to influence the passage of some most important industrial legislation and to effect a change of Government in 1899. This movement was consummated in 1901 by the enactment of provision for a system of compulsory industrial arbitration, which has had a most important influence on the subsequent economic development of the State. These matters and the important questions of federation and fiscal policy dominated politics. The decision in 1899 of the six Australian States to federate ultimately brought about a reversion from the virtual "free-trade," adopted by the State Government in 1896, to "protection," introduced by the Commonwealth Government in 1901. A policy of non-political control of appointments and promotion in the civil service was adopted in 1895.

Most important changes had gradually come about in the primary industries. Wheat-growing expanded steadily, and an export trade was established in 1898; refrigeration was applied to sea cargoes, and an important oversea trade in butter and frozen meat grew up. The prices realised for wool improved gradually after 1896, and as buyers continued to seek wool at its source, growers benefited by the speedy returns from Sydney wool sales. With these developments the industrial outlook brightened, and a period of remarkable prosperity opened.

#### 1901-1910.

In these happy circumstances the Commonwealth of Australia came into being. The new Government was clothed with a wide range of powers, concurrent with those of the State Government, and in a number of important Federal matters, viz., customs, excise, defence, coinage, currency, bounties on production and export, naturalisation, extradition, post and telegraphs, lighthouses, quarantine, and certain minor matters it was given exclusive authority. Henceforward the activities of the Commonwealth were important factors in determining the course of State development. A policy of encouraging local manufactures was adopted in 1901, when, in October, uniform customs duties were imposed; a Federal High Court was established with a general appellate jurisdiction—in some cases final; in 1904 a Commonwealth Court of Conciliation and Arbitration was established with jurisdiction in interstate industrial matters.

With the introduction of a system of industrial arbitration, there set in more intense development in the political and industrial systems of the State, and an era of sectional combination to secure common objects. Trade unionism spread rapidly as workers combined to obtain the assistance of the Court of Arbitration in improving their working conditions. Employers organised in order to meet the situation unitedly, and an Employers' Federation was founded in 1903. In Parliament a new significance attached to party organisation, so that with the continued advocacy of solidarity, the pledge, party platform, party meetings and caucuses, the system sometimes called "machine politics" developed peculiarly local characteristics. These developments in the industrial and political spheres had their counterpart in the commercial world in the rapid growth of joint stock companies to handle business on a large scale, and in the formation of trusts and combines for the more effective prosecution of business. From time to time restrictive legislation was introduced.

Although the conflict of party interests became more strenuous, a new political and social consciousness seemed to awaken and marked progress was made. State assistance by pensions for indigent aged persons was provided in 1900 and for invalids in 1907; payment of compensation to workmen in cases of industrial accident was prescribed in 1910, and effective measures were taken in 1908 to abolish and prevent a system of



sweating female and juvenile workers. An instalment of the principle of paying wages according to needs was introduced in 1905, and the first official estimate of the living wage was made in 1907. An Act to protect the property of married women (1897) was followed in 1902 by the introduction of the women's franchise. Education again became a topic of vital interest in the community, and, after a strong agitation, a series of far-reaching reforms were begun in 1904, including the introduction of free primary education in 1906 and of reforms in the syllabus, the training of teachers, and, after 1910, the enlargement of the system of secondary and University education.

This period was characterised by unsurpassed economic development, based upon the expansion of the rural industries and the improvement of foreign markets for primary products. Immigration revived in 1905, new tenures of land were introduced, a system of State finance was established to assist settlers, the Murrumbidgee Irrigation Scheme was commenced, and the tenure of land in the Western Division was placed on a liberal basis. Moreover, Local Government, which after the adverse experiences of the premature system of the forties had been confined to a small number of towns, was extended in 1906 to include hitherto unincorporated districts as "shires" covering three-fifths of the area of the State.

#### 1911-1914.

The period of prosperity, during which the State had regained its economic stability and the Federal Government had developed strength, was followed by a new movement towards assuming the responsibilities of nationhood. Much attention was devoted to schemes of local defence under the aegis of the Commonwealth Government. The nucleus of an Australian fleet was established, and a system of compulsory military training was inaugurated for home defence. A system of local coinage was introduced: the Federal Government took charge of the issue of bank notes; and the Commonwealth Bank of Australia was established. In 1911 wireless telegraphy was introduced, and the first successful aeroplane flight was made.

Social progress continued, and the most important reforms in the primary system of education were followed by a wide extension of facilities for secondary and University education, State aid in the form of bursaries being provided in cases of financial disability. At the same time, the scope of the University was extended and provision made for an elective body of control; technical education received more attention, continuation schools and rural schools were established, and greater provision was made for medical attention to school children. The Government assumed greater responsibility in regard to housing by providing and carrying out schemes for garden suburbs, and by making advances to persons building homes. Baby clinics were opened, and maternity bonuses were instituted by the Federal Government to provide financial assistance at childbirth.

Each election after 1901 saw a greater proportion of pledged labour representatives returned to Parliament, particularly in the Federal Houses. Finally in 1910 the new party assumed office in both Federal and State Governments, and since then has been either the largest or second largest party in Parliament. Industrial problems constantly occupied the Legislature; much attention was given to matters of arbitration and to the problem of avoiding strikes and lockouts, which were constantly dislocating the course of industry. The principle of the "living wage" was established firmly and provision made for its regular determination. Prices, employment, and monopolies in restraint of trade were all matters of live interest, and were made subjects of close inquiry both State and Federal. The rise

in the cost of living, which had been steady during the previous decade, proceeded more rapidly, and with it came the need for frequent re-adjustment of wages, which, coupled with questions of hours, union principles, and working conditions, led to continual agitation among the new workingmen's organisations, which were of greater relative extent in New South Wales than in any other part of the world.

The land problem received further attention. A graduated land tax was imposed upon large estates by the Federal Government to induce closer settlement through their subdivision; additional tenures on a leasehold basis were created to stay the process of alienation; the Murrumbidgee Irrigation Scheme was advanced sufficiently to receive settlers, and an additional scheme on the Murray River was agreed upon.

#### 1914-1920.

The outbreak of the European War in 1914 intruded a dominating external influence into a local situation fraught with great possibilities of economic and social progress. Although the principle of "business as usual" was at first widely urged, it was soon found that the dislocation of trade and the necessary mobilisation of the national resources to meet the demands of the times produced a readjustment of economic conditions and of political parties and policies which diverted the normal trend of development.

The successful prosecution of the war became the dominant issue, and the High Court decided early that the Commonwealth Government could do legally anything which might conduce to the successful prosecution of the war (subject, of course, to Imperial control). As a result wider powers were assumed in the Federal sphere than were exercised ordinarily in time of peace. A War Precautions Act placed power of issuing regulations in many important matters in the hands of the Federal Executive Government. A censorship of the press was established; trade and commerce were regulated closely to prevent trade with enemy countries and to secure adequate supplies of raw materials for the Imperial Government; investment and the import of luxuries were restricted in the interests of finance; unprecedented loans for war purposes were floated and subscribed on the local markets; prices were regulated, and comprehensive schemes of government control and marketing of primary products were initiated. Great numbers of men in the prime of life enlisted for war service, and large military encampments were maintained. Consequently production languished, but the phenomenal rise of prices due to war conditions and to the immense expenditure of money for war services and supplies created an air of artificial prosperity, which endured until the close of 1920.

Domestic politics were disrupted in 1916 on the issue of conscription for service abroad, which was submitted as a referendum to the people. The Labour Party, which held office in both State and Federal Governments, became sharply divided, and with the resultant expulsion from the Labour movement of conscriptionist members of Parliament, including the Premier and most members of the Cabinet, a new party distribution was effected and Labour lost office. The industrial ferment of previous years continued, and was increased by these events and by the failure of wages to rise as fast as the cost of living, although in many cases wartime profits were large. The discontent in certain sections was intensified by the imprisonment of a number of members of a well-known revolutionary body in connection with the outbreak of a series of disastrous fires in Sydney. The prevailing discontent finally burst out in 1917 into the most widespread strike in the history of the State. The strikers were, however,

defeated by the introduction of loyalist workers from the country districts and from Victoria, and by the unyielding attitude of the Government, and much bitterness was engendered by the conflict.

This event led in the following year to renewed attempts to secure industrial peace. A Board of Trade was appointed, with power to promote amicable relationships between employers and employees and to declare regularly a living wage. This power was exercised in 1919 to review the whole problem of the cost of living, and a substantial increase in rates of wages resulted immediately.

But the close of the war and the sudden world-wide rise of prices to unprecedented heights led to yet greater economic disorder and to a recrudescence of industrial disputes. Amid the prevailing discontent an election was held in 1920, under the system of proportional representation. The Labour Party was returned with a bare majority over the Nationalist and Progressive Parties on a policy of more effective price control, profiteering prevention, land legislation, and adjustment of finance.

Social and industrial progress continued. Further improvements were made in the system of education by providing for compulsory regular attendance of children of school age, by close supervision of private schools, the establishment of a Conservatorium of Music and a State Orchestra. All legal disabilities preventing women from holding public office or entering the learned professions were removed, the benefits of workmen's compensation were extended to all classes of workers, facilities for legal aid to poor litigants were provided, the State Housing Scheme was extended, a Fair Rents Court was constituted, and through private subscription large funds were established for the care of soldiers and their dependents.

#### 1921-

During 1921 the major industrial and political problems centred round the readjustments necessary to meet the altered conditions caused by the collapse of the boom in trade and commerce which had followed the world-wide decline in prices. Frequent demonstrations were made by the unemployed, and extensive relief was given, but at no period was unemployment so widespread as in older countries.

During the year the working-week was reduced from forty-eight to forty-four hours after exhaustive inquiry, and the Board of Trade declared a reduction of 3s. in the basic wage to £4 2s., which the Government refused to put into operation.

At the close of the year, a political crisis was precipitated by the resignation of the Speaker of the Legislative Assembly, and as an outcome the Labour Government was defeated in Parliament after holding office for two years. A Nationalist Ministry was formed, but resigned within a few hours of taking office, and a general election was held in March, 1922, again under the system of proportional representation. Large numbers of candidates presented themselves, and a new political group appeared—the Country Party—which gained a number of seats. This party had appeared already in the elections of 1920 as Progressives and in the Federal elections of 1919. It had associated itself with movements for forming separate political units in the northern and southern parts of the State, and had conducted much propaganda on behalf of country interests. None of the three parties gained an absolute majority, but, upon the resignation of the Labour Ministry, a Nationalist Government was formed with the support of the Country party.

With the reversal of the state of parties at the elections, extensive changes of policy were made. Economy in administration, enforcement of the reduced living wage, reversion from a forty-four to a forty-eight hours

week, modification of industrial arbitration, and the abolition of restrictions on trade and industry became features in the policy of the Government. Several State industrial undertakings which had been operating at a financial loss were closed down. Activity in immigration was revived, and the problem of land settlement was subjected to considerable investigation.

Steps were now taken to introduce a measure of law reform whereby effete laws were removed from the Statute Book. In addition, the extent of arbitration rights was restricted, so that rural workers and civil servants were removed from the jurisdiction of the Arbitration Courts. The education system was modified by remodelling the examination system and imposing fees upon admission to certain secondary schools. The number of applicants for secondary education ceased to increase and the continuation courses of a commercial and technical character became more popular. Rural schools, providing elementary agricultural training, were opened in a number of country centres. The problem of providing adequate accommodation for children in primary schools had become acute, and was vigorously attacked, sums of money being made available from loan funds for building purposes. The demand for musical education continually expanded, and the Conservatorium of Music found difficulty in accommodating all applicants. However, the State Orchestra, which had operated actively for over two years, was disbanded in September, 1922, through financial failure.

In 1923 a comprehensive scheme of rural development was propounded, partly as an outcome of the investigations of the Select Committee on Agriculture in 1920 and 1921. A migration agreement was made between the State, Commonwealth, and Imperial Governments, with the object of placing 6,000 oversea settlers on land in New South Wales within a period of five years, but little was achieved owing to the great difficulty of securing suitable migrants with a modicum of capital. At the same time a measure was passed to provide a complete basis for co-operative enterprise for rural and urban development and credit, to provide new facilities for self-help, and to bring the benefits being reaped from co-operation in other lands within reach of producers and consumers in New South Wales. To this end a conference of producers and consumers was held at Bathurst in September, 1926, to consider the problem of marketing and to formulate schemes for bringing producer and consumer into closer association. In response to a lengthy agitation the question of establishing new States within New South Wales was referred to a Royal Commission of inquiry early in 1924, and in April, 1925, this Commission reported that the creation of new States in either the northern, Riverina, or Monaro districts was neither practicable nor desirable, but that it was desirable to extend the system of local government and to further decentralise administration. From 1925 onwards considerable attention was paid by both the State and Federal Parliaments to the problem of marketing rural products locally and abroad, and a number of enabling Acts were passed for the creation of marketing control boards. In addition, Acts were passed providing for the grading of wheat, the registration of land agents, and of farm produce agents.

Steady progress was made in the development of an Australian policy of railway construction. In the early part of 1923 an agreement was made permitting the Victorian Government to extend five lines of railway across the border in the south-west Riverina. In April, 1926, the first of these lines was opened for traffic to Balranald, and the second to Stony Crossing in February, 1928. At the close of 1923 the North Coast railway was opened for traffic as far as Murwillumbah, and in 1926 the construction of a new interstate line from Kyogle to Brisbane was commenced under agreement between the Governments of Queensland, New South Wales, and

the Commonwealth. A line across New South Wales to Broken Hill was opened in November, 1927. This route is destined to be linked directly with the transcontinental line to Western Australia.

Considerable activity was maintained in constructing other important public works. Operations in connection with the Hume reservoir on the Murray River proceeded steadily. In March, 1924, a tender was accepted for the erection of the North Shore bridge, the work to be completed by 1930; and in April, 1925, the foundation-stone was laid, and the work of construction proceeded actively. The construction of the underground railway also continued, and the first section to St. James station was opened for traffic at the end of 1926. Additional lines were laid to carry the increased volume of traffic on the suburban system, which was being electrified. The whole railway system of the State was subjected to close inquiry by two English experts, who made a number of recommendations for improving the scheme of finance, control, etc. With the rapid increase in the use of motor vehicles attention was given to improvement of main roads, expenditure on construction was increased both from revenue and from loan funds, and, in 1925, a Main Roads Board was created. The Commonwealth Government also made road grants to the States.

Under the auspices of the British Cotton-growing Association much propaganda was conducted in favour of cotton-growing, and, although the area actually cropped was comparatively small, experiments were undertaken by farmers over a wide area. A cotton ginnery was opened at Newcastle and a spinning mill at Wentworthville.

Immigration proceeded steadily, but was confined principally to nominated immigrants, domestic workers, and boys for agricultural work under the auspices of various institutions. The land settlement policy was continued in operation. Facilities were provided through the Rural Bank for the voluntary subdivision of large estates and new proposals for compulsory subdivision were put forward.

Great extension commenced in 1925 in the use of wireless telegraphy, and in that year many installations came into existence in private homes for receiving news and musical programmes broadcasted from bureaux conducted by private companies under the general supervision of the Government. In 1926 projects were formulated for the transmission of messages by air between Australia and the United Kingdom, and the system was actually established in 1927. This important advance in communication occurred concurrently with steady progress in aviation, and several trial and survey flights were successfully carried out between Europe, Australia, and the East. In February, 1928, the journey from England to Darwin was completed in sixteen days by Hinkler, an Australian, travelling alone in a light aeroplane.

A special service squadron of the British Fleet visited the State in April, 1924, and during its visit the battle-cruiser *Australia*—the flagship of the first Australian navy—was sunk at sea as part of the scheme of disarmament agreed upon at the Washington Conference in 1923.

Toward the end of July, 1925, an extended visit was received from a large squadron of American battleships manœuvring in the Pacific Ocean. They were warmly welcomed by the public, and the interchange of friendly courtesies still further promoted the cordial relationships subsisting between America and Australia. A large delegation of representatives of the Empire Press Union also visited the State in the latter half of 1925.

In February, 1924, His Excellency Admiral Sir Dudley R. S. de Chair arrived to fill the position of Governor of the State in succession to Sir Walter Davidson, who died in office during the previous year.

Upon the expiry of the State Parliament by effluxion of time a general election was held at the end of May, 1925, and a Labour Government was returned to power. At this election women candidates contested six seats and one was elected as the first woman representative in the Legislative Assembly.

Following the change of Government, the forty-four hours week was brought into operation again, provision was made for the payment of pensions to widows with dependent children, high school fees were again abolished, the Fair Rents Act was amended and extended to include certain shop premises, and legislation was passed to remove any doubt as to the eligibility of women for appointment to the Legislative Council. The industrial arbitration system was remodelled to provide for an Industrial Commission and wages boards, and the ambit of the workers' compensation laws was considerably extended. In 1927 the basis of determining the living wage was altered by Act of Parliament on the recommendation of the Industrial Commissioner, and a system of child endowment was introduced.

A matter having important bearing on the powers and duties of the Governor arose in 1926 out of the rejection by the Legislative Council of a number of bills introduced by the Government. In order to obtain adequate support in the Upper House the Ministers advised the Governor to appoint twenty-five new members, submitting that the appointment of members and the number of Councillors were matters of ministerial responsibility. The Governor referred the matter for advice to the Dominions Office in London, as he was of the opinion that, in the custom hitherto observed, the Upper Chamber, which then numbered seventy-four, should be numerically smaller than the Lower House. The Secretary of State for Dominion Affairs declined to intervene, and finally the Governor agreed to act upon the advice of the Ministry, and make twenty-five new appointments.

After the appointment of the new members, the Government introduced a bill to abolish the Upper House, but leave to proceed with this measure was refused by vote of the Legislative Council on 23rd February, 1926. Subsequently the Governor refused the advice of his Ministers to make further appointments, and the Attorney-General in person laid the matter before the Secretary of State for the Dominions, who again declined to instruct the Governor in the matter. Early in 1927 a crisis developed in the Parliamentary Labour party, and as a result of a division of opinion in the Ministry the Premier resigned and was recommissioned to form a Ministry on condition that a general election should be held. At the election on 8th October, 1927, a majority of Nationalist and Country party candidates was returned, and a Coalition Government was formed. This election was held on the basis of single seats with preferential voting.

In November, 1925, a Federal election was held, and the State of New South Wales returned a majority of Nationalist representatives to both the Senate and the House of Representatives.

The correlation of State and Federal activities which had been advanced by the amalgamation of State and Federal income-tax officers in 1923 was further continued. In 1927 an important agreement was made constituting an Australian Loan Council to control all Government borrowing, providing for the transfer of State debts to the Commonwealth and creating uniform sinking funds in all States.

On 9th May, 1927, the Federal Parliament was opened at Canberra by H.R.H. the Duke of York.

## CONSTITUTION AND GOVERNMENT.

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THERE are in New South Wales three administrations, viz., the Federal, whose seat is in the new Federal Capital at Canberra (New South Wales), and which controls matters affecting the interests of Australia as a whole; the State, which meets in Sydney and deals with the more important questions of State and local interest; and the Local Government bodies, whose headquarters are at convenient centres within their areas, in which they control matters of purely local concern—these areas extend over nearly two-thirds of the State.

The State Government is the oldest, dating in its present form from 1856. Its constitution was modified in 1901, when the Federal Government was established, and in 1906, when Local Government was extended over its present area.

### *Early Forms of Government.*

A brief account of the early forms of government in New South Wales and of the introduction of the existing system was published in the Year Book for 1921, at page 25. An account of the Commonwealth Government may be found in the same edition at page 38.

### PRESENT SYSTEM OF STATE GOVERNMENT.

The Constitution of New South Wales is not framed completely in the Constitution Act of 1902, and is not entirely written. It is drawn from seven diverse sources, viz., certain Imperial statutes, such as the Colonial Laws Validity Act (1865) and the Commonwealth of Australia Constitution Act (1900); the Letters Patent and the Instructions to the Governor; an element of inherited English law; some Federal statutes; sundry State statutes; numerous legal decisions; and a large element of English and local convention.

The Imperial Parliament is legally omnipotent in local as well as in Imperial affairs, and it may exercise effective control over the affairs of the State by direct legislation and some indirect control through the Secretary of State for the Colonies, by whom the Governor is directed in the exercise of his powers. Imperial legislation forms the basis of the existing Constitution, and the Imperial Parliament regulates all matters of Imperial concern in addition to controlling the extensive powers which remain vested in the Crown by virtue of its prerogative. These include such important matters as foreign relations in peace and war, and control of the forces. In local affairs the prerogatives of the Crown are generally exercised by the Governor on the advice of the Executive Council, but where Imperial interests are involved the prerogative powers are exercised through the medium of the Privy Council, the Secretary of State for the Colonies, and the Governor.

### *The Governor.*

In New South Wales the position of the Governor is primarily that of local representative of the Crown, and through him the powers of the Crown in matters of local concern are exercised. In addition he is titular head of the Government of New South Wales; he possesses powers similar to those of a constitutional sovereign, and he performs the formal and ceremonial functions which attach to the Crown in its august capacity.

His constitutional functions are defined and regulated partly by various statutes, which from time to time cast new duties upon him, partly by the Letters Patent constituting his office, and partly by the Instructions to the

Governor. The Letters Patent and Instructions were given under the Royal Sign Manual in 1900, and amended in 1909. These functions cover a wide range of important duties, but it is directed that "in the execution of the powers and authorities vested in him the Governor shall be guided by the advice of the Executive Council." This provision, however, is modified by the further direction that if, in any case the Governor should see sufficient cause to dissent from the opinion of his Ministers, he may act in the exercise of his powers and authority in opposition to the opinion of his Ministers, reporting the matter to the Secretary of State for the Dominions without delay. The extent of the Governor's discretionary powers, however, tends to contract, though he still possesses important spheres of independent action, such as in granting dissolution of Parliament. He is, moreover, entitled to full information on all matters to which his assent is sought, and in this way he may exercise a general supervision over his officers, and use his personal influence for the good of the State. The general nature of his position is such that he is guardian of the Constitution and bound to see that the great powers with which he is entrusted are not used otherwise than in the public interest. In extreme cases his discretion constitutes a safeguard against malpractice. His more important constitutional duties are to appoint the Executive Council and to preside over its deliberations; to summon, prorogue, and dissolve the Legislature; to assent, to refuse to assent, or to reserve bills passed by the Legislature; to appoint members of the Legislative Council; to keep and use the Public Seal of the State; to appoint all ministers and officers of State; and, in proper cases, to remove and suspend officers of State. He exercises the King's prerogative of mercy, but only on the advice of the Executive Council, in capital cases, and of a Minister of the Crown in other cases.

With respect to responsibility for his actions the Governor does not occupy the same position as the King. He is amenable to the law; and, although the State accepts responsibility for his official acts, he is personally liable for his unofficial actions, civil and criminal. Politically he is indirectly responsible to the Imperial Parliament through the Secretary of State for the Colonies, but in State politics his Ministers take the responsibility for their advice, on which he acts. However, in an extreme case if good reason existed the local Legislature might be justified in asking for his removal.

The Governor's normal term of office is five years, at a salary of £5,000 per annum, with certain allowances for his staff, provided by the Constitution Act out of the revenues of the State.

The periods for which the Governor may absent himself from the State are limited by the Instructions. When he is absent the Lieutenant-Governor acts in his stead in all matters of State. For that purpose the Chief Justice is usually appointed. In the event of the Lieutenant-Governor not being available to fill the Governor's position, an Administrator assumes office under a dormant Commission appointing the Senior Judge of the State as Administrator.

The present Governor is Admiral Sir Dudley R. S. de Chair, K.C.B., M.V.O. He was sworn in on 28th February, 1924.

#### *The Executive.*

All important acts of State are performed or sanctioned by the Governor-in-Council, and, except in the limited spheres where the Governor possesses discretionary powers, he is required, in matters of local concern, to act on the advice of the Executive Council or of a Minister of the Crown.

The Council is established by virtue of the Letters Patent constituting the office of Governor, and it is composed of such persons as the Governor



is pleased to appoint. Its members are invariably members of the Ministry formed by the leader of the dominant party in the Legislative Assembly. When a member resigns from the Ministry he resigns also from the Executive Council, otherwise he may be dismissed by the Governor.

The Executive Council meets only when summoned by the Governor, who is required by his Instructions to preside over its deliberations unless absent for "some necessary or reasonable cause." In his absence the Vice-President presides.

*The Ministry or Cabinet.*

In New South Wales the terms "Ministry" and "Cabinet" are synonymous, since both bodies by custom consist of those members of Parliament chosen to administer departments of State, and to perform other executive functions. The Ministry is answerable to Parliament for its administration, and it continues in office only so long as it commands the confidence of the Legislative Assembly, from which nearly all its members are chosen. An adverse vote in the Legislative Council does not affect the life of the Ministry. The constitutional practices of the Imperial Parliament with respect to the appointment and resignation of Ministers have been adopted tacitly with some minor modifications. Cabinet acts in a similar way to the English Cabinet under direction of the Premier, who supervises the general legislative and administrative policy and makes all communications to the Governor.

Frequent meetings of Cabinet are held to deliberate upon the general policy of the administration, the more important business matters of the State, and the legislative measures to be introduced to Parliament, and to manage the financial business of the State. Its decisions are carried into effect by the Executive Council or by individual Ministers as each case requires.

Administrative matters of minor importance are determined by ministerial heads of departments without reference to the Executive Council, and every Minister possesses considerable discretionary powers in the ordinary affairs of his department.

Following on the resignation of the Labour Government, the following Ministry, comprised of members of the Nationalist and Country Parties, assumed office on 19th October, 1927:—

- Premier and Colonial Treasurer—The Hon. T. R. Bavin, K.C., B.A., LL.B., M.L.A.
- Minister for Public Works and Railways—The Hon. E. A. Buttenshaw, M.L.A.
- Attorney-General and Vice-President of the Executive Council—The Hon. F. S. Boyce, B.A., LL.B., K.C., M.L.C.
- Colonial Secretary—The Hon. A. Bruntnell, M.L.A.
- Minister for Lands—The Hon. R. T. Ball, M.L.A.
- Minister for Agriculture—The Hon. H. V. C. Thorby, M.L.A.
- Minister for Education—The Hon. D. H. Drummond, M.L.A.
- Minister for Local Government—Lt.-Col. The Hon. M. F. Bruxner, D.S.O., M.L.A.
- Minister for Mines and Forests—Capt. The Hon. F. A. Chaffey, M.L.A.
- Minister for Justice—The Hon. J. R. Lee, M.L.A.
- Minister for Labour and Industry—The Hon. E. H. Farrar, M.L.C.
- Minister for Public Health—The Hon. R. D. Arthur, M.D., M.L.A.
- Asst. Colonial Treasurer—The Hon. B. S. B. Stevens, M.L.A.
- Honorary Minister—The Hon. J. Ryan, M.L.C.

The salaries payable annually to members of the Cabinet as from 1st July, 1925, were fixed as follows by the Parliamentary Allowances and Salaries Act, 1925:—

	<b>£</b>
The Premier .. .. .	2,445
The Attorney-General .. .. .	2,095
The Vice-President of the Executive Council (and leader of the Government in the Legislative Council) .. .. .	1,375
Nine other Ministers of the Crown, £1,945 each .. .. .	17,505
	23,420
Total .. .. .	23,420

These amounts include the annual allowances paid to Ministers as members of the Legislative Assembly.

The salaries of Ministers were fixed as from 1st January, 1908, at the following rates:—Premier, £1,870; Attorney-General, £1,520; five other Ministers, £1,370 each; Vice-President of the Executive Council, £800. They were increased in 1920 upon the recommendation of a judge of the Arbitration Court to the same rates as are payable now, but, between 1st July, 1922, and 1st July, 1925, they were on the following scale:—Premier, £2,000; Attorney-General, £1,600; nine other Ministers, £1,500 each; Vice-President of the Executive Council, £900.

THE STATE LEGISLATURE.

The State Legislature consists of the Crown and two Houses of Parliament, and all State laws are enacted “by the King’s Most Excellent Majesty, by and with the advice and consent of the Legislative Council and the Legislative Assembly in Parliament assembled.” It exercises a general power of legislation, and possesses plenary and not delegated authority. The Constitution Act of 1902 provides that “the Legislature shall, subject to the provisions of the Commonwealth of Australia Constitution Act, have power to make laws for the peace, welfare, and good government of New South Wales in all cases whatsoever.” It can delegate its powers, and within its territory its actions are restricted only by legislation of the Imperial Parliament intended to apply to New South Wales, and by valid Federal enactments.

The two Houses of Parliament are the Legislative Council (or Upper House), and the Legislative Assembly (or Lower House). Their powers are nominally co-ordinate, but it is provided that bills appropriating money or imposing taxation and bills affecting itself must originate in the Legislative Assembly, which is the elective Chamber, and which, it is recognised, must control taxation and expenditure. However, bills involving money matters may be introduced only by a Minister on the recommendation of the Governor, and in this way the responsibility of the Ministry for financial measures is secured.

Every member of Parliament must take an oath or make an affirmation of allegiance.

By virtue of the Constitution Act it is a function of the Governor to summon, prorogue, and dissolve both Houses of Parliament, but it is provided that both Houses shall meet at least once in every year, so that a period of twelve months shall not elapse between sessions. The continuity of Parliament is ensured by the Parliamentary Electorates and Elections Act, 1912 (as amended in 1918), which provides that writs for the election of new members must be issued within four days after the dissolution of the Legislative Assembly, that they must be returned within sixty days after issue

(unless otherwise directed by the Governor), and that Parliament shall meet within seven days of the return of writs. The duration of Parliament was limited to three years in 1874.

It is agreed tacitly that the procedure in each House shall be conducted according to its prototype in the Imperial Parliament, but comprehensive Standing Orders regulating the business of each House have been drawn up. When a disagreement arises between the two Houses each appoints "managers" to confer upon the matters in dispute. There is no provision to meet a deadlock other than by dissolution of the Legislative Assembly, which may be granted by the Governor. The new Legislative Assembly is regarded as representing the will of the people; and the overwhelming opinion is that the Legislative Council should recognise it.

Much interest and some controversy centres around the powers of the Governor in granting a dissolution of Parliament. Strictly speaking only the Legislative Assembly is dissolved, but Parliament is ended thereby, because both Houses are necessary to constitute a Parliament. There are two main cases in which a dissolution may be granted in addition to that mentioned above; they arise when, on a question of policy, the Ministry sustains an adverse vote in the Legislative Assembly, and when the Legislative Assembly becomes factious, or will not form a stable administration.

#### *The Legislative Council.*

The Legislative Council is a nominee Chamber consisting of a variable number of members appointed for life without remuneration. The Governor, with the advice of the Executive Council, may summon to the Legislative Council any person who is of the full age of 21 years, and is a natural-born subject of his Majesty or naturalised in Great Britain or in New South Wales. An Act to authorise the appointment of women as members of the Council received Royal Assent in February, 1926.

In making appointments to the Legislative Council the Governor acts ordinarily on the advice of the Ministry, and no special instructions have been issued to him respecting the acceptance or rejection of such advice. Not more than one-fifth of the members summoned to the Council may be persons holding office of emolument under the Crown. The seats of members become vacant by death, resignation, absence, accepting foreign allegiance, bankruptcy, accepting public contracts, or by criminal conviction. The presence of one-fourth of the members, exclusive of the President, is necessary to form a quorum for the despatch of business.

The lowest number of members during the past twenty years was fifty-one in 1911. In 1917 there were seventy-one members of the Council, and this number was not exceeded until 1921, when sixteen new appointments were made. The total membership in December, 1927, was 102.

The Council is presided over by a President appointed from among the members by the Governor. He receives an annual salary of £1,200. There is also a Chairman of Committees, who receives a salary of £700 per annum. Members of the Legislative Council are supplied with free passes on State railways and tramways.

#### *The Legislative Assembly.*

The Legislative Assembly is the elective or popular House of Parliament, and is the most important factor in the government of the country. By its power over supply it ultimately controls the Executive. It consists of ninety members elected on a system of universal adult suffrage for a maximum period of three years. Any person who is enrolled as an elector of the State is eligible to be elected to the Legislative Assembly, except persons who are

members of the Federal Legislature or of the Legislative Council, or who hold non-political offices of profit under the Crown, other than in the army or navy. It was provided in 1916 that any officer of the public service of New South Wales may be elected to the Legislative Assembly on condition that he forthwith resign his position in the service. At the close of 1918 all legal impediments to the election of women to the Legislative Assembly were removed. Several women have since contested seats at the elections, and one has been elected. The seat of a member becomes vacant in similar cases to those stated above for Legislative Councillors.

The House is presided over by a Speaker, whose election is the first business of the House when it meets after election. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and determines its procedure. There is also a Chairman of Committees elected by the House at the beginning of each session; he presides over the deliberations of the House in Committee of the Whole, and acts as Deputy-Speaker.

Payment of members of the Legislative Assembly was introduced as from 21st September, 1889. The amount fixed originally was £300 per annum, but it was increased to £500 by an Act assented to on 17th September, 1912, further increased to £875 as from 1st November, 1920, after inquiry and report by a Judge of the Court of Industrial Arbitration, reduced to £600 as from 1st July, 1922, and restored to £875 as from 1st July, 1925. An aggregate amount of £2,700 is provided for postage, each member receiving an order monthly for one-twelfth of his annual allowance. In addition each member is supplied with a free pass on State railways and tramways. The salary of the Speaker is £1,675, of the Chairman of Committees £1,115 per annum, and, since 1912, the leader of the Opposition has received an annual allowance of £250 in addition to his allowance as member.

#### *State Parliamentary Committees.*

A number of committees consisting of members of Parliament are appointed to deal with special matters connected with the business of the country and of either House; from time to time select committees are chosen to inquire into and report on specific matters for the information of Parliament and the public. Each House elects a committee to deal with its Standing Orders and with printing, and a joint committee to supervise the library. In addition there are the more important committees described below.

#### *Committees of Supply and of Ways and Means.*

These committees consist by custom of the whole of the members of the Legislative Assembly, and they deal with all money matters. The Committee of Supply debates and determines the nature and amount of the expenditure, and the Committee of Ways and Means debates and authorises the issue of the sums from the Consolidated Revenue Fund and frames the resolutions on which taxing proposals are based.

#### *Parliamentary Standing Committee on Public Works.*

A joint committee of members of the Legislative Council and Legislative Assembly, called the Parliamentary Standing Committee on Public Works, is appointed by ballot as soon as practicable after the commencement of the first session of every Parliament. The committee consists of three members of the Legislative Council and four members of the Legislative Assembly, and it has power, under the Public Works Act, to prosecute inquiries, to summon witnesses, and to compel the production of books, etc.

The Chairman receives as remuneration £3 3s. for each sitting of the committee, and the other members £2 2s. each.

Proposals for public works of an estimated cost exceeding £25,000 must be submitted and explained by a Minister in the Legislative Assembly, and then referred to the Public Works Committee for report.

#### *Public Accounts Committee.*

For the better supervision of the financial business of the State a Public Accounts Committee is appointed every session under provisions of the Audit Act, 1902, from among the members of the Legislative Assembly. It consists of five members, and is clothed with full powers of inquiry into any question arising in connection with the public accounts and upon any expenditure by a Minister of the Crown made without Parliamentary sanction. It reports on such matters to the Legislative Assembly.

#### *Committee of Elections and Qualifications.*

Within seven days of his election the Speaker is required by the Parliamentary Electorates and Elections Act, 1912, to select nine members of the Legislative Assembly to act as the Committee of Elections and Qualifications. His choice is subject to the approval of the House. The Committee is clothed with judicial powers, and each member is required to take an oath of impartiality. Its business is to inquire into and determine matters connected with election petitions and questions referred to it by the Legislative Assembly concerning the validity of any election or the return of any member, and questions involving the qualifications of members.

Its decisions are final, but it must report to the House.

#### *Commissions and Trusts.*

In addition to the Ministerial Departments, various public services are administered by Commissions, Boards, and Trusts; the more important are:—

- Railway Commissioners for New South Wales.
- Metropolitan Water, Sewerage, and Drainage Board.
- Hunter District Water Supply and Sewerage Board.
- Sydney Harbour Trust Commissioners.
- Water Conservation and Irrigation Commission.
- Commissioners of the Government Savings Bank of New South Wales.
- Board of Fire Commissioners of New South Wales.
- Metropolitan Meat Industry Board.
- Forestry Commission.
- Western Land Board.
- Main Roads Board.
- Prickly-pear Commission.

In each case the authority controls a specific service, and administers the statute law in relation to it, subject to a limited degree of supervision by a Minister.

#### *Auditor-General.*

The Auditor-General is appointed by the Governor, and holds office during good behaviour. In certain cases he may be suspended by the Governor, but he is removable from office only on an address from both Houses of Parliament. He is required to take an oath that he will faithfully perform his duties, and he is debarred from entering political life. He is endowed with wide powers of supervision, inspection, and audit in regard to the collection and expenditure of public moneys and the manner in which the public accounts are kept. He exercises control over

the issue of public moneys, and all warrants must be countersigned by him. Matters connected with the public accounts are subject to special or annual report to Parliament by him, and he may refer any matter to the Public Accounts Committee.

#### STATE ELECTORAL SYSTEM.

##### *Franchise.*

The elections of members of the Legislative Assembly are conducted by secret ballot. Adult British subjects, men and women, are qualified for enrolment as electors when they have resided in the Commonwealth for a period of six months, in the State for three months, and in the electoral district for one month prior to the issue of the writs for the election.

An amending Act of 1926 provided that inmates of public charitable institutions may be enrolled and may vote at elections in respect of the electorates for which they were enrolled at the date of admission to the institution. Persons are disqualified from voting who are of unsound mind, criminals, disorderly persons, or defaulters from justice. Since the year 1894 each elector has been entitled to one vote only. The electoral lists are compiled annually under provisions for compulsory enrolment introduced in 1921, being collected by the police and revised before a special court under the presidency of a stipendiary or police magistrate.

Electors absent from their districts have been permitted since 1913 to record their votes at any polling-place in the State, and 64,871 votes were so recorded in 1927, compared with 36,054 in 1925, and 38,752 in 1922. Postal voting in the case of persons precluded from attendance at any polling-place by reason of illness or infirmity, distance over 15 miles, or travelling was introduced in 1920, when 2,773 votes were so recorded. In 1922 there were 5,019 such votes, 4,495 in 1925, and 9,289 in 1927.

Where any qualified elector is blind or otherwise incapacitated from voting or is unable to write, he may require the deputy returning-officer to mark his ballot-paper according to his instructions. In 1925 there were 13,490 "open votes" made in this way. The number in 1927 was not recorded.

At general elections polling is conducted on the same day in all electorates. Polling-day is a public holiday from noon, and during the hours of polling (8 a.m. to 8 p.m.) the hotels are closed.

##### *Electorates and Electors.*

The electoral law provides that electorates are to be redistributed whenever directed by the Governor. In the event of there being no direction by the Governor, a distribution must take place on the expiration of nine years from the date of the last redistribution. The redistribution is made by a special commission of three persons appointed by the Governor from the Public Service of New South Wales. Prior to the passing of an amending Act in 1927 the commissioners were directed to arrange the electoral boundaries in such a way as to secure divisions containing approximately equal quotas of electors per member. The Act of 1927, however, provided for a lower quota for electoral districts outside the Cumberland-Northumberland area in such a way as to increase the number of such electorates from 32 to at least 35.

The first Legislative Assembly consisted of fifty-four members elected in thirty-two districts. As settlement extended and population increased, provision was made for increased representation, until in 1894 the electorates numbered seventy-four and the members 141. Under the Parliamentary Electorates and Elections Act of 1893, the State was divided into 125 electoral districts, each returning one member.

After the federation of the Australian States the question of a further reduction in the number of members in the State Parliament was submitted to the electors by referendum, and as a result the number of districts and of representatives was reduced to 90 in 1904.

The following table shows certain particulars as to parliamentary representation at the various dates on which the membership of the Assembly or the franchise was altered, and for each year in which elections have been held since 1901:—

Year of Election.	Number of Members of Legislative Assembly	Population per Member.	Proportion of persons enrolled to Total Population.	Total Number of Electors qualified to Vote.	Average number of Electors per Member.
1856	54	5,200	per cent. 15·5	...	...
1858	72	4,500	22·3	...	...
1880	108	6,900	25·2	...	...
1885	122	7,800	24·5	...	...
1891	141	8,100	26·7	...	...
1894	125	9,800	24·3	298,817	2,390
1901	125	10,900	25·3	346,184	2,769
1904	90	15,900	48·3	689,490	7,661
1907	90	17,000	48·8	745,900	8,288
1910	90	18,200	53·3	867,695	9,641
1913	90	20,500	55·1	1,037,999	11,533
1917	90	21,000	58·5	1,109,830	12,331
1920	90	22,800	56·1	1,154,437	12,827
1922	90	23,800	58·5	1,251,023	13,900
1925	90	25,300	58·8	1,339,080	14,879
1927	90	26,300	59·1	1,409,493	15,661

The number of individual electors cannot be ascertained for any period prior to the year 1894, as the franchise was based on the ownership of property, and electors were allowed to vote in each electorate in which they possessed the necessary qualification. The proportion of the population entitled to vote in those years, as shown above, has been calculated on the total number of votes to which the electors on the roll were entitled; they are, therefore, somewhat in excess of the actual proportions. Women voted for the first time in 1904, and since that year practically the whole of the adult population have been qualified to vote.

#### *Votes cast at Elections.*

The following table shows the voting at the elections held in New South Wales since the general election in 1894, when a system based on single electorates and the principle of "one man one vote" was introduced. The number of electors as stated for elections in the years 1894 to 1917, inclusive,

represents the gross number enrolled, and the figures for the later elections indicate the number qualified to vote:—

Year of Election.	Electors Enrolled (whole State).	Contested Electorates.					
		Electors Enrolled.	Votes Recorded.		Informal Votes.		
			Number.	Percentage.	Number.	Percentage.	
1894—Males ...	298,817	254,105	204,246	80·38	3,310	1·62	
1895—Males ...	267,458	238,233	153,034	64·24	1,354	·88	
1898—Males ...	324,339	294,481	178,717	60·69	1,638	·92	
1901—Males ...	346,184	270,861	195,359	72·13	1,534	·79	
1904 {	Males ...	363,062	304,396	226,057	74·26		
	Females ...	326,428	262,433	174,538	66·51		
Total ...	689,490	566,829	400,595	70·67	3,973	·99	
1907 {	Males ...	392,845	370,715	267,301	72·10		
	Females ...	353,055	336,680	204,650	60·78		
	Total ...	745,900	707,395	471,951	66·72	13,543	2·87
1910 {	Males ...	458,626	444,242	322,199	72·53		
	Females ...	409,069	400,139	262,154	65·52		
	Total ...	867,695	844,381	584,353	69·20	10,393	1·78
1913 {	Males ...	553,633	534,379	385,838	72·20		
	Females ...	484,366	468,437	302,389	64·55		
	Total ...	1,037,999	1,002,816	688,227	68·63	14,439	2·10
1917 {	Males ...	574,308	525,681	328,030	62·40		
	Females ...	535,522	487,585	295,354	60·57		
	Total ...	1,109,830	1,013,266	623,384	61·52	5,844	·94
1920 {	Males ...	593,244	593,244	363,115	61·21		
	Females ...	561,193	561,193	285,594	50·89		
	Total ...	1,154,437	1,154,437	648,709	56·19	62,900	9·70
1922 {	Males ...	636,662	636,662	466,949	73·34		
	Females ...	614,361	614,361	408,515	66·49		
	Total ...	1,251,023	1,251,023	875,464	69·98	31,771	3·63
1925 {	Males ...	678,749	678,749	489,126	72·06		
	Females ...	660,331	660,331	435,853	66·00		
	Total ...	1,339,080	1,339,080	924,979	69·07	30,155	3·28
1927 {	Males ...	714,886	706,316	*	*83·28		
	Females ...	694,607	687,938	*	*81·07		
	Total ...	1,409,493	1,394,254	1,160,777	82·54	15,036	1·08

\* Incomplete, only partly recorded.

The analysis shown above indicates that the proportion of electors who fail to record their votes is large, even if due allowance is made for obstacles to voting, especially in sparsely-settled districts. The highest proportion of votes to enrolment, 80·4 per cent., was recorded in 1894, when there was a strenuous contest on the question of fiscal reform; and the lowest proportion, 56·2 per cent. was recorded in 1920. The elections in the latter year were the first under the system of proportional representation, and the method of voting was somewhat complex, the electors being required to sign a statutory declaration before obtaining a ballot-paper and to record a preference for every name on the ballot-paper. Under these conditions an unusually large number of electors refrained from voting.

Before the elections in 1922 the method was simplified, the statutory declaration was abolished, and the recording of preferences was required only to the extent of the number of candidates to be elected. The proportion of voters to enrolment was greater at the elections of 1922 and 1925 than it had been at most elections under the system of single-member electorates. It is probable that provision for compulsory enrolment and the simplification of the method of voting contributed to this result, though there is little doubt that the main factor which influences the size of the polling is the intensity of interest in party issues.



The number of women exercising their right to vote has always been less, relatively and absolutely, than the number of men. The proportion of women voters to women enrolled has generally been about two-thirds, but in 1907 and 1917 it was approximately 60 per cent. and in 1920 only one-half.

It is noteworthy that, whereas at the elections of 1910 and previous years a greater proportion of electors enrolled recorded their votes at State than at Federal elections, the proportion was greater at Federal than at State elections from 1913 and 1920. The change was due doubtless to the dominance of war issues, for the proportion of votes cast at the State elections of 1922 rose to 69.98 per cent. as against a decline to 56.16 at the Federal elections of that year. At the Federal elections of 1925 compulsory voting was introduced for the first time.

#### *Proportional Representation.*

The modified system of voting intended to secure proportional representation was introduced by an Act passed in 1918 and operated at the general elections of 1920, 1922, and 1925. A description of the system and an analyses of the party representation secured under it is shown on page 42 of the Year Book for 1926-27.

#### *Reversion to Single Seats.*

In 1926 an Act was passed restoring the system of single seats and providing for preferential voting. Three Electoral District Commissioners were appointed to redistribute the State into ninety electorates, each to be represented by one member.

It was further provided that any voter might number the candidates in order of preference on his ballot-paper and that, in counting votes, the candidate elected should be that one who secured an absolute majority of votes either of first preferences outright or of first preferences plus votes transferred to him in due order of preference by excluding in turn candidates with the lowest number of votes and re-allotting their votes according to the next preference indicated.

Under the new system casual vacancies occurring after the dissolution of the present (twenty-seventh) Parliament will be filled at by-elections.

#### *State Parliaments.*

A list of the Parliaments since 1889, when payment of members was instituted, is shown below:—

Number of Parliament.	Return of Writs.	Date of Opening.	Date of Dissolution.	Duration.			Number of Sessions.
				yrs.	mths.	dys.	
14	22 Feb., 1889...	27 Feb. 1889...	6 June 1891...	2	3	15	4
15	11 July, 1891...	14 July 1891...	25 June 1894...	2	11	14	4
16	3 Aug., 1894...	7 Aug. 1894...	5 July 1895...	0	11	2	1
17	10 Aug., 1895...	13 Aug. 1895...	8 July 1898...	2	10	28	4
18	13 Aug., 1898...	16 Aug. 1898...	11 June 1901...	2	9	29	5
19	17 July, 1901...	23 July 1901...	16 July 1904†	3	0	0	4
20	20 Aug., 1904...	23 Aug. 1904...	20 Aug., 1907†	3	0	0	4
21	26 Sept., 1907...	2 Oct. 1907...	14 Sept. 1910...	2	11	19	5
22	31 Oct. and 10 Nov., 1910†	15 Nov. 1910...	6 Nov. 1913...	2	11	26	5
23	23 and 29 Dec., 1913† ...	23 Dec. 1913...	21 Feb. 1917...	3	1	29	5
24	10, 16, and 23 April, 1917† ...	17 April 1917...	18 Feb. 1920...	2	10	8	4
25	21 April, 1920...	27 April 1920...	17 Feb. 1922...	1	10	25	3
26	19 April, 1922...	26 April 1922...	18 April 1925†	3	0	0	5
27	20 June, 1925...	24 June, 1925...	7 Sept., 1927...	2	2	17	5
28	29 Oct., 1927...	3 Nov., 1927...	Sitting*	.....	.....	.....	...

\*30th April, 1928.

†Expired by effluxion of time.

‡Under system of second ballots.

The normal duration of Parliament is three years. Unless previously dissolved Parliament expires by effluxion of time three years after the day prior to the original date of the return of the writs.

On account of war conditions and the disturbed state of public affairs, it was deemed advisable to extend the 23rd Parliament to a period exceeding the three years fixed by the Constitution Act, and the Legislative Assembly Continuance Act, 1916, was passed to provide for an extension from three years to four years. The Parliament, however, terminated after 3 years and 60 days.

*State Ministers.*

The various Ministries which have held office since 1894, together with the duration in office of each, are shown below. The life of a Ministry is not co-terminous with the life of a Parliament. In sixty-nine years under the present system there have been forty-seven Ministries, but only twenty-seven Parliaments. Up to 3rd August, 1894, twenty-seven Ministries had held office.

Ministry.		In Office.		Duration.
Number.	Name.	From—	To—	
				yrs. mths. days.
28	Reid ... ..	3 Aug. 1894	13 Sept. 1899	5 1 11
29	Lyne ... ..	14 Sept. 1899	27 Mar. 1901	1 6 14
30	See ... ..	28 Mar. 1901	14 June 1904	3 2 18
31	Waddell ... ..	15 June 1904	29 Aug. 1904	0 2 15
32	Carruthers ... ..	30 Aug. 1904	1 Oct. 1907	3 1 2
33	Wade... ..	2 Oct. 1907	20 Oct. 1910	3 0 19
34	McGowen ... ..	21 Oct. 1910	29 June 1913	2 8 9
35	Holman ... ..	30 June 1913	15 Nov. 1916	3 4 16
36	Holman (National) ... ..	16 Nov. 1916	12 April 1920	3 4 28
37	Storey ... ..	13 April 1920	10 Oct. 1921	1 5 27
38	Dooley ... ..	10 Oct. 1921	20 Dec. 1921	0 2 11
39	Fuller... ..	20 Dec. 1921	20 Dec. 1921	About 7 hours
40	Dooley ... ..	20 Dec. 1921	13 April 1922	0 3 24
41	Fuller (Coalition) ... ..	13 April 1922	17 June 1925	3 2 4
42	Lang ... ..	17 June 1925	26 May 1927	1 11 9
43	Lang ... ..	27 May 1927	18 Oct. 1927	0 4 22
44	Bavin ... ..	19 Oct. 1927	.....	.....

## COST OF STATE PARLIAMENTARY GOVERNMENT.

The following statement shows the cost of State Parliamentary Government in New South Wales during recent years. Expenses of Federal and Local Governments are not included:—

Head of Expenditure.	1915-16.	1923-24.	1925-26.	1926-27.
	£	£	£	£
<b>Governor—</b>				
Salary ... ..	5,000	5,000	5,000	5,000
Salaries, etc., of Staff... ..	3,549	3,923	4,028	4,296
Other expenses ... ..	1,547	7,159	1,945	1,252
	10,096	16,082	10,973	10,548
<b>Executive Council—</b>				
Salaries of Officers ... ..	...	481	570	573
Other expenses ... ..	...	186	333	328
	...	667	903	901
<b>Ministry—</b>				
Salaries of Ministers ... ..	11,040	18,000	23,420	23,393
Conferences, Special Reports, etc. ...	5,244	3,519	1,078	5,744
	16,284	21,519	24,498	29,137
<b>Parliament—</b>				
<b>Legislative Council—</b>				
Salaries of President and Chairman of Committees ...	1,220	1,425	1,900	1,900
Railway passes for Members ...	6,070	15,262	15,906	17,528
Postage for Members ... ..	...	60	...	219
<b>Legislative Assembly—</b>				
Salaries of Speaker and Chairman of Committees ... ..	1,740	2,240	2,790	2,790
Allowances to Members* ... ..	49,335	47,062	67,417	67,625
Railway passes for Members ...	10,387	17,312	17,462	17,506
Postage for Members ... ..	1,770	2,650	2,700	2,644
<b>Both Houses—Joint expenditure—</b>				
Standing Committee on Public Works—				
Remuneration of Members ...	3,599	5,026	3,966	4,469
Salaries of Staff and contingencies ... ..	2,626	2,185	2,145	2,127
Salaries of Reporting Staff ...	included	8,383	8,269	7,595
Library—Salaries of Staff ...	in	2,911	2,541	2,589
Contingencies... ..	“other”	1,708	942	934
Other Salaries of Staff ... ..	below.	21,058	23,516	23,958
Printing—Hansard ... ..	6,689	4,750	6,189	5,935
Other ... ..	14,967	8,852	13,562	15,752
Other Expenses ... ..	24,490	5,512	5,478	5,309
	113,893	146,396	174,783	178,880
<b>Electoral—</b>				
Salaries ... ..	1,123	1,979	2,104	2,526
Contingencies ... ..	56,491†	14,157	8,195	23,092
	57,614	16,136	10,299	25,618
<b>Royal Commissions and Select Committees</b>	4,114	4,017	7,790	3,660
<b>Grand Total ... ..</b>	£ 202,001	204,817	229,246	248,744
<b>Per head of population ... ..</b>	2s. 2d.	1s. 10d.	2s. 0d.	2s. 1d.

\* Excluding salaries of Ministers, Speaker, and Chairman of Committees. † Includes £30,244 Liquor Referendum.

In considering such a table as the above it is necessary to remember that there is no clear line of demarcation between costs incurred in respect of parliamentary government and the costs of ordinary administration. This is to be observed particularly in regard to ministers of the Crown who fill dual roles as administrative heads and parliamentary representatives. Similar difficulties arise in regard to Royal Commissions, which are, in many cases, partly administrative inquiries. In the absence of any means of dissecting the expenditure under these headings the whole of it has been treated as incidental to the system of parliamentary government. On the other hand such factors as the costs of ministerial motor cars and the salaries of ministers' private secretaries are omitted from account as appertaining mainly to administration.

The cost of Parliamentary Government in 1926-27 was swollen considerably by preparations for the triennial elections. However, it represented less than 1 per cent. of the Governmental expenditure during that year, that is, the total expenditure from Consolidated Revenue less expenditure on business undertakings.

The foregoing statement does not, however, represent the total cost of Parliamentary Government because it excludes the expense of Federal government. For the year 1925-26 this amounted to £511,474 for the whole Commonwealth, equivalent to 1s. 8d. per head of population.

### THE COMMONWEALTH.

A detailed account of the inauguration of Federation and the nature and functions of the Federal Parliament in their relation to the State was published in the Year Book for 1921 at pages 38-40 and 625.

The federation of the six Australian States was inaugurated formally on 1st January, 1901, for their mutual benefit in matters upon which it was agreed that joint action was desirable. The broad principles of federation were:—The transfer of limited and defined powers of legislation to a Federal Parliament consisting of a Senate and a House of Representatives, the former being a revisory Chamber wherein the States are equally represented, and the latter, the principal Chamber, consisting of members elected from the States in proportion to their population; complete freedom of action for the State Parliaments in their own sphere; a High Court to determine the validity of legislation; and an effective method of amending the Constitution. State laws remain operative in all spheres until superseded by laws passed by the Federal Parliament in the exercise of its assigned powers. State laws, however, are invalid only to the extent of their inconsistency with valid Federal enactments.

The numbers of representatives elected from the various States to the House of Representatives are as follow:—New South Wales, 28; Victoria, 20; Queensland, 10; South Australia, 7; Western Australia, 5; Tasmania, 5. In addition, one representative of the Northern Territory is elected to attend and participate in debates without having the right to vote.

For the purpose of electing representatives to the Senate of the Federal Parliament, New South Wales is treated as one constituency, returning six members, each for six years, three of whom retire triennially. Its twenty-eight members of the House of Representatives are elected for three years from single-member constituencies. The system of voting is preferential. Otherwise the electoral system is similar to that of the State. In 1924 the Commonwealth Electoral Act was amended to make provision for compulsory voting.

An analysis of the voting at Senate elections in New South Wales up to 1919 was published in the 1921 edition of this Year Book at page 40; the voting at elections of members of the House of Representatives from New South Wales has been as follows:—

Elec- tions.	Electors Enrolled (Contested Divisions only).		Votes Recorded.		Percentage of Votes Re- corded to Electors Enrolled.			Informal Votes.	
	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Number.	Proportion per cent.
1901	315,962	...	215,105	...	68·08	...	68·08	4,070	1·70
1903	303,254	274,763	164,133	118,381	54·12	43·08	48·88	7,834	2·77
1906	363,723	314,777	216,150	141,227	59·43	44·87	52·67	11,705	3·28
1910	431,702	379,927	294,049	207,868	68·11	54·71	61·84	8,002	1·59
1913	554,028	482,159	405,152	312,703	73·13	64·85	69·28	22,262	3·10
1914	491,066	429,906	351,172	257,581	71·51	59·92	66·10	14,816	2·43
1917	484,854	447,437	370,618	292,925	76·44	65·47	71·17	19,874	2·98
1919	527,779	508,129	385,614	308,183	73·06	60·65	66·97	26,517	3·82
1922	517,388	498,209	330,362	239,980	63·85	48·17	56·16	25,823	4·53
1925	640,533	627,214	581,678	563,215	90·81	89·80	90·31	21,389	1·87

The percentage of voters increased steadily at the elections during the period 1903-1913; the improvement was not continued in 1914, when the electoral contest was modified in consequence of the outbreak of war in Europe, but in 1917, when considerable political feeling was excited by the question of compulsory military service, the percentage was higher than at any Federal elections before the introduction of compulsory voting.

The numbers of electors enrolled and votes recorded for the Senate elections of 1925 were the same as for the House of Representatives, but the number of informal votes cast was 73,638 or 6·43 per cent.

#### FEDERAL REFERENDA.

Analyses of the voting on all Federal questions submitted to referenda were shown in the 1921 edition of this Year Book at page 42, and in the 1926-27 edition at page 47.

#### SEAT OF FEDERAL GOVERNMENT.

An outline of the provisions of the Constitution Act with respect to the seat of government and the development of the territory was published on page 48 of the Year Book for 1926-27. The Federal Parliament commenced its regular sittings at Canberra on 9th May, 1927.

## DEFENCE.

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UPON the inauguration of the Commonwealth the duty of providing for the defence of Australia devolved upon the Federal Government, and the Parliament of the Commonwealth has paramount power, subject to Imperial approval, to legislate for the naval and military defence of Australia, and for the control of the forces to execute and maintain the federal laws. The Constitution provides that the States may not raise nor maintain forces, but enjoins the Commonwealth to protect every State against invasion, and, on the application of the Executive Government of the State, against domestic violence. It is provided in the Defence Act that the Citizen Forces may not be called out nor utilised in connection with an industrial dispute.

In terms of the Defence Act male citizens between the ages of 18 and 60 years are liable for service in the citizen forces for home defence in time of war. Male citizens are liable also to undergo military or naval training between the ages of 12 and 26 years.

The system of compulsory training was brought into operation on 1st January, 1911. The duration of the training in each year is prescribed by the Act, the trainees being liable for service in the following age groups:—Junior cadets, 12 to 14 years of age; senior cadets, 14 to 18 years; citizen forces, 18 to 26 years.

The duration of the training was curtailed during the war period, also in 1921 and in 1922 owing to the resolutions passed at the Washington Conference on limitation of armaments. At present, training is commenced by senior cadets in the year in which they reach the age of 17 years, one year later they are transferred to the citizen forces to undergo courses during a further period of three years. The training of boys under 16 years as part of the defence system was suspended in 1922, though they were still required to register during the months of January and February of the year in which they reached the age of 14 years.

Junior cadet training in relation to boys of the ages of 12 and 13 years consists almost entirely of a course of physical drill on modern lines. Legally it is universal and compulsory, but, in practice, it is confined to the larger schools. All boys of the prescribed ages are trained unless physically incapacitated. The system is carried out by school teachers advised by the officers of the Department of Defence. Such teachers formerly received instruction at special schools but, latterly, an instructor has been added to the staff of the Teachers' Training College.

### MILITARY DEFENCE.

The Commonwealth is organised for defence purposes into six military districts, corresponding as far as practicable with the political divisions into States. The second military district represents the State of New South Wales, excepting the far North Coast and the Barrier district, which are attached to Queensland and South Australia respectively, and the Deniliquin, Moama, and Corowa districts attached to Victoria.

A military college is maintained at Duntroon in the Federal Capital Territory for the training of officers.

The following table shows the strength of the military forces of the Commonwealth on 1st August, 1926:—

Military District.	Perma- nent.	Citizen Forces.	Officers on Un- attached List.	Officers.	Chap- lains.	Total.
				Reserve.		
Headquarters ... ..	148	10	...	...	6	164
1. Queensland ... ..	144	4,764	55	986	58	6,007
2. New South Wales ... ..	657	16,592	150	2,633	68	20,100
3. Victoria ... ..	515	13,832	139	3,001	138	17,625
4. South Australia ... ..	88	4,147	52	848	40	5,175
5. Western Australia ... ..	180	2,269	7	621	32	3,059
6. Tasmania ... ..	68	1,270	25	268	20	1,651
Total ... ..	1,750	42,884	428	8,357	302	53,781

#### NAVAL DEFENCE.

The naval defence of Australia was undertaken by the Imperial Navy under agreement between the Imperial Government and the Governments of Australia and New Zealand until 1913, when the Imperial squadron was replaced by Australian war vessels.

The fleet of the Australian Navy consisted in January, 1927, of 4 light cruisers, 11 destroyers, 1 flotilla leader, 1 depot ship, 1 seaplane carrier, 1 submarine, 4 sloops, 2 fleet auxiliaries and a boys' training ship. Two cruisers each of 10,000 tons displacement and 1 submarine are being constructed.

The seagoing force consisted of 435 officers and 4,375 ratings on active service in the Royal Australian Navy in January, 1927. More than 90 per cent. of the personnel were Australians, the remainder being on loan from the Royal Navy.

Reserves of officers and men for the Royal Australian Navy are provided from four services, viz:—(a) Ratings who have completed periods of service; (b) officers permanently employed in the mercantile marine; (c) compulsory trainees of citizen forces; (d) volunteers enrolled for service in any capacity in time of war or emergency. The personnel of the Royal Australian Naval Reserve in January, 1927, comprised 239 officers and 5,609 men.

Junior officers are trained at the Naval College, Jervis Bay, which contained 54 cadet midshipmen undergoing training in January, 1927. Junior seamen ratings are trained on the H.M.A.S. "Tingira" at Sydney, there being 192 trainees in January, 1927. There were, in addition, sea-going reserves of 58 officers, fleet reserves of 88 men and volunteer reserves of 8 officers and 47 men, besides auxiliary services of 34 officers and 131 men. The general depot of the Navy is at Westernport, Victoria, where the more advanced training of officers and men is conducted.

#### AIR DEFENCE.

An Australian Air Force for defence purposes was established in 1921 by proclamation under the Defence Act. It formed part of the military forces until the Air Force Act was passed in September, 1923, to provide for its administration as a separate branch of the defence system. The present approved establishment of the Permanent Air Force is 95 officers and 765 airmen, and of the Citizen Air Force 54 officers and 285 airmen.

## COMMERCE.

POWER to make laws with respect to trade and commerce with other countries and between the States of Australia is vested in the Commonwealth Parliament, and in the year 1901 control of the Customs and Excise Department of New South Wales was transferred to the Commonwealth.

The first Federal Act relating to customs came into operation by proclamation on 4th October, 1901. The Act, with amendments, provides administrative machinery in relation to customs, prescribes the manner in which duties are to be computed and paid, and authorises the inspection of imports and exports.

Prior to federation a different tariff was in operation in each State, and interstate trade was subject to the same duties as oversea trade. On 8th October, 1901, when the Customs Tariff Act of 1902 was introduced in the Federal Parliament, a uniform tariff for all the States was imposed, trade and commerce between the States became free, and the power of the Commonwealth to impose duties of customs and excise became exclusive, except that the State of Western Australia was given the right to levy duty on interstate imports for a period of five years.

By the Customs Act certain imports are prohibited, and the prohibition may be extended by proclamation to other commodities. The conditions under which goods for export are prepared may be prescribed by regulation, and the exportation of goods which do not conform to the required standards may be prohibited.

In terms of the Commerce (Trade Descriptions) Act, 1935, it is required that the imports or exports of the following classes of goods must bear a prescribed trade description, viz., articles used for food or drink by man, or used in the manufacture or preparation thereof; medicines; manures; apparel (including boots and shoes) and the material from which it is manufactured; jewellery; seeds and plants; brushware.

In the administration of matters relating to trade and customs, the Department of Trade and Customs, under the direction of a Minister of the Crown, is assisted by the Tariff Board appointed under an Act which commenced in March, 1922. The Board consists of four members, including an administrative officer of the Department of Trade and Customs, who is chairman. The Act prescribes that the Minister must refer to the Board for investigation such matters as the classification of goods for duty; the determination of the value of goods for duty; appeals against the decisions of the Comptroller-General in respect of the interpretation of the tariff; the necessity for new or increased or reduced duties, or for bounties; the effect of bounties; proposals for applying preferential tariffs to any country; and complaints that a manufacturer is taking undue advantage of the protection afforded by the tariff to charge unnecessarily high prices. In addition, the Minister may request the Board to report as to the effect of the customs and excise tariffs and of the customs laws on the industries of the Commonwealth, and other matters affecting the encouragement of industries in relation to the tariff.

Certain inquiries conducted by the Tariff Board must be held in public, *e.g.*, those relating to revision of the tariff, to proposals for bounties, or to complaints that a manufacturer is taking undue advantage of the protection afforded by the tariff.

The Federal Department of Markets was established in 1925 to take over functions of the Department of Trade and Customs relating to the oversea



marketing of Australian produce and to immigration, also the administration of the Commonwealth Board of Trade. The functions of the Board of Trade include the collection and dissemination of commercial and industrial intelligence, the control of Trade Commissioners abroad, and the investigation of matters affecting trade, commerce, and industry. The Board, under the presidency of the Prime Minister, includes in its membership representatives of the Customs Department, the Chamber of Commerce, the Chamber of Manufactures, and of other kindred organisations. A section of the board has been established in each State of the Commonwealth.

The oversea export of a number of Australian products is controlled by boards constituted under Federal legislation to organise the marketing of these commodities. As a preliminary step towards initiating this form of control special legislation is passed in respect of each commodity, but it does not become effective until the project has been submitted to a poll of the producers. If a majority of the producers are favourable, a board elected by them is appointed to supervise the export from Australia and the subsequent sale and distribution of the product, and the expenses are defrayed by means of a levy on the exports. Thus boards have been organised in respect of dairy produce (butter and cheese), dried fruits (sultanas, currants, and lexias), and canned fruits (apricots, peaches, and pears, and any other varieties as may be prescribed). Legislation was enacted also in respect of fresh fruits (apples and pears), but the poll of growers proved unfavourable and the Act was not brought into operation.

In terms of the Export Guarantee Act, 1924, the Federal Government may guarantee bank advances made to boards constituted to control the export of Australian products, the maximum guarantee being 80 per cent. of the market value of the produce. The Act also authorises the Government to grant assistance, upon the recommendation of the Commonwealth Board of Trade, in respect of the export of Australian primary products, the total liability which may be incurred in this manner being limited to £500,000.

For some products, assistance has been given by the Government of the Commonwealth in the form of bounties payable on export, but all such bounties, except for fortified wine, have expired by effluxion of time. Details are shown in the chapter entitled "Factories."

#### STATISTICS OF IMPORTS AND EXPORTS.

Statistics relating to the oversea trade of the various States of Australia are recorded by the Federal Department of Trade and Customs. Particulars of interstate trade have not been available since 12th September, 1910, when the Federal Government decided that the records should be discontinued. Therefore the figures in this chapter relate to oversea trade only—that is, the trade of New South Wales with countries outside Australia.

#### OVERSEA TRADE.

The value of the goods imported and exported as shown in the following tables represents the value as recorded by the Department of Trade and Customs. The value of goods imported represents the amount on which duty is payable or would be payable if the duty were *ad valorem*. The value of goods exported is the value in the principal markets of New South Wales.

In accordance with a provision of the Customs Act of 1901-1925, the value of goods subject to *ad valorem* duty is the sum of the following:—  
(a) The actual price paid by the Australian importer plus any discount or

other special deduction, or the current domestic value in the country of export at the date of exportation, whichever is the higher; (b) all charges for placing the goods free on board at the port of export; and (c) 10 per cent. of the amounts (a) and (b).

The Customs Act provided that where an invoice shows the value of goods in any currency other than British, the equivalent value in British currency is to be ascertained "according to a fair rate of exchange." Until 8th December, 1920, it was the practice of the Customs authorities to assess the value as in the country of export at the time of shipment, and to convert foreign values on the basis of the mint par rate of exchange.

Since that date, in consequence of a decision of the High Court of Australia, the values for statistical purposes, as well as for duty, have been based on the commercial rates of exchange at the date of exportation.

The total value of oversea imports and exports, as recorded by the Customs Department during the years 1901 and 1911 and in each of the last seven years is shown in the following table, with the value per head of population:—

Year ended 30th June.	Imports.	Exports.			Total Trade Oversea.
		Australian Products.	Other Products.	Total.	
	£	£	£	£	£
1901*	17,560,207	†	†	18,210,627	35,770,834
1911*	27,343,428	29,938,415	2,222,986	32,161,401	59,504,829
1921	72,466,388	48,302,717	4,299,089	52,601,806	125,068,194
1922	43,321,478	44,728,907	3,283,948	48,012,855	91,334,333
1923	55,010,083	40,175,208	2,406,714	42,581,922	97,592,005
1924	58,225,040	40,506,465	2,640,681	43,147,146	101,372,186
1925	66,321,747	58,212,750	2,364,455	60,577,205	126,898,952
1926	64,009,919	51,565,742	2,436,072	54,001,814	118,011,733
1927	68,940,081	60,407,280	2,407,797	62,815,077	131,755,158

Per head of Population.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1901*	12 16 11	†	†	13 6 6	26 3 5
1911*	16 8 5	17 19 7	1 6 8	19 6 3	35 14 8
1921	34 13 4	23 2 2	2 1 1	25 3 3	59 16 7
1922	20 7 2	21 0 5	1 10 10	22 11 3	42 18 5
1923	25 6 3	18 9 9	1 2 2	19 11 11	44 18 2
1924	26 6 11	18 6 6	1 3 11	19 10 5	45 17 4
1925	29 8 8	25 16 9	1 1 0	26 17 9	56 6 5
1926	27 17 1	22 8 9	1 1 3	23 10 0	51 7 1
1927	29 7 3	25 14 7	1 0 6	26 15 1	56 2 4

\* Year ended 31st December.

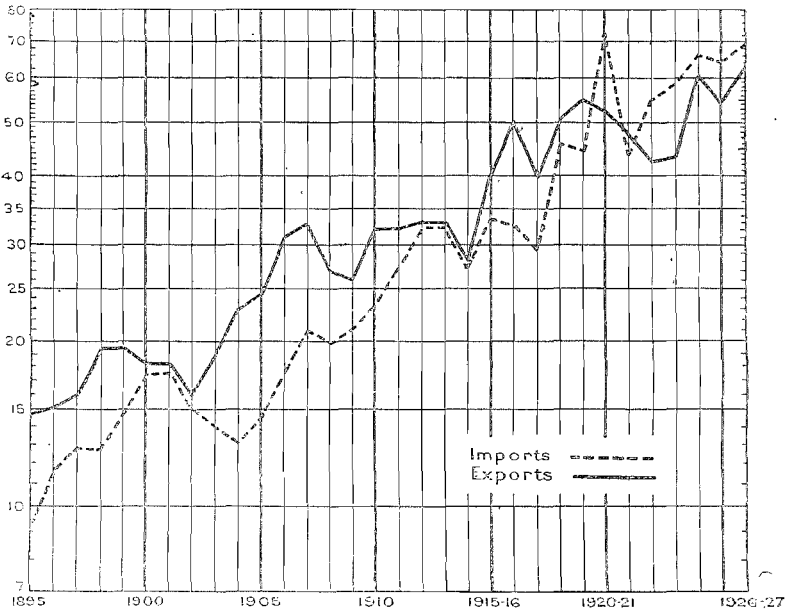
† Not available.

These figures, with the exception of those relating to the year 1901, do not include the value of exports in the form of ships' stores.

The increase in the aggregate value of trade during the decennium 1901 to 1911 was the result of industrial expansion. Since 1911 there has been further progress in many industries, but the increase in trade between 1911 and 1921 was due in a large measure to enhanced prices.

OVERSEA TRADE, 1895 TO 1926-27.

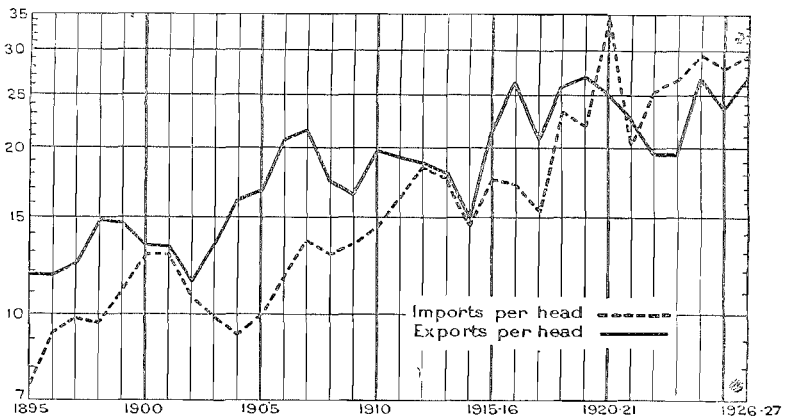
Ratio Graph.



The numbers at the side of the graph represent £1,000,000.

OVERSEA TRADE PER HEAD OF POPULATION, 1895 TO 1926-27.

Ratio Graph.



The numbers at the side of the graph represent £ per head.

The diagrams are ratio graphs, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graphs.

During 1920-21 the value of imports was abnormally high, owing to extraordinary conditions affecting Australian trade. Anticipating protracted delivery and a curtailment of the quantity ordered Australian importers placed large orders abroad during the post-war period of trade expansion. Owing to trade depression in other countries the Australian orders were delivered promptly and in full quantity, with the result that the value of imports expanded beyond immediate requirements in 1920-21, and declined in the following year.

In 1922-23 there was an increase of 27 per cent. in the value of imports, trade having been stimulated by good returns from the wool, wheat, etc., of the previous seasons. The expansion continued during 1923-24 though the rate of increase slackened.

In the following year there was an increase of over £8,000,000, but the imports included gold to the value of £6,000,000. In 1925-26, although the volume of imports was again very large, the imports of gold declined by £5,600,000, and the total value was £2,300,000 lower than in the previous year. The value in 1926-27 was the highest recorded in any year except 1920-21.

The bulk of the exports are products of the rural industries, and the quantity available for export varies with seasonal conditions. Between 1901 and 1911 the value of exports, increasing with production, rose by 77 per cent. During the following decade the industries suffered severely by reason of drought and war, which caused a diminution in production, but the value of exports continued to rise under the influence of higher prices. The value of the exports during the years 1921-23, however, include important items of export, *e.g.*, wool, meat, wheat, etc., which were purchased by the Imperial Government during the war period and stored in Australia pending shipment.

The decline in the values between 1921 and 1923 was due largely to falling prices. In 1923-24 high prices obtained for the wool clip caused the value of exports to rise above that of the preceding year, notwithstanding a decline in such important items as hides and skins, frozen meat, and butter.

In 1924-25 large quantities of wool, wheat, and butter were exported, and prices for such commodities in oversea markets were at a high level. In the years 1925-26 there was a decline of over £7,200,000 in the value of wheat and flour exported, and of more than £1,000,000 each in respect of butter and of lead. These decreases were offset to some extent by an increase of £3,000,000 in the export of bullion and specie. The total value of exports was £6,575,000 below the level of the previous year. In 1926-27 the total value of exports was the highest yet recorded, but it included over £10,000,000 of gold, which was transferred to the United States, whence a large amount was imported in 1924-25.

A comparison of the annual values of imports with those of exports shows that there was an excess of imports in each of the last seven years except in 1921-22, when there was an excess of exports amounting to £4,691,000. The excess of imports ranged from £20,000,000 in 1920-21 to £5,745,000 in 1924-25, and amounted to £6,125,000 in 1926-27.

The foregoing figures relating to imports and exports include bullion and specie, gold being an item of domestic produce in Australia. In 1924-25 a large quantity of gold was imported, its value being greater than the excess of the total imports over exports. In the following years the movement was in the opposite direction. It must be noted, however, that consignments of specie and bullion which are received at or despatched from New

South Wales are to be regarded as affecting the trade of the whole Commonwealth rather than that of New South Wales.

Year ended 30th June.	Imports of Bullion and Specie.	Exports of Bullion and Specie.		
		Australian Produce.	Other Produce.	Total.
1901*	£ 492,848	£ †	£ †	£ 3,816,844
1911*	1,254,508	3,281,701	1,096,936	4,378,637
1921	29,392	3,770,195	15,275	3,785,470
1922	68,369	2,027,004	1,550	2,028,554
1923	48,023	41,239	600	41,839
1924	61,681	526,617	...	526,617
1925	6,007,967	133,001	3,300	136,301
1926	379,760	3,251,469	14,910	3,266,379
1927	503,134	10,304,680	6,000	10,310,680

\* Calendar year.

† Not available.

The bullion and specie imported during 1926-27 included £298,636 from New Zealand, £160,565 from New Guinea, and £29,761 from Papua. Of the exports during that year £10,000,910 were sent to the United States and £255,300 to New Zealand.

#### DIRECTION OF TRADE.

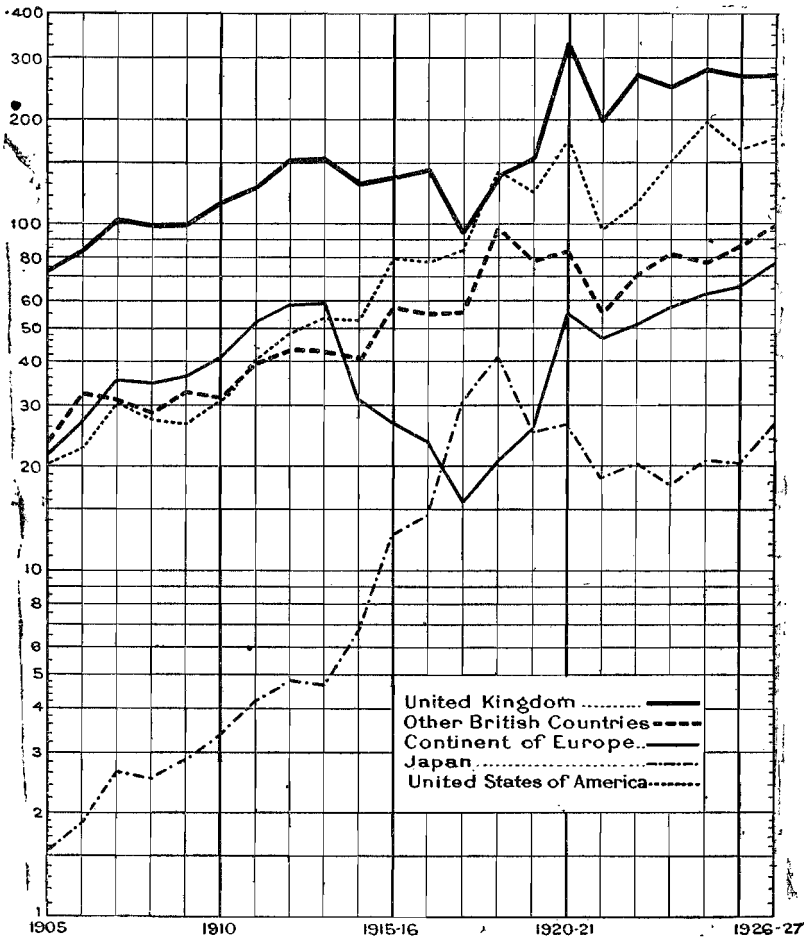
The direction of the oversea trade of New South Wales is indicated in the following statement, which shows the value of imports to and of exports from the principal countries during the year 1926-27 in comparison with similar information for the years 1911 and 1920-21. Particulars regarding the imports relate to the country of origin.

Country.	Imports (Country of Origin).			Exports.		
	1911.	1920-21.	1926-27.	1911.	1920-21.	1926-27.
	£	£	£	£	£	£
United Kingdom ... ..	12,675,664	32,960,437	26,830,519	12,261,971	20,630,150	15,416,894
Canada ... ..	331,585	1,857,411	1,930,729	113,582	125,242	231,035
South African Customs Union ... ..	173,971	286,005	606,384	323,792	463,902	181,254
India and the East ... ..	1,206,090	3,337,251	4,253,753	3,167,958	1,699,290	1,153,690
New Zealand ... ..	1,722,021	965,682	1,596,015	1,686,996	4,797,519	2,654,937
South Sea Islands ... ..	463,848	1,511,143	1,309,547	529,421	2,083,277	1,403,661
Other British Possessions...	50,029	322,214	224,152	8,430	2,066,382	145,174
<b>Total, British ... ..</b>	<b>16,622,908</b>	<b>41,240,143</b>	<b>36,751,099</b>	<b>18,092,150</b>	<b>31,865,762</b>	<b>21,186,645</b>
Belgium ... ..	372,049	812,096	358,162	2,431,797	2,732,907	3,742,784
France ... ..	916,918	1,440,873	1,839,369	3,640,477	2,655,324	8,563,244
Germany ... ..	2,429,272	9,548	1,722,933	4,201,080	628,101	4,462,654
Italy ... ..	226,029	337,432	578,896	254,745	795,299	1,207,515
Netherlands ... ..	143,906	229,575	320,721	71,799	409,503	351,848
Norway ... ..	186,590	445,052	374,127	237	30,817	808
Sweden ... ..	262,642	1,126,569	757,829	619	98,687	80,147
Switzerland ... ..	401,800	874,319	1,058,931	232	8,808	6,717
Other European ... ..	278,759	271,134	610,332	248,780	585,920	181,891
United States and Hawaii	4,020,412	17,403,732	17,951,675	823,399	7,518,329	14,908,774
Japan ... ..	233,770	2,612,101	2,643,349	667,420	2,147,444	5,465,688
Netherlands East Indies ...	370,408	2,803,999	2,936,755	218,431	1,095,575	637,723
China and other Eastern Countries ... ..	230,483	577,275	535,655	381,012	403,648	406,296
South Sea Islands ... ..	288,930	149,802	112,898	587,141	573,972	383,261
Other Foreign Countries ...	168,502	2,132,738	287,350	540,082	1,051,710	1,229,077
<b>Total Foreign ... ..</b>	<b>10,720,520</b>	<b>31,226,245</b>	<b>32,188,982</b>	<b>14,069,251</b>	<b>20,736,044</b>	<b>41,628,432</b>
<b>Total, All Countries ...</b>	<b>27,343,428</b>	<b>72,466,388</b>	<b>68,940,081</b>	<b>32,161,401</b>	<b>52,601,806</b>	<b>62,815,077</b>

In the oversea trade of New South Wales the value of the goods to and from the United Kingdom exceeds the trade with any other country. In 1926-27 imports valued at £26,830,519 were the products of Great Britain and Northern Ireland, and exports shipped thereto were valued at £15,416,894. The increases since 1911, viz., imports £14,165,000 and exports £3,155,000, have not been sufficient to maintain the relative position of the United Kingdom in regard to the oversea trade of New South Wales, as the proportion of imports has declined from 46.4 per cent. to 38.9 per cent. and of exports from 38.1 to 24.5 per cent. The figures shown in respect of trade with the United Kingdom in 1926-27 are exclusive of imports from and exports to the Irish Free State, valued at £1,624 and £37,800 respectively.

OVERSEA IMPORTS—COUNTRY OF ORIGIN—1905 TO 1926-27.

Ratio Graph.



The numbers at the side of the graph represent £100,000.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

From European countries other than Great Britain and Ireland the imports were valued at £7,721,300, or 11.2 per cent. of the total in 1926-27, and the direct exports thereto were valued at £18,597,608, or 29.6 per cent. The increase in the value of imports from the Continent was about £2,500,000, and the exports have increased by nearly £7,750,000 since 1911, when the relative proportions were 19.1 per cent. of imports and 33.7 per cent. of exports. A noticeable feature of the trade with Europe in recent years has been the increase in the direct exports to France, which were of greater value in 1926-27 than the exports to any other European country.

Trade with North America developed rapidly during the war period. Imports from Canada and the United States (including Alaska and Hawaii) represented only 15.9 per cent. in 1911 and exports 2.9 per cent. In 1926-27 the imports were valued at £19,882,000, or 28.8 per cent., and exports at £15,140,000, or 24.1 per cent., but this amount includes gold to the value of over £10,000,000.

Imports from Japan increased in value from £423,770, or 1.5 per cent., in 1911, to £2,643,349, or 3.8 per cent., in 1926-27, and exports from £667,420, or 2.1 per cent., to £5,465,688, or 8.7 per cent. Imports from the Netherlands East Indies showed a remarkable expansion from £370,408, or 1.4 per cent., in 1911, to £2,936,755, or 4.3 per cent., in 1926-27. This increase was due mainly to large imports of tea and of petroleum oils, the value of each being over £1,000,000 in 1926-27.

Trade between New Zealand and New South Wales fluctuates according to seasonal conditions, as trade in primary products usually increases if local supplies become deficient as a result of an unfavourable season in either country. The imports and exports in 1926-27 showed proportions of 2.3 per cent. and 4.2 per cent. respectively. Imports from the South Sea Islands represent about 2 per cent. of the total imports, and exports 2.9 per cent. of the total exports.

The statistics of the import trade of New South Wales in 1911 and in each of the last seven years are summarised in the following table in order to show the value of British and foreign goods imported:—

Year ended 30th June.	British Empire.			Foreign Countries.	Total Imports.
	United Kingdom.	Other British Countries.	Total.		
	£	£	£	£	£
1911*	12,675,664	3,947,244	16,622,908	10,720,520	27,343,428
1921	32,960,437	8,279,706	41,240,143	31,226,245	72,466,388
1922	19,969,726	5,492,389	25,462,115	17,859,363	43,321,478
1923	26,651,718	7,041,535	33,693,253	21,316,830	55,010,083
1924	24,639,057	8,114,939	32,753,996	25,471,044	58,225,040
1925	27,438,475	7,714,785	35,153,260	31,158,487	66,321,747
1926	26,641,934	8,614,922	35,256,856	28,753,063	64,009,919
1927	26,830,519	9,920,580	36,751,099	32,188,982	68,940,081

## PER CENT. OF TOTAL IMPORTS.

1911*	46.4	14.4	60.8	39.2	100
1921	45.5	11.4	56.9	43.1	100
1922	46.1	12.7	58.8	41.2	100
1923	48.4	12.8	61.2	38.8	100
1924	42.3	14.0	56.3	43.7	100
1925	41.4	11.6	53.0	47.0	100
1926	41.6	13.5	55.1	44.9	100
1927	38.9	14.4	53.3	46.7	100

\* Year ended 31st December.

The percentage of imports of British origin has declined in recent years. The figures relating to trade with the United Kingdom in the three years ended June, 1927, do not include the trade with the Irish Free State.

The value of the oversea exports from New South Wales to British and foreign countries in 1911, and in each of the last seven years, is shown below:—

Year ended 30th June.	British Empire.			Foreign Countries.	Total Exports.
	United Kingdom.	Other British Countries.	Total.		
	£	£	£	£	£
1911*	12,261,971	5,830,179	18,092,150	14,069,251	32,161,401
1921	20,630,150	11,235,612	31,865,762	20,736,044	52,601,806
1922	18,805,323	7,026,533	25,831,856	22,180,999	48,012,855
1923	14,787,084	5,451,357	20,238,441	22,343,481	42,581,922
1924	13,399,065	5,596,386	18,995,451	24,151,695	43,147,146
1925	20,405,113	6,765,584	27,170,697	33,406,508	60,577,205
1926	15,674,127	6,243,134	21,917,261	32,084,553	54,001,814
1927	15,416,894	5,769,751	21,186,645	41,628,432	62,815,077

## PER CENT. OF TOTAL EXPORTS.

1911*	38·1	18·1	56·2	43·8	100
1921	39·2	21·4	60·6	39·4	100
1922	39·2	14·6	53·8	46·2	100
1923	34·7	12·8	47·5	52·5	100
1924	31·0	13·0	44·0	56·0	100
1925	33·7	11·2	44·9	55·1	100
1926	29·0	11·6	40·6	59·4	100
1927	24·5	9·2	33·7	66·3	100

\* Year ended 31st December.

In the proportionate distribution of the export trade between British and foreign countries the British trade increased between 1911 and 1921, and declined subsequently. The United Kingdom receives more exports than any other country, but large quantities of the merchandise consigned to ports in Great Britain are re-exported.

The increase in the exports to foreign countries since 1921 was due in a measure to the establishment of direct communication between New South Wales and foreign countries to which exports were transhipped previously at British ports. In 1926-27 another increase was caused by the consignment of a large amount of gold to the United States.



## ARTICLES OF IMPORT.

A classification of the goods imported into New South Wales during the three years ended June, 1927, is shown in the following table. The items have been grouped in accordance with a statistical classification of imports adopted by the Department of Trade and Customs in 1922:—

Classification of Imports.	1924-25.	1925-26.	1926-27.
	£	£	£
Foodstuffs of Animal Origin ... ..	802,417	1,031,111	1,355,748
Foodstuffs of Vegetable Origin, Beverages (non-alcoholic), etc. ... ..	3,286,686	3,654,564	4,064,283
Spirituous and Alcoholic Liquors ... ..	1,123,238	1,238,107	910,960
Tobacco and Preparations thereof ... ..	1,605,897	2,003,603	1,784,629
Live Animals ... ..	121,983	104,519	103,651
Animal Substances not Foodstuffs ... ..	397,979	399,391	572,344
Vegetable Substances and Unmanufactured			
Fibres ... ..	1,937,961	2,219,842	2,191,153
Apparel ... ..	2,777,818	2,527,977	2,760,237
Textiles ... ..	11,314,650	10,834,664	11,362,383
Yarns and Manufactured Fibres... ..	2,151,246	2,016,150	1,969,131
Oils, Fats, and Waxes ... ..	2,984,276	3,401,756	3,699,750
Paints and Varnishes ... ..	296,680	305,986	352,384
Stones and Minerals (including Ores and Concentrates) ... ..	283,304	323,757	356,506
Machines and Machinery... ..	6,263,112	6,562,797	7,654,484
Metals and Metal Manufactures other than Machinery ... ..	11,187,674	11,025,574	12,482,471
Rubber and Rubber Manufactures ... ..	1,217,063	2,204,666	2,249,865
Leather and Leather Manufactures ... ..	200,432	222,615	200,133
Wood and Wicker ... ..	2,243,132	2,701,734	2,614,213
Earthenware, China, Glass, etc. ... ..	1,073,541	1,052,051	1,159,309
Paper ... ..	1,943,242	1,883,913	2,312,399
Stationery and Paper Manufactures ... ..	1,090,489	1,229,855	1,271,474
Jewellery, Timepieces, and Fancy Goods ... ..	1,274,468	1,358,322	1,429,946
Optical, Surgical, and Scientific Instruments ... ..	1,031,052	1,163,930	1,190,444
Drugs, Chemicals, and Fertilisers ... ..	1,368,123	1,502,670	1,686,973
Miscellaneous ... ..	2,339,476	2,656,823	2,673,102
Gold and Silver; and Bronze Specie ... ..	6,005,808	378,542	502,109
Total Imports ... ..	66,321,747	64,009,919	68,940,081

The bulk of the imports consists of manufactured articles. Minerals, metal manufactures, and machinery, the most important group in respect of value in 1926-27, represented 29.8 per cent. of the total value of imports; next in order was the textile group, *i.e.*, apparel, textiles, yarns, and manufactured fibres, 23.3 per cent. Articles of food and drink and tobacco constituted an important class of imports, the value in 1926-27 being 11.3 per cent. of the total. The group, oils and fats and waxes, represented 5.4 per cent., and paper and stationery 5.2 per cent.

There were some notable increases in the imports of 1926-27 as compared with those of the year 1911. For instance, in the textile group the value of piece goods rose from £3,704,533 in 1911 to £9,093,221, and yarns from £62,607 to £658,403. Of the vegetable substances, the quantity and value of copra rose from 234,189 cwt., valued at £239,010, to 784,896 cwt., £918,164; and linseed from 4,497 centals, valued at £3,779, to 276,045 centals, £233,349. The quantity of tea imported in 1911 was 14,905,845 lb., valued at £540,671, and the quantity in 1926-27 was 28,922,652 lb., valued at £2,297,585. The imports of unmanufactured tobacco in 1926-27 amounted to 14,846,565 lb., valued at £1,438,628, the quantity being 2½ times and the value over 6 times the corresponding figures for 1911, *viz.*, 6,385,656 lb. valued at £231,871.

The value of imports of vehicles and parts rose from £682,592 in 1911 to £6,412,881 in 1926-27. This class of imports owes its expansion in recent years to an increase in the value of imports of bodies, chassis, etc., for motor vehicles, which was £5,230,679 in 1926-27 as compared with £1,688,514 in 1920-21. During the same period imports of crude rubber increased in value from £98,524 to £790,341, and rubber tyres from £484,746 to £1,150,938. In regard to petroleum spirits, benzine, etc., there was an increase from 1,501,008 gallons, valued at £66,987, in 1911 to 13,042,594 gallons, £1,375,614 in 1920-21, and to 53,423,418 gallons, valued at £2,243,245 in 1926-27. The value of printing paper imported in 1911 was £317,596 as compared with £1,447,794 in 1926-27. A large quantity of butter, viz., 4,271,512 lb., value £300,178, was imported, mainly from New Zealand, during 1926-27.

The chief items of the various classes of imports in 1926-27 are shown below:—

Article.	Value of import.	Article.	Value of import.
<b>Apparel, Textiles and Manufactured Fibres—</b>	<b>£</b>	<b>Food, Beverages, and Tobacco—</b>	<b>£</b>
Piece Goods—Cotton and Linen ..	3,749,906	Tobacco, Cigars, etc. . . . .	1,784,629
Silk and Velvet .. .. .	3,184,801	Tea .. .. .	2,297,585
Woollen .. .. .	866,145	Whisky .. .. .	616,245
Canvas and Duck .. .. .	337,622	Fish, in tins .. .. .	551,775
Hessians, etc. .. .. .	349,720	Butter .. .. .	300,178
Other .. .. .	605,027	<b>Vegetable Substances and Unmanufactured Fibres—</b>	
Bags and Sacks .. .. .	1,212,172	Copr .. .. .	918,164
Sewing Cottons, etc. .. .. .	330,386	Linseed .. .. .	233,349
Socks and Stockings .. .. .	659,087	Kapok .. .. .	233,019
Trimmings and Ornaments .. .. .	408,898	<b>Paper and Stationery—</b>	
Floor Coverings .. .. .	1,108,680	Printing Paper .. .. .	1,447,794
Yarns .. .. .	658,408	Books (printed) .. .. .	564,847
Hats and Caps .. .. .	366,462	Writing Paper .. .. .	257,112
Gloves .. .. .	230,535	<b>Oils, Fats, Waxes—</b>	
<b>Machines and Manufactures of Metal—</b>		Petroleum Spirits .. .. .	2,243,245
Electrical Machinery and Appliances	3,685,257	Kerosene .. .. .	339,181
Other Motive Power Machinery ..	773,392	Lubricating (Mineral) Oil .. ..	482,713
Printing Machinery .. .. .	316,033	<b>Other Classes—</b>	
Sewing Machines .. .. .	275,380	Timber .. .. .	2,298,023
Other Machinery .. .. .	2,593,201	Rubber, crude .. .. .	790,341
Iron and Steel—		Rubber Tyres .. .. .	1,150,938
Plate and Sheet .. .. .	1,339,186	Glass and Glassware .. .. .	522,772
Other .. .. .	664,653	Musical Instruments and Parts ..	629,455
Metal Pipes and Tubes, etc. ..	597,538	Jewellery and Precious Stones ..	504,300
Tools of Trade .. .. .	464,297	Crockery and other Household Ware	312,139
Vehicles and parts .. .. .	6,412,881	Films for Kinematographs .. ..	280,472
Platedware and Cutlery .. .. .	492,356	Timepieces .. .. .	365,423
Other Metals and Metal Manufactures .. .. .	2,541,530	Gramophones, etc., and Records ..	470,895
		Fancy Goods .. .. .	560,223

The United Kingdom is the main source of supply of nearly all the manufactured articles imported into New South Wales, the largest items being piece goods, valued at nearly £5,000,000 in 1926-27; machinery and metal manufactures—notably vehicles and parts, iron and steel, and electrical cable and wire—floor coverings, printing paper, and whisky. The principal products of other European countries imported into New South Wales are as follow:—France, silk piece goods, trimmings and ornaments, apparel, motor chassis, rubber tyres, and toilet preparations; Switzerland, silk piece goods, trimmings and ornaments, timepieces, gramophones, and talking machines; Belgium, glass; Netherlands, electrical appliances and gin; Norway, fish, paper, dressed timber; Sweden, paper, cream separators, dressed timber, matches, vacuum cleaners, and wood pulp; Italy, motor chassis, silk piece goods, felt hats; Germany, machinery, tools of trade, and other metal manufactures, timepieces, pianos, gloves, trimmings and ornaments, and toys. The items of Eastern origin include the following:—From Japan, piece goods of silk and cotton, crockery, timber, raw silk; from India, bags and sacks, hessian and other jute goods, goatskins, tea, rice, linseed; from

Ceylon, tea, cocoanuts, and crude rubber from British Malaya, rubber and spices; from China, tea, nuts, rice, and vegetable paint oils; from Netherlands East Indies, kapok, petroleum oils, tea, rubber; from the Philippine Islands, timber.

The products of the United States are imported in large quantities, *e.g.*, machines and machinery of various kinds, tools, motor vehicles and parts, other metal manufactures, oils, tobacco, film for kinematographs, timber, rubber tyres, musical instruments, gramophones and talking machines and records, tinned fish, cotton pieces goods, cotton yarns, and socks and stockings. The principal imports of Canadian origin are paper, tinned fish, cutlery, motor chassis, machinery, rubber tyres, and timber. Undressed timber is usually the principal item of import from New Zealand, and in 1926-27 potatoes, butter, and gold were imported in large quantities. Copra is imported from various South Sea Islands, rock phosphates from Nauru and Gilbert Islands, precious stones and maize from South Africa, tinned fish from Alaska, dates from Mesopotamia, and gold from New Guinea and Papua.

#### ARTICLES OF EXPORT.

The exports of Australian produce consist mainly of raw materials. Particulars of the principal commodities exported during 1926-27 are shown below in comparison with the annual average during the five years ended 30th June, 1926. In regard to such commodities as wool, wheat, etc., for which there is constant demand, the quantity available for export depends mainly on local seasonal conditions, but the exportation of industrial metals is influenced to a greater extent by market prices, and a movement up or down reacts promptly on the productive activity. The value of the trade in practically all the commodities enumerated in the table depends on the prices prevailing in the oversea markets:—

Commodity.	Australian Produce Exported.					
	Quantity.		Value.		Per cent. of Total Value.	
	Annual Average, 1922-26.	1926-27.	Annual Average, 1922-26.	1926-27.	1922-26.	1926-27.
Wool—greasy ... lb.	245,826,654	335,025,736	£ 19,779,585	£ 25,593,195	39·8	40·7
scoured ... lb.	28,738,394	26,731,310	2,845,848	2,739,770	5·7	4·4
tops ... lb.	4,052,764	2,900,897	915,778	562,715	1·9	·9
...	...	...	23,541,211	28,895,680	47·4	46·0
Skins and hides ...	...	...	3,226,550	4,748,607	6·5	7·6
Meats—frozen—						
Mutton and lamb lb.	33,801,794	45,985,989	907,743	855,793	1·8	1·4
Other ...	...	...	486,624	475,395	1·0	·7
Tinned, etc. ...	...	...	204,964	331,258	·4	·5
Leather ...	...	...	407,578	388,990	·8	·6
Tallow ... cwt.	323,341	450,143	574,618	761,585	1·2	1·2
Butter ... lb.	25,833,007	17,753,508	1,776,014	1,239,541	3·6	2·0
Wheat ... cntl.	9,648,042	6,457,472	5,077,919	3,031,014	10·2	4·8
Flour ... cntl.	2,641,722	3,059,471	1,708,408	1,984,684	3·5	3·2
Lead—Pig and matte						
cwt.	1,558,536	1,476,170	2,343,052	2,193,797	4·7	3·5
Tin—Ingots ... cwt.	27,029	32,718	303,153	483,948	·6	·8
Coal ... tons	1,048,187	803,276	1,141,432	961,551	2·3	1·5
Timber, undressed						
sup. ft.	25,372,164	18,281,645	416,448	301,671	·8	·5
Bullion and specie ...	...	...	1,195,866	10,304,680	2·4	16·4
All other ...	...	...	6,352,608	5,857,483	12·8	9·3
Total ...	...	...	49,664,188	62,815,077	100·0	100·0

The value of the exports of domestic products depends mainly on the wool trade, which supplied 46 per cent. of the total value in 1926-27. The value of the wool sent to Great Britain and Northern Ireland in 1926-27 was £7,649,390 and the direct exports to Continental ports in the aggregate reached over 15 millions sterling, including France £7,009,578, Germany £4,111,304, Belgium £3,073,009, and Italy £822,470. Japan purchased wool to the value of £4,816,898, and the United States £1,292,015.

Skins and hides represented 7.6 per cent. of the exports of Australian produce in 1926-27. The United States received the largest portion, viz., £2,848,344, Great Britain and Northern Ireland £689,837, Germany £163,696, and sheepskins to the value of £761,728 were sent to France.

The exports of butter and of meat were equivalent to 2 per cent. and 2.6 per cent. respectively. The United Kingdom received the bulk of these products, viz., butter £936,825 and meat £1,251,251. Meat valued at £156,760 and butter at £158,821 were sent to Eastern countries. Eggs to the value of £137,012 were sent to Great Britain, sausage casings £195,691 to the United States of America, and tobacco valued at £126,661 to New Zealand and the Pacific Islands.

Leather and tallow are important items of the export trade. The leather exported to the United Kingdom in 1926-27 was valued at £146,817, and to Eastern ports at £210,874. The principal countries to which tallow was consigned were Japan £323,293, Great Britain £160,667, Italy £66,565, and India £67,962.

Wheat and flour represented 8 per cent. of the value of Australian products exported in 1926-27. The value of the wheat sent to Great Britain and Northern Ireland was £1,373,893, Belgium £500,719, France £242,712, Italy £185,535, Netherlands £98,187, and to Algeria £221,779. The principal markets for flour were: Great Britain £336,506, Egypt £599,154, British Malaya £247,754, Netherlands East Indies £348,714, and Philippine Islands £110,925.

Among the industrial metals lead and tin showed a proportion of 4.3 per cent. of the exports in 1926-27. The bulk of the metal trade was with the United Kingdom, viz., copper ingots £64,690, pig lead £1,998,682, and tin £148,585. Pig lead sent to Japan was valued at £126,819. New Zealand received tin ingots £62,656. Tin valued at £271,843 was consigned to the United States. The figures for New South Wales, however, do not include the products of the Broken Hill mines which are dispatched oversea from South Australian ports.

The value of the coal exported represented 1.5 per cent. in 1926-27. New Zealand, which usually provides the main outlet, received 413,434 tons, valued at £490,299, and the exports to Eastern ports amounted to 177,977 tons, valued at £213,804, and to South America 123,439 tons valued at £150,646. Coke, 38,786 tons valued at £66,995, was sent to New Caledonia. Undressed timber, 13,502,793 super. feet, valued at £211,551 was exported to New Zealand.

There has been a marked decrease in the export trade in a number of food commodities such as tinned meat, condensed milk, jams, biscuits, etc., which were exported in large quantities during the war period. The readiness with which production was increased then to meet the extraordinary demand is evidence of the fact that there is ample scope for development, and the subsequent decline in trade points to the necessity for securing new markets.

There is a fairly large re-export trade in provisions and manufactured articles with New Zealand, New Caledonia, Fiji, and other South Sea islands, but the principal item is copra, which is transhipped at Sydney to European ports. During the year ended June, 1927, the quantity of copra re-exported was 612,830 cwt., valued at £668,709, including 406,051 cwt.,

valued at £445,206, to France, and 130,659 cwt., £140,964, to the Netherlands. The re-exports in 1926-27 included also seven vessels transferred abroad, the value being £140,280. Other important items of foreign produce re-exported during the year were piece goods, £129,068; machinery, £151,103; vehicles, £66,310; metals and other metal manufactures, £165,704; tea, £90,795; rice, £60,596; oils, £57,440; sugar, £50,207; tobacco, cigars, and cigarettes, £80,336; jewellery and precious stones, £69,598.

#### Exports—Ships' Stores.

The figures relating to the exports, as shown in the foregoing tables, do not include exports in the form of ships' stores. This is an important branch of the trade of the State, as will be seen from the following statement of the value of ships' stores exported in 1911 and in each year since 1921:—

Year ended 30th June.	Ships' Stores Exported.		
	Australian Produce.	Other Produce.	Total.
	£	£	£
1911*	839,700	76,547	916,247
1921	2,028,728	300,969	2,329,697
1922	1,915,084	160,268	2,075,352
1923	2,018,821	118,703	2,137,524
1924	1,859,243	147,861	2,007,104
1925	1,595,305	226,861	1,822,166
1926	1,906,153	322,007	2,228,160
1927	1,608,241	142,009	1,750,250

\* Calendar Year.

The most important items of Australian produce exported as ships' stores in 1926-27 were bunker coal, 899,413 tons, valued at £1,167,190; meat, fresh, 5,107,318 lb., £99,090; other meats, £79,356; fish, fresh or frozen, 620,841 lb., £26,492; butter, 535,659 lb., £37,343; flour, 19,939 centals, £13,887; ale and beer, 96,431 gallons, £22,469. The chief item of foreign produce was oil, 3,821,792 gallons, valued at £76,335.

#### CUSTOMS AND EXCISE TARIFFS.

The Customs tariff is contained in the Customs Tariff Act, 1921-1926. There are three tariffs, viz., (1) British preferential, (2) intermediate, (3) general. The British preferential tariff applies to products of the United Kingdom, and by proclamation it may be applied, wholly or in part, to any part of the British Dominions, if the Tariff Board, in view of reciprocal arrangements, has reported upon the question and the Federal Parliament has agreed. Under similar conditions the intermediate tariff may be applied in respect of goods from any part of the British Dominions or from a foreign country. The general tariff is imposed on all goods to which the other tariffs do not apply. In 1925 an amending Custom Act made material alterations in the conditions under which the British preferential tariff is applied.

The tariff list includes a number of duties which may be deferred upon the recommendation of the Tariff Board until the date when, in the opinion of the Board, the goods will be produced locally in reasonable quantities and of satisfactory quality. The items include iron and steel sheets, plain, corrugated, and galvanised; hoop-iron and other items of metal manufactures; aeroplanes; ships; soda, citric and tartaric acid, and cream of tartar; writing paper; woollen yarns.

A number of alterations in the Custom rates were made in September, 1925, when a new tariff schedule was introduced into the Federal Parliament. In view of an impending dissolution, a validating Act was passed to give effect to the increased duties for the period of one year, and in 1926 the schedule was embodied in an amendment of the Customs Tariff Act. The alterations include a number of adjustments which are directed towards the improvement of some branches of the textile industry and the engineering trades. The duty on petroleum and shale oils for use in motor-driven vehicles using public roads was increased in August, 1926, by 2d. per gallon. The revised rates are: British preferential, 2½d.; intermediate and general tariffs, 3d. per gallon. In November, 1927, there was another revision of the tariff to provide additional protection to Australian industries by increasing duties on such items as butter and cheese, potatoes and rice, textiles, and products of metal and machinery works. Increased preference was afforded to British industries in respect of a number of important items, *e.g.*, gloves, lace, motor chassis, etc., and a number of revenue-producing duties were reduced or abolished.

Reciprocal trade treaties are in operation in respect of New Zealand and Canada. A measure of preference is accorded to the territories of Papua and New Guinea in terms of an Act which commenced on 1st April, 1926, certain tropical products imported direct therefrom being free of duty. A reciprocal trade treaty with South Africa, which commenced in 1906, was abrogated in July, 1926.

Reciprocity with New Zealand was introduced in 1922. The British preferential tariff is applied generally to goods produced in New Zealand, and special rates have been fixed in relation to certain commodities. The British preferential rates are charged also on goods transhipped from New Zealand, which would have been classified under the British preferential tariff if they had been imported direct from the country of origin to Australia. The New Zealand Re-exports Act, 1924, which commenced on 1st October, 1925, provides that when foreign goods are re-exported to Australia from New Zealand the value for duty shall be the sum of the following:—(a) The current domestic value in the country of origin, (b) charges for placing goods *f.o.b.* at port of export to New Zealand, (c) 10 per cent. of the sum of (a) + (b), (d) 10 per cent. of the sum of the foregoing amounts. In 1926 it was agreed reciprocally that unless by mutual arrangement a custom duty shall not be imposed, nor an existing rate increased, on the products of either country entering the other until six months' notice has been given.

The tariff treaty with Canada was brought into operation on 1st October, 1925.

The Department of Trade and Customs issues an official guide to the tariff which shows in detail a classification, for purposes of duty, of all articles of import, and the rates of tax.

The Customs Tariff (Industries Preservation) Act, 1921-22, provides for the imposition of special customs duties to prevent the dumping of foreign goods in Australia to the detriment of local industries and to safeguard the preference accorded to the United Kingdom under the tariff. These duties, which are additional to those payable under the tariff, may be imposed on the recommendation of the Tariff Board.

The excise tariff is contained in the Excise Tariff Act, 1921-1926. The dutiable goods are beer, spirits, saccharin, starch made from imported rice, tobacco, cigars, cigarettes, and snuff.

*Customs and Excise Revenue.*

The following statement shows the net amount of customs and excise revenue collected in New South Wales under each division of the tariff during the years ended June 1911, 1921, 1926, and 1927. Sydney is an important distributing centre for the whole of Australia, consequently the collections include receipts on account of goods which, in the course of trade, were transferred to and consumed in other States. A notable instance is the excise collected in New South Wales on cigarettes made locally, though more than half the output of the factories is exported subsequently to other parts of the Commonwealth. On the other hand, the receipts do not include duties on goods transferred from other States for consumption in New South Wales:—

Tariff Division.	Net Collections during year ended 30th June.			
	1911.	1921.	1926.	1927
Customs—	£	£	£	£
1. Stimulants, Ale, Beer, etc.	1,109,212	832,473	1,503,986	1,499,954
2. Narcotics ... ..	506,426	1,013,607	1,394,830	1,454,562
3. Sugar ... ..	67,438	1,206	7,662	6,619
4. Agricultural Products and Groceries... ..	354,855	339,997	549,098	697,508
5. Apparel and Textiles ... ..	822,576	2,626,199	2,074,903	2,461,386
6. Metals and Machinery ... ..	477,766	2,050,953	1,968,636	2,271,994
7. Oils, Paints, and Varnishes ... ..	92,800	231,733	371,332	825,532
8. Earthenware, etc. ... ..	128,593	276,091	298,620	326,860
9. Drugs and Chemicals ... ..	42,350	214,132	250,116	254,854
10. Wood, Wicker, etc. ... ..	156,632	214,043	553,028	553,347
11. Jewellery and Fancy Goods ... ..	120,335	395,041	470,591	520,650
12. Leather and Rubber ... ..	110,351	234,894	911,263	832,055
13. Paper and Stationery ... ..	83,521	490,762	329,045	350,606
14. Vehicles ... ..	66,317	361,343	1,103,024	1,310,583
15. Musical Instruments ... ..	50,707	112,997	211,773	230,860
16. Miscellaneous ... ..	104,395	323,468	445,417	510,028
Other Receipts... ..	12,678	29,043	29,643	35,734
Total, Custom Duties... ..	£4,306,952	£9,797,982	£12,472,972	£14,143,132
Excise—				
Beer ... ..	210,728	2,019,397	2,182,401	2,299,193
Spirits ... ..	119,169	677,537	775,487	793,665
Starch ... ..	507	...	260	172
Sugar ... ..	261,758	...	...	...
Tobacco... ..	188,763	586,760	743,650	762,273
Cigars ... ..	958	18,072	21,103	17,657
Cigarettes ... ..	250,093	1,721,252	1,747,999	1,822,816
Licenses—Tobacco ... ..	858	2,905	3,518	4,573
„ Other ... ..	1,401	1,574	1,412	1
Total, Excise Duties ... ..	£1,034,235	£5,027,497	£5,475,830	£5,700,350
Total, Customs and Excise Duties ... ..	£5,341,187	£14,825,479	£17,948,802	£19,843,482

The customs revenue increased more than threefold during the period under review, and the excise revenue was more than five times greater in 1926-27 than in 1911. The excise duties now contribute 29 per cent. of the customs and excise revenue as compared with 19 per cent. in 1911. Nearly 44 per cent. of the customs and excise revenue is obtained from duties on stimulants, etc., and narcotics, viz., £8,650,120 in 1926-27, as compared with £2,385,349 in 1911. These amounts were equivalent to £3 13s. 8d. and £1 8s. per head of population in the respective years.

Notwithstanding increases of 100 per cent. or more in the rates of duty, the customs collections in respect of stimulants, ale, beer, etc., increased by only 35 per cent. between 1911 and 1926-27. The excise on beer and spirits rose from £329,897 to £3,092,858. The excise revenue from tobacco and cigarettes also has increased in a remarkable degree. The duties in respect of the group, apparel and textiles, yielded the largest amount of the customs revenue in 1926-27, next in order being metals and machinery, stimulants, and narcotics. The revenue from customs duties on vehicles shows the greatest relative increase, viz., from £66,317 in 1911 to £1,310,583 in 1926-27.

The following table shows the net collections of Customs and Excise revenue in New South Wales during five years ended June, 1927:—

Collections.	Year ended 30th June.				
	1923.	1924.	1925.	1926.	1927.
Customs Duties.. ..	£ 9,905,443	£ 10,988,303	£ 11,645,992	£ 12,472,972	£ 14,143,132
Excise Duties .. ..	4,894,129	5,106,913	5,182,741	5,470,900	5,895,776
Licenses .. .. .	4,725	4,998	4,732	4,930	4,574
Total £	14,804,297	16,099,214	16,833,465	17,948,802	19,843,482
Per head of population	£ s. d. 6 16 3	£ s. d. 7 5 8	£ s. d. 7 9 5	£ s. d. 7 16 3	£ s. d. 8 9 0



## SHIPPING.

OWING to the geographic position of New South Wales, the progress of the national industries is dependent to an unusual degree upon shipping facilities, and efficient transport services are essential to maintain regular and speedy communication and to place the staple products upon distant markets in a satisfactory condition without unduly increasing the cost. Improvement in the methods of carrying perishable products has promoted the growth of a permanent export trade in such commodities as frozen meat and butter; and in the construction of modern ships special provision is made for refrigerated cargoes.

### CONTROL OF SHIPPING.

Prior to the inauguration of the Commonwealth in 1901, the shipping of New South Wales was regulated partly by an Imperial enactment, the Merchant Shipping Act, 1894, and partly by the laws of the Parliament of New South Wales. Under the Commonwealth Constitution the Federal Parliament is empowered to make laws with respect to trade and commerce with other countries and among the States, including navigation and shipping, and in relation to such matters as lighthouses, lightships, beacons and buoys, and quarantine.

Special legislation relating to navigation and shipping is contained in the Federal Navigation Act, 1912-26. It is drafted on the lines of the Merchant Shipping Act and of the Navigation Acts of New South Wales and embodies the rules of an international convention for Safety of Life at Sea signed in London in 1914.

The provisions of the Act apply to ships registered in Australia, also to other British ships on round voyages to or from Australia. The Governor-General may suspend its application to barges, fishing boats, pleasure yachts, missionary ships, or other vessels not carrying passengers or goods for hire; and the High Court of Australia has decided that clauses relating to manning, accommodation, and licensing do not apply to vessels engaged in purely intra-state trade.

A ship may not engage in the coasting trade of Australia unless licensed to do so, and a license may not be granted to a ship in receipt of a foreign subsidy. Licensees, during the time their ships are so engaged, are obliged to pay to the seamen wages at current rates ruling in Australia, and, in the case of foreign vessels, to comply with the same conditions as to manning and accommodation for the crew as are imposed on British ships. Power is reserved to the Minister for Trade and Customs to grant permits, under certain conditions, to unlicensed British ships to engage in the coasting trade if a licensed British ship is not available for the service, or if the service by licensed shipping is inadequate. A permit may be continuing, or for a single voyage.

The Governor-General may suspend by proclamation the operation of the foregoing provisions, and under certain conditions he may grant permission to British ships to carry tourist traffic between ports in the Commonwealth and the territories, such traffic to be exempt from the provisions of the Navigation Act relating to the coasting trade of Australia.

The part of the Navigation Act which relates to pilotage has not yet been brought into operation, and this service is regulated under the State Navigation Act of 1901.

The State Department of Navigation exercises control over the ports of New South Wales, and administers the Harbour and Tonnage Rates Act, 1920, which authorises the collection of shipping rates and port dues, except in Sydney Harbour, which is subject to the control of the Sydney Harbour Trust.

Matters relating to seaboard quarantine are administered by the Commonwealth in terms of the Quarantine Act, 1908-24, and arrangements may be made with the State Government to aid in carrying out the law. The Act defines the vessels, persons, animals, plants, and goods which are subject to quarantine, and provides for examination, detention, and segregation in order to prevent the introduction or spread of disease or pests. Imported animals or plants may not be landed without a permit granted by a quarantine officer. The master, owner, and agent of a vessel ordered into quarantine are severally responsible for the expenses, but the Commonwealth Government may undertake to bear the cost in respect of vessels trading exclusively between Australasian ports. Quarantine expenses in the case of animals and goods are defrayed by the importer or owner.

Vessels arriving from overseas ports are examined by quarantine officers only at the first port of call in Australia unless they have travelled along the northern trade route, when they are inspected again at the last port of call. The quarantine station of New South Wales is situated in Sydney Harbour, near the entrance to the port.

The liability of shipowners, charterers, etc., in regard to the transportation of goods is defined by the Sea-Carriage Acts passed by the State and the Commonwealth Parliaments. The State Act passed in 1921 applies to the intra-state trade. It nullifies clauses in bills of lading or similar documents which purport to relieve the shipowner or charterer from liability for loss or damage to goods arising from the improper condition of any part of the ship in which cargo is carried, or arising from negligence in the handling or care of the goods; or to lessen the obligations of the shipowner or charterer to exercise due diligence, to man and equip the ship, to keep it seaworthy, and to keep in a fit state the hold, refrigerating chambers, and other parts in which cargo is carried; or to lessen the obligations of the master, agent, or servants of a ship, to handle the goods carefully, and to deliver them properly.

The Sea-Carriage of Goods Act, passed by the Parliament of the Commonwealth, applies to the interstate and the outward overseas trade of Australia. It embodies general rules relating to bills of lading, recommended by an international conference on maritime law in 1922 and adopted in Great Britain and in other parts of the British Empire. The Act provides also that a bill of lading issued in Australia to a place outside is subject to Australian law, and that any stipulation in a bill of lading from a country outside Australia purporting to lessen the jurisdiction of Australian Courts is void. Another important provision of the Act prescribes that a bill of lading issued in accordance with the rules, when the carrier or his agent receives goods for shipment, shall be capable of negotiation as if it were a bill issued after shipment.

#### INTERSTATE AND OVERSEA SHIPPING.

The figures in this chapter relating to shipping are exclusive of particulars concerning ships of war, cable-laying vessels, and yachts, which are not included in the official shipping records. Where tonnage is quoted it is net tonnage.

*Vessels Entered and Cleared.*

In compiling the records of oversea and interstate shipping, a vessel is treated as an entry once and as a clearance once for each voyage to and from New South Wales, being entered at the first port of call, and cleared at the port from which it departs. The repeated voyages of every vessel are included.

The aggregate number and tonnage of interstate and oversea vessels which arrived in and departed from ports of New South Wales in various years since 1901, with the average net tonnage per vessel, are shown in the following statement:—

Year ended 30th June.	Entries.		Clearances.		Average Tonnage per Vessel.
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	
1901*	2,760	4,133,200	2,853	4,274,101	1,498
1911*	3,127	6,822,135	3,146	6,833,782	2,177
1921	3,019	7,123,331	3,023	7,122,209	2,358
1922	2,891	7,182,341	2,883	7,065,996	2,468
1923	3,031	8,326,182	3,012	8,260,309	2,745
1924	3,313	8,908,077	3,320	8,985,707	2,698
1925	3,189	9,089,861	3,155	9,014,810	2,854
1926	2,945	8,534,292	2,906	8,495,031	2,910
1927	3,229	9,084,476	3,267	9,213,319	2,817

\* Year ended 31st December.

The shipping trade of New South Wales increased by 27 per cent. between 1921 and 1925. In the following year there was a decrease of 11·5 per cent., attributable mainly to industrial strife locally and in Great Britain and to a shrinkage in the exports of wheat. In 1926-27 the tonnage was the largest on record.

The average size of the vessels engaged in trade with New South Wales rose from 1,500 tons in 1901 to 2,177 tons in 1911. There was a decline during the war period, when scarcity of shipping caused smaller vessels to be commissioned for oversea voyages, but in recent years there has been a fairly steady increase.

A noticeable feature of the shipping records of New South Wales is the large proportion of tonnage entering in ballast and the small proportion which clears without cargo. The majority of empty ships come from ports of the neighbouring States or New Zealand, where, in some cases, they have delivered a general cargo and have cleared for Newcastle, in this State, to load coal. During the quinquennium ended June, 1925, the tonnage entered in ballast represented on the average 18·8 per cent. of the total entries, and the tonnage cleared without cargo 5·3 per cent. of the clearances. In 1925-26 the tonnage entered in ballast was 1,051,961 tons, or 12·3 per cent., and in the following year 1,192,723 tons, or 13·1 per cent. The clearances without cargo represented 616,552 tons, or 7·3 per cent., and 678,092 tons, or 7·4 per cent. in the respective years.

Sailing vessels are not engaged extensively in the trade of New South Wales. They represented only a small proportion of the total tonnage in 1926-27, when the entries included 10 sailers with an aggregate tonnage of 14,934 tons, and the clearances 15 vessels, 18,483 tons.

A comparison of the shipping of the Australian States shows that the tonnage trading to and from New South Wales is far in excess of the

figures of any other State. The following statement shows the entries and clearances during the year ended 30th June, 1927, excluding the coastal trade:—

State.	Interstate and Oversea.			
	Entries.		Clearances.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
New South Wales ... ..	3,229	9,084,476	3,267	9,213,319
Victoria ... ..	2,667	7,187,147	2,666	7,180,748
Queensland ... ..	965	2,986,951	975	3,012,923
South Australia ... ..	1,444	5,123,261	1,439	5,114,249
Western Australia ... ..	796	3,763,957	799	3,796,564
Tasmania ... ..	1,072	1,367,833	1,057	1,360,786
Northern Territory ... ..	50	126,765	50	126,999

#### NATIONALITY OF VESSELS.

The majority of the vessels engaged in the trade of the State of New South Wales are under the British flag, the deep-sea trade with the mother country and British possessions being controlled chiefly by shipowners of the United Kingdom, and the interstate trade by Australian shipping companies. In the table below the British and the foreign shipping are shown under distinctive headings.

Year ended 30th June.	Net Tonnage Entered and Cleared.				Percentage.		
	Australian.	Other British.	Foreign.	Total.	Australian.	Other British.	Foreign.
1901*	3,348,502	3,714,217	1,344,582	8,407,301	39·8	44·2	16·0
1911*	4,645,195	6,594,649	2,416,073	13,655,917	34·0	48·3	17·7
1921	4,739,555	6,739,914	2,766,071	14,245,540	33·3	47·3	19·4
1922	5,659,061	6,823,443	1,765,833	14,248,337	39·7	47·9	12·4
1923	5,824,694	8,343,022	2,413,775	16,586,491	35·1	50·3	14·6
1924	6,739,951	8,512,086	2,641,747	17,893,784	37·7	47·6	14·7
1925	6,119,983	8,921,552	3,063,136	18,104,671	33·8	49·3	16·9
1926	5,540,386	8,389,138	3,099,799	17,029,323	32·5	49·3	18·2
1927	6,448,697	8,768,280	3,080,818	18,297,795	35·3	47·9	16·8

\* Year ended 31st December.

The Australian tonnage increased by over 1,300,000 tons between 1901 and 1911, but ten years later the tonnage was only slightly higher than in 1911. The apparent lack of progress was due in a measure to the fact that the owners who are associated as the Australian Steamship Owners' Federation arranged to run their vessels as one fleet, entailing fewer voyages. During the four years 1921-24 there was a marked increase in the Australian tonnage and in the year ended June, 1924, it was larger by over 2,000,000 tons than in 1921. In the following years the activities of the Australian shipping were curtailed and there were successive reductions of 620,000 tons and 580,000 tons. In 1926-27 there was a substantial improvement.

Particulars relating to the nationality of vessels engaged in trade with New South Wales in 1913, 1922-23 and 1926-27, are shown in greater detail in the following statement:—

Nationality of Shipping.	Entries and Clearances.						Net Tonnage— Percentage of each Nationality.		
	1913.*		1922-23.		1926-27.		1913.*	1922-23.	1926-27.
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.			
<b>British—</b>									
Australia .. ..	3,231	5,711,398	3,080	5,824,694	3,465	6,448,697	35·3	35·1	35·3
New Zealand .. ..	771	1,350,138	284	248,641	369	811,460	8·4	1·5	4·4
Great Britain .. ..	1,589	6,081,117	1,682	7,548,841	1,521	7,405,943	37·5	45·5	40·5
Other British .. ..	22	30,459	202	550,540	184	550,877	·2	3·3	3·0
<b>Total .. ..</b>	<b>5,613</b>	<b>13,182,112</b>	<b>5,248</b>	<b>14,172,716</b>	<b>5,539</b>	<b>15,218,977</b>	<b>81·4</b>	<b>85·4</b>	<b>83·2</b>
<b>Foreign—</b>									
Denmark .. ..	2	768	18	62,317	28	84,123	·0	·4	·5
France .. ..	150	313,252	110	230,629	126	275,911	1·9	1·4	1·5
Germany .. ..	487	1,533,728	30	31,127	106	369,241	9·5	·5	2·0
Italy .. ..	29	47,770	23	101,364	43	170,992	·3	·8	·9
Netherlands .. ..	52	128,870	111	397,372	96	346,310	·8	2·4	1·9
Norway .. ..	133	353,343	93	247,778	157	484,460	2·2	1·5	2·6
Sweden .. ..	23	57,643	59	166,964	63	179,596	·4	1·0	1·0
Japan .. ..	103	332,471	186	610,898	184	608,560	2·0	3·7	3·3
United States of America .. ..	76	143,853	143	473,728	135	515,166	·9	2·9	2·8
Other Nationalities	50	89,292	17	35,588	19	46,954	·6	·2	·3
<b>Total .. ..</b>	<b>1,155</b>	<b>3,006,490</b>	<b>795</b>	<b>2,413,775</b>	<b>957</b>	<b>3,050,818</b>	<b>18·6</b>	<b>14·6</b>	<b>16·8</b>
<b>Grand Total ..</b>	<b>6,768</b>	<b>16,188,602</b>	<b>6,043</b>	<b>16,586,491</b>	<b>6,496</b>	<b>18,277,795</b>	<b>100·0</b>	<b>100·0</b>	<b>100·0</b>

\* Year ended 31st December.

In 1926-27 the proportion of Australian tonnage was the same as in 1913. The tonnage owned in Great Britain was higher, absolutely and relatively, than before the war, though it has declined since the year 1922-23. There was a decided decrease in New Zealand tonnage between 1913 and 1923, and it is still more than 40 per cent. lower than before the war, notwithstanding an improvement during the last four years. The shipping classified as other British included Canadian tonnage, which amounted to 267,061 tons in 1926-27.

In 1913 the largest proportion of foreign tonnage was German, amounting to 9·5 per cent. of the total shipping. German ships were excluded in 1914, and did not re-enter the trade until 1922. Their tonnage represented 2 per cent. of the total tonnage in 1926-27. During the war period, Japanese and American tonnage began to take an important part in the oversea trade of New South Wales, and between 1913 and 1920-21 the Japanese tonnage rose from 2 per cent. to 8·1 per cent., and the United States from 0·9 per cent. to 4·2 per cent. In the succeeding years a decrease occurred, but shipping belonging to these two nations represented 36 per cent. of the foreign shipping in 1926-27.

French tonnage declined during the war and has not yet regained its former position in the trade of the State. Italian and Dutch lines have established regular services, and are absorbing an increasing proportion of the oversea trade.

The foreign tonnage in 1926-27 was 16·8 per cent. of the total, as compared with 14·6 per cent. in 1922-23, and 18·6 in 1913. There are indications that foreign shipowners are endeavouring to increase the direct trade between Australia and their respective countries.

Of the Australian tonnage, entrances and clearances in interstate trade amounted to 5,741,026 tons, or 87 per cent., and voyages in oversea trade to 707,671 tons, the tonnage to and from Great Britain being 287,721 tons, and New Zealand 204,064 tons. Of the other British tonnage, including ships owned in Great Britain, 2,751,893 tons were entered from and

cleared for interstate ports, and 2,634,127 tons plied between Australia and Great Britain. The tonnage belonging to other nations was employed chiefly in the foreign trade.

During the year 1926-27 the interstate cargo discharged at ports in New South Wales amounted to 1,768,175 tons, and the oversea to 2,196,135 tons, and the shipments to interstate ports represented 3,713,721 tons, and to oversea countries 1,925,622 tons. The interstate trade is carried for the most part in Australian ships, and the nationality of the vessels in which oversea trade is carried is shown below:—

Nationality of Shipping.	1924-25.		1925-26.		1926-27.	
	Discharged.	Shipped.	Discharged.	Shipped.	Discharged.	Shipped.
Interstate Cargoes ...	Tons. 1,651,936	Tons. 3,559,476	Tons. 1,613,036	Tons. 3,088,259	Tons. 1,768,175	Tons. 3,713,721
Oversea Cargoes.						
Australia ...	148,087	243,277	189,813	243,598	162,898	195,261
Great Britain ...	1,017,592	1,122,301	1,127,347	894,331	1,233,243	755,903
Other British ...	102,240	530,986	134,070	539,686	134,875	427,694
Total British ...	1,288,519	1,896,564	1,451,230	1,477,615	1,530,616	1,378,948
France ...	*	*	20,823	66,912	18,916	87,942
Germany ...	32,780	47,395	40,840	36,170	49,142	83,430
Italy ...	19,198	64,911	25,711	73,178	26,008	34,494
Japan ...	99,363	237,870	79,769	26,981	73,159	56,426
Netherlands ...	46,112	108,634	49,466	100,747	39,211	75,633
Norway ...	102,950	140,201	137,742	99,633	192,228	102,302
Sweden ...	57,300	33,593	88,937	39,884	95,673	35,353
United States of America...	105,936	43,625	94,502	33,055	119,200	32,968
Other Foreign ...	72,308	127,210	95,029	39,653	51,922	38,126
Total, Foreign ...	535,897	805,439	632,822	515,613	665,519	546,674
Total, Oversea ...	1,804,416	2,702,008	2,084,052	1,993,228	2,196,135	1,925,622
Grand Total ...	3,456,352	6,261,479	3,697,088	5,031,487	3,964,310	5,639,343

\* Included with "Other Foreign."

In 1926-27 British vessels carried 70 per cent. of the oversea cargo discharged at ports in New South Wales and 72 per cent. of the cargo shipped abroad.

#### DIRECTION OF SHIPPING TRADE.

The shipping records do not disclose the full extent of communication between New South Wales and other countries, as they relate only to terminal ports and are exclusive of the trade with intermediate ports, of which some are visited regularly by many vessels on both outward and inward journeys. But the following statement of the tonnage entered from and cleared for interstate ports and oversea countries, grouped according to geographical position, indicates, as far as practicable, the growth or decline of shipping along the main trade routes since 1911:—

Country.	1911.		1920-21.		1926-27.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
Australian States ...	3,519	6,528,328	3,206	6,382,297	4,120	9,524,257
New Zealand ...	623	1,223,238	769	1,473,057	481	1,164,960
Europe ...	771	3,033,630	582	2,798,459	684	3,875,555
Africa ...	59	114,035	81	225,856	22	70,702
Asia and Pacific Islands ...	710	1,410,164	1,009	2,179,040	757	1,949,926
North and Central America ...	253	638,393	299	1,003,137	403	1,634,217
South America ...	335	768,129	96	183,694	29	78,178
Total ...	6,273	13,655,917	6,042	14,245,540	6,496	18,297,795

Shipping to and from the other Australian States in 1926-27. was greater by 3,000,000 tons than in 1911, but a slight decrease was recorded in respect of the New Zealand trade. The tonnage engaged in trade with North and Central America was more than double the tonnage in 1911, but the South American trade, which was mainly for the export of coal, has lost its former importance.

The interstate and oversea trade of New South Wales is confined practically to three centres, viz., Sydney, Newcastle and Port Kembla, and the distribution amongst the ports of the inward trade in 1901, 1911, and in the last seven years, is shown in the following table. On each voyage a vessel is counted as an entry only at the first port of call in New South Wales and intra-state trade is excluded, therefore the figures do not indicate the total tonnage entered at each port.

Year ended 30th June.	Port Jackson (Sydney).		Port Hunter (Newcastle).		Port Kembla.		Other Ports.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
1901*	1,884	2,953,511	702	1,036,178	53†	67,558†	140	45,864
1911*	2,181	5,246,351	701	1,357,132	64	102,866	81	115,786
1921	1,869	4,776,182	1,082	2,255,040	42	85,514	26	6,595
1922	1,811	4,984,876	985	2,068,868	53	118,593	42	14,004
1923	2,057	6,104,733	854	2,017,729	76	193,120	44	7,600
1924	2,163	6,371,362	1,012	2,325,187	83	193,672	54	17,856
1925	2,062	6,522,773	1,004	2,368,129.	74	181,980	49	17,029
1926	1,988	6,304,313	826	1,964,191	83	243,913	43	21,870
1927	2,174	6,809,172	890	1,991,909	90	241,208	75	42,137

\* Year ended 31st December.

† Wollongong.

Many vessels, including steamers engaged regularly in the trade of New South Wales, discharge cargo at Sydney, then proceed to Newcastle for coal. Such vessels are counted as entries at Sydney only; therefore the inward shipping of Newcastle is greatly in excess of the tonnage stated in the table. The trade of Port Kembla increased as a result of the establishment of important industries in the locality. The decline in the inward trade of other ports, as compared with the year 1911, was due mainly to the omission of Twofold Bay as a port of call for interstate vessels.

The trade of the various ports, as indicated by the quantity of interstate and oversea cargo discharged and shipped, is shown by the following particulars relating to the year 1926-27:—

Port.	Cargo Discharged.		Cargo Shipped.	
	Interstate.	Oversea.	Interstate.	Oversea.
	Tons.	Tons.	Tons.	Tons.
Sydney ... ..	972,967	2,049,695	781,642	1,063,716
Newcastle ... ..	782,089	119,482	2,705,139	763,892
Port Kembla ... ..	11,854	26,958	136,361	84,281
Other Ports ... ..	1,265	...	90,579	13,733
To ... ..	1,738,175	2,196,135	3,713,721	1,925,622

## HARBOURS AND ANCHORAGES.

Along the coast of New South Wales, there are numerous ports, estuaries, and roadsteads, which provide shelter to shipping and afford facilities for trade.

There are four natural harbours where vessels of deep draught may enter, viz., Port Stephens, Broken Bay, Port Jackson (Sydney Harbour) and Jervis Bay. Port Jackson ranks first by reason of extent, natural facilities, and volume of trade. Newcastle is a bar harbour at the mouth of the Hunter River, where extensive accommodation has been provided for over-sea shipping. Artificial harbours have been constructed at Coff's Harbour, Wollongong, Port Kembla, Shellharbour, Kiama, and Ulladulla. With the exception of Port Kembla, they are useful only for small vessels. There are a number of estuarine harbours, but the entrances are usually blocked to some extent by sandbars, formed by the combined action of ocean currents and waves and wind. There are also numerous roadsteads or anchorages which afford shelter to vessels of moderate draught during southerly or south-easterly weather. Breakwaters and training-walls have been constructed to control the sand movement at the majority of the bar harbours, so that the navigating channels may be maintained with little difficulty.

*Sydney Harbour.*

Port Jackson (Sydney Harbour) is the principal port of New South Wales. It has a safe entrance and deep waters, and its steep foreshores provide good shelter for vessels at anchor. It is almost landlocked, resembling a lake rather than a seaport. The entrance, which is three-quarters of a mile wide, lies between bluff headlands, and faces eastward, so that it is protected from southerly gales, which expend their violence on North Head instead of sweeping directly into the harbour.

At the Heads the depth of water is not less than 80 feet at low water, ordinary spring tide. Near the entrance the fairway divides into two channels about half a mile long and over 700 feet wide. The depth is 40 feet, and it could be increased if required, as the bottom is sand and the channels do not silt up when deepened. Very little allowance need be made for scend, because the channels are protected by the headlands. They are well lighted and, by night as well as by day, they are navigable by the largest vessels afloat.

The total area of Port Jackson is 14,284 acres, or about 22 square miles. The coastline, being irregular, is over 188 miles in length, and gives facilities for extensive wharfage. The area which may be designated the harbour proper, embraced by 75 miles of foreshores, *i.e.*, below the Iron Cove, Parramatta River, and Lane Cove bridges, and the Spit, Middle Harbour, covers 8,980 acres. About three thousand acres have a depth ranging from 35 to 160 feet at low water, ordinary spring tide, and excluding the fairway and the bays in which most of the shipping is accommodated at present, there are over 1,000 acres suitable for anchoring deep-sea vessels. The rise and fall of the tide in the harbour is from about 3 feet to 6 feet.

The control of the Port was vested in the Sydney Harbour Trust in the year 1901. The Trust consists of three Commissioners appointed for a term of seven years, with control over the port and shipping, harbour lights, buoys and wharves, and authority to undertake works for the preservation



and improvement of the port, to appropriate wharves, stores, etc., to special uses, and to levy rates and charges in respect of vessels and goods and for the use of property.

The Trust was debited with the value of the resumed property and improvements, amounting to £4,700,000 in 1901, and, by reason of extensive improvements effected under a comprehensive scheme of reconstruction, the capital debt, as at 30th June, 1927, was £11,300,000. The shipping accommodation has been largely remodelled, old wharves being replaced and new wharves and jetties and sheds constructed to keep pace with a rapidly increasing trade. The depth of water has been increased in various parts of the harbour, a sea-wall has been built, and the approaches have been improved. A roadway, 100 feet wide, has been constructed along the water-front from Circular Quay to Erskine-street, via Walsh Bay, and it is being continued towards Pyrmont, where it will run along the frontage of an area which is being reclaimed at the head of Darling Harbour. The Pyrmont Bridge, which is a swing bridge across Darling Harbour, will then be removed.

Amongst the property under the administration of the Harbour Trust is a considerable area adjoining the water-front, embracing dwellings, shops, and stores. The area has been improved greatly by the demolition of old buildings to permit the widening of the streets and the erection of modern dwellings and of business premises and stores.

The principal wharves are situated in close proximity to the business centre of the city, about 4 or 5 miles from the Heads. Excluding ferry wharves and jetties used for private purposes, there are 62,872 feet of wharfage under the control of the Trust. The principal wharves are leased to the various shipping companies whose vessels engage regularly in the trade of the port, and other wharves are reserved for vessels which visit the port occasionally. The location of the wharves and the berthing accommodation as at 30th June, 1927, are shown below. The figures are exclusive of thirty ferry berths, with an aggregate berthing accommodation of 3,427 feet.

Locality.	Number of Berths.	Length of Berths.
		ft.
Woolloomooloo Bay ... ..	13	5,781
Circular Quay ... ..	7	3,442
Walsh Bay ... ..	12	7,524
Darling Harbour to Johnston's Bay	86	33,389
Blackwattle Bay ... ..	24	4,266
Rozelle Bay ... ..	18	4,300
Glebe Island and White Bay	11	4,170
Total ... ..	171	62,872

The berths in Woolloomooloo Bay are used in connection with a general oversea trade, and the largest vessels visiting the port are accommodated there. Commodious sheds have been erected on the wharves and electric conveyors installed. The southern portion of Circular Quay is used for ferry traffic, but seven berths are available on the eastern and western sides for oversea steamers. In Walsh Bay the waters are deep, and advantage was taken of the steep shore to increase the capacity of the jetties by erecting sheds of two storeys, the upper floors having access by means of bridges to streets on a higher level. Darling Harbour contains a large number of berths, and some of them are directly connected with the railway system.

On a spit of land, known as Glebe Island, lying between Rozelle Bay and White Bay, works have been constructed to facilitate the shipment of wheat. Grain brought by rail from the country districts may be unloaded from the trucks, at the rate of 80,000 bushels per hour, into a large terminal elevator having a capacity of 6,500,000 bushels, and it may be delivered from the elevator into the holds of vessels at the rate of 60,000 bushels per hour, four vessels being loaded simultaneously.

Special facilities are available along the waterside for other important classes of trade, such as wool stores fitted with appliances to expedite the handling of the staple product, and accommodation is reserved for the storage of hazardous goods. By private enterprise, a plant has been installed at Ball's Head, where bunkers may be replenished rapidly with coal or oil.

The wharves are situated on the southern shore of the port, and the northern is used mainly for residential sites. The ferry steamers on which traffic is carried across the harbour are certificated as to seaworthiness by the Department of Navigation and licensed by the Sydney Harbour Trust. During 1926-27 certificates were issued to 63 ferry steamers with an aggregate tonnage of 8,971 tons and capacity to carry 46,758 passengers.

In 1922 the Sydney Harbour Bridge Act was passed, and in accordance with its provisions tenders were invited for the construction of a bridge to span the harbour from Dawes' Point to Milson's Point. A tender for the construction of an arch bridge was accepted, the contract price being £4,217,721. The bridge will provide for pedestrian, vehicular and railway traffic, and is to be completed in 1931. It was estimated that the approaches to the bridge will cost a further sum of £1,275,000, and land resumptions £250,000. A description of the bridge and particulars relating to the progress of the undertaking are published in the chapter relating to Roads and Bridges.

There are nine islands in Port Jackson. Four are reserved as public pleasure resorts. Garden Island is used as a depot by the Australian Navy. On Goat Island a repair depot has been established by the Harbour Trust, and three fire floats, with an aggregate capacity of 9,500 gallons per minute, are stationed there. Large graving docks are situated on Cockatoo Island and at Woolwich. Spectacle Island is used for the storage of explosives. Fort Denison, used formerly for defence purposes, is now a lighthouse and fog signal station.

An account of the dock accommodation provided in Sydney Harbour is shown on a later page.

The number and tonnage of vessels which entered Sydney Harbour during the last five years, as recorded by the Harbour Trust, are shown below. The figures differ from those in the table on page 72 as they include vessels engaged in the coastal trade of the State, also vessels which do not report to the Customs authorities on return from a journey to Newcastle for bunker coal:—

Year ended 30th June.	Coastal (State).		Oversea and Interstate.		Total Trade.	
	Number.	Net Tonnage.	Number.	Net Tonnage.	Number.	Net Tonnage.
1923	5,874	1,611,531	2,503	7,201,901	8,377	8,813,432
1924	5,925	1,657,749	2,593	7,364,288	8,518	9,022,037
1925	5,610	1,605,920	2,482	7,525,755	8,092	9,131,675
1926	5,289	1,484,157	2,363	7,233,613	7,652	8,717,770
1927	5,740	1,667,968	2,626	7,879,005	8,366	9,546,973

The aggregate tonnage of vessels which entered the port of Sydney during the year 1926-27 was the largest on record. The average net tonnage of the oversea and interstate steamers in 1926-27 was 3,000 tons, as compared with 2,476 in 1913.

The number of sailing vessels is decreasing rapidly, and the number which entered in 1926-27 was only 72 with a tonnage of 50,940, as compared with 242 vessels and a tonnage of 124,328 in 1920-21. On the other hand the number of motor ships is increasing. The oversea and interstate vessels included 86 motor vessels, 303,695 tons (net) in 1925-26, and 150 of an aggregate net tonnage of 484,150 in the following year.

The following statement shows the latest tonnage figures, including coastwise, for the principal ports of Australasia and the United Kingdom. The figures include tonnage which arrived at the respective ports, although not recorded by the Customs Department:—

Port.	Arrivals incl. Coastwise Net Tonnage.	Port.	Arrivals incl. Coastwise— Net Tonnage.
<i>Australia—</i>		<i>England—</i>	
Sydney ... ..	9,546,973	London ... ..	23,590,931
Melbourne ... ..	7,324,530	Liverpool (including Birkenhead) ... ..	15,849,019
Newcastle ... ..	4,815,525	Cardiff ... ..	8,466,441
Port Adelaide ... ..	4,877,664	Newcastle and Shields	9,013,247
Brisbane ... ..	3,315,130	Southampton ... ..	10,417,994
Fremantle ... ..	3,283,838	Hull ... ..	5,556,609
Townsville ... ..	1,028,106	Plymouth ... ..	5,287,786
Hobart ... ..	808,534	<i>Scotland—</i>	
Albany ... ..	531,219	Glasgow ... ..	6,052,396
Port Kembla ... ..	709,003	Leith ... ..	2,272,112
<i>New Zealand—</i>		<i>Ireland—</i>	
Wellington ... ..	3,430,594	Belfast ... ..	4,185,556
Auckland ... ..	2,450,714	Cork ... ..	4,351,592
Lyttelton ... ..	1,961,630	Dublin ... ..	3,111,061

The revenue and expenditure by the Sydney Harbour Trust during each of the last five years are shown in the following statement, also the capital debt at the end of each year:—

Year ended 30th June.	Capital Debt.	Revenue.	Expenditure.				Surplus.
			Working Expenses.	Renewals and Re- placements.	Interest.	Total Ex- penditure.	
	£	£	£	£	£	£	£
1923	10,129,113	852,242	229,849	23,766	514,756	768,371	83,871
1924	10,417,859	897,357	247,007	29,877	528,743	805,627	91,730
1925	10,644,463	970,402	247,842	35,198	526,944	809,984	160,418
1926	10,956,555	1,015,878	258,117	39,985	554,446	852,548	163,330
1927	11,299,989	1,083,855	273,412	46,620	569,884	889,916	193,939

During the year 1926-27, the revenue represented 9.73 per cent. of the capital debt, and the ratio of working expenses to the revenue was 25.2 per cent. After deducting interest charges and the expenditure from the Public Works Fund on renewals and replacements, there was a surplus on the year's transactions of £193,939.

The principal sources of revenue in 1926-27 were wharfage rates, which amounted to £674,311, and rents for wharves, jetties, and stores, £203,128.

*Newcastle Harbour.*

Newcastle Harbour (Port Hunter) is the second port of New South Wales and the third port of Australia in regard to the volume of its shipping trade. The harbour lies in the course of the Hunter River, and its limits are not defined, but an area of about 990 acres is enclosed by about 8 miles of coastline, extending on the western side as far as Port Waratah, omitting Throsby Creek, and on the eastern side to a point due east of the southern end of Moscheto Island. The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width at the entrance is 19 chains, and the navigable channel is 350 feet wide. The minimum depth is 23 feet 6 inches at low water ordinary spring tide, but vessels which draw 27 feet can enter at high water. Works are in progress with the object of increasing the depth at the entrance to 32 feet.

The harbour is landlocked sufficiently to render it safe for vessels in all kinds of weather, and breakwaters have been erected to improve the entrance and to prevent the ingress of sand from the ocean beaches.

Newcastle is primarily a coal loading port, and the proximity of the coal-fields has led to the establishment of important industries, including iron and steel works, in the district, so that trade in other commodities is likely to develop steadily. Arrangements have been made for the shipment of butter produced in the northern dairying districts. Frozen meat also may be dispatched, and a wharf is available for timber.

Wharfage accommodation to the extent of 23,812 feet is provided; 10,138 feet are used for the shipment of coal, 7,900 feet for general cargo, 2,428 feet for Government purposes, and 3,346 feet are leased. There are 98 mooring dolphins and jetties for vessels awaiting cargo. The general cargo wharves are connected with the main railway system. The railway extends along the coal wharves also.

The shipping entered during 1926-27 included coastal 3,236 vessels 1,127,520 tons, interstate 1,114 vessels 1,844,712 tons, and oversea 561 vessels 1,843,293 tons; total, 4,911 vessels 4,815,525 tons.

*Other Ports.*

The shipping trade of the ports of New South Wales, other than Sydney and Newcastle, is relatively small, and only a brief account of these harbours and anchorages is given hereunder, in the order in which they occur along the coast.

The most northerly port is the estuary of the Tweed River. Its entrance is formed by breakwaters, but the channel is almost blocked by a sandy bar, where the average depth at low water is about 6½ feet. Byron Bay provides fair shelter during off-shore winds, the depth of water at the ocean jetty is about 30 feet. The estuaries of the Richmond and Clarence Rivers are bar harbours. On the Richmond River bar the average depth at low water is 12 feet, and the river is navigable by small vessels as far as Lismore, 65 miles from the sea. The entrance to the Clarence River is somewhat deeper, and vessels of 14 feet draught may navigate the river as far as Grafton (48 miles). Woolgoolga gives protection to small vessels in southerly weather. At Coff's Harbour breakwaters are under construction to form a harbour for the rich Dorrigo district by connecting small islands in the vicinity with the mainland. When complete, a harbour of over 200 acres will be available, and 95 acres will give a minimum depth of 24 feet.

The bar harbours which form the estuaries of the Bellinger and Nambucca Rivers are used only by vessels of light draught. Trial Bay generally

affords safe anchorage and shelter for coastal vessels. The Macleay River, which discharges into Trial Bay, is navigable by small vessels for 40 miles. Port Macquarie, at the mouth of the Hastings River, is a bar harbour for coastal vessels, but the entrance is rendered somewhat dangerous by shifting banks of sand. Between Port Macquarie and Port Stephens small vessels are afforded shelter at Camden Haven, Crowdy Bay, Harrington Inlet (at the mouth of the Manning River), Cape Hawke Harbour (Point Forster), and Sugarloaf Bay.

Port Stephens is 21 nautical miles north of Newcastle. At the entrance the depth is 30 feet and the width between the headlands is about 60 chains, the navigable width being 20 chains. The port extends westward for about 11 miles and is from 1 to 3 miles broad. Excluding the Karuah and Myall Rivers, which discharge into Port Stephens, the area enclosed by a coastline of 92 miles is about 32,000 acres. The eastern portion is somewhat obstructed by sandbanks, but there are channels between them giving access to secure landlocked anchorage. Salamander Bay, 5 miles from the entrance, is a spacious, well-sheltered anchorage, with a depth ranging from 36 to 54 feet. Outside Port Stephens there is an anchorage known as Fly Road, where vessels can obtain excellent shelter if they experience difficulty in entering the port. By reason of its natural advantages, its proximity to the Maitland coal-fields, and its favourable position for connection with trunk railways, Port Stephens could be transformed into an important shipping centre.

Broken Bay, at the mouth of the Hawkesbury River, is a good natural harbour, but on account of its proximity to Sydney Harbour it has not been developed. Broken Bay has three large branches, Brisbane Water, Hawkesbury Mouth and Pittwater. The area below the bridge where the main Northern railway crosses the Hawkesbury River, excluding Cowan, Mullet and Cockle Creeks, and Brisbane Water, extends over 14,500 acres and has a coastline of 62 miles. The entrance to Broken Bay is  $2\frac{1}{2}$  miles wide, with deep water. The Hawkesbury River is navigable for 70 miles. Vessels of 9 feet draught may enter Brisbane Water. Pittwater is deep, but the entrance is blocked by a bar with a fairway depth of 9 feet.

To the south of Sydney lies Botany Bay, used mainly as a fishing ground and tourist resort. At the roadsteads Bulli and Bellambi, ocean jetties have been constructed for the shipment of coal. Wollongong has a small artificial shipping basin connected by rail with the Illawarra coal mines. A few miles further south a harbour for deep-sea vessels has been built at Port Kembla. The shipping area with a minimum depth of 24 feet is 256 acres, and there are 166 acres with 36 feet of water. Shellharbour is fit for small vessels only. At Kiama a small harbour is available for coastal steamers. At Crookhaven good anchorage may be obtained in 6 fathoms of water. Jervis Bay is 82 miles south of Sydney. Its area is 48 square miles and the entrance is over 2 miles wide. About 38 square miles carry a depth over 24 feet, but only a small proportion of the area is suitable for anchorage in all weather, on account of the almost oval form of the bay and the few indentations in the coastline, which is only 31 miles in length. Darling Road and Montague Road are parts of the bay which afford shelter at all times. At Darling Road an area of land has been ceded to the Commonwealth Government as a port for Canberra, the Federal Capital.

Between Jervis and Twofold Bays there are a number of shipping places where small coastal steamers load dairy produce for the Sydney market, viz., Ulladulla, a small artificial harbour, Bateman Bay, Moruya River,

Narooma (Wagonga Inlet), Bermagui, Tathra (the port of Bega), and Merimbula. Twofold Bay is near the southern extremity of the State. It affords good anchorage for fairly large vessels.

#### RIVER TRAFFIC.

New South Wales has few inland waterways and although there is some river traffic its extent is not recorded. The coastal rivers especially in the northern districts are navigable for some distance by sea-going vessels and trade is carried further inland by means of small steamers and launches.

The use of the inland rivers for navigation depends mainly on seasonal conditions. Normally, the Murray River may be used by flat-bottomed barges and other small craft. Traffic on the Darling is intermittent. At certain times in seasons when the rainfall is sufficient to maintain a fair volume of water, barges carry wool and other products for a considerable distance.

A scheme is in progress for the construction of storage dams, weirs and locks on the Murray, Murrumbidgee and Darling Rivers. The works are being constructed under an agreement between the Governments of the Commonwealth and of the States of New South Wales, Victoria, and South Australia, which provides that except in times of unusual drought, sufficient water must be maintained in the weirs and locks for navigation by vessels drawing 5 feet of water.

#### HARBOUR FERRY SERVICES.

In the ports of Sydney and Newcastle, ferry services have been established by private companies to transport passengers, vehicles, etc., across the harbours, the conditions under which the services are conducted being regulated by license. At 30th June, 1927, sixty-eight boats licensed to carry 46,380 passengers were in service, and 1,232 persons were employed. Approximately 51,500,000 passengers were carried during the year 1926-27; and in accidents 23 passengers and 141 employees were injured; the total revenue amounted to £786,432, and the expenditure to £719,880.

These ferries are distinct from those to which reference is made in the chapter entitled Local Government, which are maintained by the central Government or by municipalities or shires for the free transport of traffic across rivers where bridges have not been erected.

#### RATES OF FREIGHT.

Freight charges represent an important factor in the cost of marketing in oversea countries the products of the industries of New South Wales. Generally the rates charged by British lines of steamships are determined by organisations of shipowners.

During the war period, rates of freight rose to an extraordinary level. The maximum for most commodities was reached in 1919, then the over-supply of shipping led to a general decline and the movement became steadily downward. The decrease is especially noticeable in regard to classes of cargo carried by tramp steamers, *e.g.*, wheat, for which freight was charged at £7 10s. per ton in 1920, and in the following year space was obtained at the rate of £2 6s. 8d. per ton. The decline continued until 1923, then it slackened. During the last three years the rates for wheat have varied according to the quantity available for export. The rates for other commodities have been fairly steady, though some showed a tendency to decline in 1927.

The following statement shows the range of rates for the carriage of various commodities by steamer from Sydney to London in the last three years, as compared with the rates in 1911 and in 1920-21:—

Article.	1911.	1920-21.	1924-25.	1925-26.	1926-27.
Butter ... .. box 56 lb.	2s. to 2s. 6d.	6s.	4s. 6d.	4s. 6d.	4s. to 4s. 6d.
Copra ... .. ton	40s.	225s. to 120s.	61s. 3d.	61s. 3d.	61s. 3d.
Hides ... .. lb.	40s. to 52s. 6d.†	1½d. to 1d.	¾d.	¾d.	¾d. to 1½d.
Leather ... .. ton	60s.	270s. to 244s.	152s.	153s.	137s. 9d. to 153s.
Mutton—Frozen ... lb.	¾d. to 1½d.	1½d.	1½d.	1½d.	1d. to 1½d.
Rabbits—Preserved ... ton	50s.	120s. to 105s.	70s.	70s.	65s. to 70s.
Tallow ... .. „	40s. to 42s. 6d.	180s. to 170s.	78s. 9d.	78s. 9d.	78s. 9d. to 70s. 9d.
Wheat ... .. „	17s. 6d. to 30s.	120s. to 46s. 8d.	50s. to 30s.	40s. to 20s.	21s. 3d. to 47s. 6d.
Wool—Greasy ... .. lb.	¾d. to 1½d.	1½d.‡	1½d.‡	1½d.‡	1½d. to 1½d.‡
Measurement Goods—40 cub. ft.	25s. to 45s.	120s. to 105s.	70s.	70s.	63s. to 70s.
Timber ... .. 100 sup ft.	6s.	35s. to 22s.	11s.	11s.	11s.

† Per ton. ‡ Plus 5% primage, less 10% rebate.

Wool is carried direct to Continental ports in Europe at the same rates as to London, but for cargo transhipped at London the rates are much higher. The rate for wool from Sydney to Japan in 1926-27 was 1½d. per lb., less 10 per cent. rebate.

#### PORT CHARGES.

The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Acts. The various charges are shown in detail in the Statistical Register of New South Wales 1926-27, and only a brief reference to the rates collected by each authority is made in this volume.

The gross collections by the State authorities, *i.e.*, the Department of Navigation of New South Wales and the Sydney Harbour Trust, during the last three years are shown below in comparison with those during the years 1910-11 and 1920-21:—

Charges.	Year ended 30th June.				
	1911.	1921.	1925.	1926.	1927.
	£	£	£	£	£
Pilotage ... ..	43,856	74,733	78,330	73,907	75,014
Harbour Removal Fees ... ..	7,306	10,647	7,054	6,577	6,109
Harbour and Light Rates ... ..	41,331	49,551	55,589	54,464	52,716
Navigation Department Fees, etc. ...	9,256	10,839	2,083	1,833	1,641
Harbour and Tonnage Rates (Out-ports) ... ..	6,792	72,865	188,956	174,814	182,101
Sydney Harbour Trust—					
Wharfage and Tonnage Rates ...	223,379	475,230	650,347	677,475	733,035
Rents of Wharves, Jetties, etc. ...	77,930	188,473	191,770	191,187	190,952
Rents of other premises ... ..	46,178	71,666	84,690	93,040	103,728
Miscellaneous ... ..	22,273	61,629	45,826	59,637	59,617
Total ... ..	483,301	1,015,633	1,304,645	1,332,934	1,404,913

The light-houses and light dues collected in Australia by the Commonwealth Government during the year ended 30th June, 1927, amounted to £202,143, and receipts under the Federal Navigation Act to £14,638.

*Charges levied on Ships.*

The principal charges imposed under Federal legislation are light dues and fees for the survey of ships, the adjustment of compasses, etc.

The Commonwealth light dues must be paid in respect of every ship entering a port in Australia. The rate, payable quarterly, is 9d. per ton (net), and payment at one port covers all Australian ports which the vessel may enter during the ensuing period of three months. Vessels calling at only one port in Australia *en route* to an oversea destination are charged at the rate of 5d. per ton (net). If a vessel is laid up for a period of at least one month, a proportionate remission of the light dues may be made.

The Federal Navigation Act prescribes that sea-going vessels must be surveyed at least once in every twelve months, and a vessel may not go to sea without a certificate of survey or equipment issued by the Federal Department of Navigation, or other approved certificate. The fees for survey and for compass adjustment are collected by the Department of Navigation and paid to licensed marine surveyors and compass adjusters. The prescribed survey fees for a twelve-months' certificate in respect of steamers, motor ships, and of sailing ships (15 tons and over), with auxiliary engines range from £4 where the gross registered tonnage does not exceed 100 tons to £13 10s. if the gross tonnage is between 2,100 and 2,400 tons; and a charge is made for each additional 300 tons at the rate of 30s. for passenger ships and £1 for cargo ships. For ships under 1,800 tons propelled by sails only, the fee ranges from £3 to £6 with 15s. for each additional 300 tons. The survey fees for dry docking certificates range from £1 to £4, and double rates are charged for vessels without certificates of survey. The fees for the adjustment of a ship's compasses range from £2 2s. to £7 7s.

The certification of ships trading exclusively within the limits of the State of New South Wales is a function of the State Department of Navigation. The fees payable to marine surveyors for surveys in respect of a twelve months' certificate range from £2 to £8 where the tonnage does not exceed 600 tons, with £2 for each additional 300 tons up to a maximum of £20.

Pilotage rates are charged by the Navigation Department of New South Wales in respect of every ship entering or clearing a port in the State. Vessels engaged in the whaling trade and vessels in the charge of a master possessing a pilotage certificate are exempt unless a pilot is actually employed. The rate is 1½d. per ton (net), on arrival and on departure for ships (a) in ballast, (b) arriving solely for refitting or docking, (c) resorting to port solely on pleasure or for orders, repairs, provisions or coal, or through stress of weather or otherwise in distress. The rate for other ships is 2½d. per ton on arrival and on departure. The maximum rate is £25 and the minimum is £3 at Sydney or Newcastle, and £1 10s. at other ports.

Vessels being removed from one place to another in a port where there is a pilot establishment are charged harbour removal dues unless the master possesses a pilotage certificate. The rate for a removal varies from £1 to £4 10s. according to the size of the vessel; half rates are charged after the third removal.

The harbour and light rate imposed by the State Government is payable half-yearly at the rate of 4d. per ton (net). The exemptions are vessels engaged in the whaling trade, vessels entering port for refitting or docking, for pleasure, orders, repairs, provisions or coal, or in distress, and those in respect of which the rate has been paid at any port in the State during the preceding six months.



Tonnage rates are payable in respect of vessels of 240 tons and over while berthed at a wharf—the charge is  $\frac{3}{16}$ d. per ton (gross) for each period of six hours. Vessels under 240 tons are liable for berthing charges, the daily rate in Sydney Harbour being £1 for vessels engaged in vehicular traffic, 1s. to 10s., according to passenger capacity, for vessels engaged in picnic, excursion or passenger traffic, and 2s. 6d. to 10s. for other vessels. Berthing charges in other ports are calculated at the rate of 2s. 6d. for each period of six hours. Where wharves are leased to shipping companies the tonnage rates and berthing charges in respect to their vessels are not charged as they accrue, but are accounted for in rent.

Moorings may be laid down in Sydney Harbour with the approval of the Harbour Trust Commissioners. An annual license fee of £5 is charged for moorings owned and used by shipping companies; and from 2s. 6d. to 10s. for those used in connection with docking premises or for small vessels. In other ports vessels are allowed to occupy Government mooring buoys for a period of two clear days free of charge, thereafter buoyage rates ranging from £1 to £3 per day are imposed. Exemption from buoyage rates may be granted by the officer in charge of a port if a vessel is detained through stress of weather or when an unforeseen circumstance renders it desirable that the vessel should occupy a Government buoy.

Tugs, ferry boats, hulks, and launches plying for hire in Sydney Harbour must obtain a license, for which the charge is £1 per annum. For water boats supplying water to shipping in the port the annual license fee is £5; for lighters, 2s. per ton up to 200 tons and 1s. for each additional ton, the minimum fee being £2; and for watermen 5s. In other ports the annual license fees for ballast lighters and for watermen are £1 and 10s. respectively. The charge for water supplied to a vessel by the Sydney Harbour Trust is 2s. per 1,000 gallons if the water is taken through hoses supplied by the Commissioners; in other cases the rate is 1s. 6d. per 1,000 gallons.

#### *Harbour and Wharfage Rates.*

In addition to the foregoing charges levied on the vessels and payable by their owners, harbour or wharfage rates payable by the owners of the goods are imposed on the cargoes landed or shipped in the ports. Goods transhipped are subject to transshipment rates and not to inward or outward wharfage or harbour rates. Passengers' luggage is exempt. The schedules of rates for the port of Sydney are contained in the Sydney Harbour Trust regulations, and for other ports they are proclaimed under the Harbour and Tonnage Rates Act.

In Sydney Harbour all classes of goods are subject to inward or to transshipment rates. Unless it is otherwise specified in the schedule, the inward rate is 4s. per ton assessed by weight or by measurement (40 cubic feet) at the option of the Commissioners. There are a number of special inward rates—some apply only to Australian products arriving from another port in the Commonwealth, *e.g.*, 2s. 6d. per ton of dairy produce, fresh fish, poultry, iron or steel, fencing wire, copper or stone; 2s. 6d. per 630 superficial feet of rough or sawn timber. The inward rate on coal is 1s. per ton, and on liquid fuel 2s. per ton, but only the transshipment rate—6d. per ton—is levied when these commodities are shipped in Sydney for consumption as bunker fuel by the loading vessel. Kerosene in the case is charged at the rate of 2½d. per case; green fruit—Australian 1½d. and other 2d. per package; vegetables, 1½d. per case; timber (other than Australian), 3s. 6d. per 630 super feet; copra, 3s. per ton; guano, 1s. 3d. per ton; sugar for

refining, 2s. per ton; wool, 9d. per bale. The general rate on transshipments is 6d. per ton, but there are a number of special rates ranging down to ¼d. per ton, which is payable on firewood.

The schedule of outward rates in operation in Sydney Harbour in June, 1927, contained thirty-two items, including the principal primary products, and all other goods are free. The rate in respect of coal is 6d. per ton; wheat and coke 9d. per ton; wool 9d. per bale; ore 4½d. per ton; other commodities subject to outward rate, including pastoral and dairy products, flour and mill offals, cement, copper, tin and fertilisers, 1s. 6d. per ton. Outward rates are not chargeable on consignments under 2 tons.

In ports other than Sydney there are separate schedules for coastwise goods. The inward general rate for coastwise goods arriving at these ports is 2s. per ton, and special rates include coal and firewood 6d. per ton; coke and fertilisers 1s. per ton; green fruit 2d. per package; vegetables 1d. per case; ore 4½d. per ton; ore products 9d. per ton; inflammable liquids 2d. per case; maize and oats 2d. per bag. The outward rate on coastwise goods is 1s. per ton, unless otherwise specified; coal and firewood are rated at 3d. per ton; coke 4d. per ton; ore and ore products 4½d. per ton; timber—sawn or rough—1s. 3d. per 630 super feet. Transshipment rates are half the inward rates.

The general rate imposed in respect of interstate and oversea goods arriving at ports outside Sydney is 3s. 4d. per ton by weight or measurement. In most cases the special rates are the same as those levied in Sydney, some of the exceptions being coal 6d. per ton, kerosene 2d. per case, liquid fuel 3s. per ton, ore 4½d. per ton, ore products 9d. per ton, wool 6d. per bale. The schedule of outward rates on interstate and oversea goods contains 24 items including coal and firewood 3d. per ton, coke 4d. per ton, rough or sawn timber 1s. per 630 super feet, and wool 6d. per bale. The rate is 1s. per ton by weight or by measurement on goods for which a special rate is not fixed. The transshipment rates on interstate and oversea goods are in most cases similar to those imposed in Sydney.

#### *Storage Charges.*

In order to avoid congestion on the wharves in Sydney Harbour, storage charges are imposed on imported goods landed on a wharf if they are not removed within six days after the final discharge of the vessel, and on goods placed on a wharf for export which are not removed within 48 hours. The charges are at a daily rate of 4d. per ton during the first week, 5d. during the second, 6d. during the third week and 7d. thereafter.

In other ports storage charges are payable on goods left on a wharf for more than 48 hours at a daily rate of 2d., 3d., and 4d. per ton for the first, second, and third week respectively, and 6d. per ton thereafter.

Storage charges are imposed on timber after the first 48 hours at the daily rate of 1d. per ton for the first four days, and thereafter at 3d. per ton in Sydney Harbour, and at 2d. per ton in other ports.

In computing storage charges in Sydney Harbour, Sundays and holidays are not included.

#### SHIPPING REGISTERS.

Shipping in New South Wales is registered in accordance with the Merchant Shipping Act of the Imperial Parliament, under sections which apply to the United Kingdom and to all British dominions. The Act prescribes that all British vessels engaged in trade must be registered, except those under 15 tons burthen employed in the coasting trade of the part of the British Empire in which the owners reside. Ships not legally registered are not entitled to recognition as British ships and are not permitted to proceed to sea. Although the registration of vessels under 15 tons is not

compulsory, many small vessels are registered at the request of the owners, as registration facilitates the transaction of business for the purpose of sale or mortgage. The flag for merchant ships registered in Australia is the red ensign usually flown by British merchant vessels, defaced with a white seven-pointed star indicating the six federated States of Australia and the territories of the Commonwealth and the five smaller white stars representing the Southern Cross.

In New South Wales shipping registers are kept at the ports of Sydney and Newcastle. The following statement shows particulars regarding the shipping on the registers, as at 30th June, 1927:—

Tonnage Class.	Steam.		Motor.		Sailing.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
Under 50 tons ...	246	5,534	218	2,278	200	2,738	664	10,550
50 and under 500 ...	205	32,425	2	167	72	11,084	279	43,676
500 ,, ,, 1,000 ...	17	11,752	...	...	8	6,413	25	18,165
1,000 ,, ,, 2,000 ...	8	13,061	...	...	3	3,727	11	16,788
2,000 and over ...	9	33,093	...	..	...	...	9	33,093
<b>Total ...</b>	<b>485</b>	<b>95,865</b>	<b>220</b>	<b>2,445</b>	<b>283</b>	<b>23,962</b>	<b>988</b>	<b>122,272</b>

Changes in respect of the registration in consequence of sales show that 53 vessels, with an aggregate tonnage of 12,127 tons (net), were sold during the year 1926-27. Fifty-one of a net tonnage of 9,102 tons being sold to British subjects, the transactions did not necessarily involve removal from the registers. Two vessels, 3,025 tons, were sold to foreigners.

Excluding yachts, launches and boats, eleven vessels, £194,234, were imported during 1926-27, viz., six valued at £172,309 from the United Kingdom, one valued at £3,800 from France, and four valued at £18,125 from the Netherlands. Eight vessels, of a total value of £140,780, were exported, including one built in Australia, which was sent to the Solomon Islands. Of the seven vessels built elsewhere, two were exported to Fiji, and one to each of the following countries, viz.:—New Zealand, Solomon Islands, British Malaya, Greece, and Brazil.

#### SHIPBUILDING AND REPAIRING.

Accommodation for building, fitting, and repairing ships, has been provided by State and private enterprise at Sydney and Newcastle, and at four other ports in New South Wales.

In Sydney Harbour there are four large graving docks, five floating docks, and seven patent slips. Two graving docks, the Fitzroy and the Sutherland, situated on Cockatoo Island, were under the control of the Government of New South Wales until February, 1913, when they were transferred to the Commonwealth. They are controlled now by the Australian Commonwealth Shipping Board. The Sutherland Dock is 633 feet long, and can accommodate a vessel with a breadth of 84 feet, and a draught of 30 feet. The Fitzroy Dock has an effective length of 490 feet, and its breadth is 45 feet. It can take vessels drawing 18 feet 3 inches. At Cockatoo Island there are also two patent slips, where vessels drawing 9 feet and 4 feet respectively may be slipped. The vessels docked at the Cockatoo Island docks during the year ended 30th June, 1927, numbered 112, including 30 warships; their gross tonnage was 304,832 tons. The vessels slipped numbered 46, with a gross tonnage of 1,380 tons. In addition to warships a number of mercantile vessels have been constructed at Cockatoo Dockyard, including the largest Australian-built steamers, viz., the *Fordsdale*, 9,700 gross tonnage, and a sister ship, the *Ferndale*.

A private company, Mort's Dock and Engineering Company, Limited, owns two graving docks in Sydney Harbour, four floating docks and four patent slips. The Woolwich Dock is 850 feet long, and at high tide can take vessels drawing 28 feet; Mort's Dock is 640 feet long, and vessels drawing 16½ feet may be floated into it. The largest of the slips is 270 feet long; it can take a vessel weighing 1,600 tons gross, drawing 11 feet forward and 16 feet aft. The works of the Mort's Dock and Engineering Company are equipped with plant for shipbuilding, as well as for all classes of repairs.

There is a smaller dock, under private ownership, with a lifting power of 300 tons, and the State Government maintains a slip with a lifting capacity of 100 tons.

At Newcastle there are two patent slips attached to the State Government Dockyard at Walsh Island, and three which are privately owned. Of the latter, the largest is 200 feet long and 40 feet wide; it can take vessels which weigh 800 tons, and draw 8 feet forward and 12 feet aft.

The works at Walsh Island were established on a site which was originally a sandspit, and had been built up by dredging from the bed of the Hunter River. In 1913, after the Cockatoo Dockyard had been transferred to the Federal Government, workshops were erected at Walsh Island for the construction and repair of Government dredges and other vessels. Subsequently the establishment was extended, and provision was made for the construction of merchant ships and ferry steamers, and for other classes of engineering and iron work. The patent slips are 292 feet in length; one has a lifting power of 900 tons and the other 400 tons. During the year ended 30th June, 1927, fifty-one vessels, with a gross tonnage of 12,177 tons, were slipped at Walsh Island.

An agreement, subject to ratification by Parliament, has been made between the Government of New South Wales and the Commonwealth Government for the construction of a large floating dock at Walsh Island. The Commonwealth has agreed to contribute the sum of £135,000 towards the cost of construction, which is estimated at £410,000.

Graving docks under the control of the State Government are maintained at the ports of the Tweed, Richmond, Clarence, and Manning Rivers to meet the requirements of vessels engaged in the coastal trade. The largest, at Richmond River, is 214 feet long and 45 feet wide; it can accommodate a vessel with a draught of 10 feet. Fifty-three vessels with a gross tonnage of 3,418 tons were docked at these ports during the year 1926-27.

The number and tonnage of steam and sailing vessels built in New South Wales in 1901, 1911, and in each of the last seven years are shown in the following statement.

Year.	Sailing.		Steam.		Motor.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1901	11	647	12	1,076	...	...	23	1,723
1911	1	18	14	968	...	...	15	986
1920-21	1	7	8	808	6	84	15	892
1921-22	4	37	10	6,619	10	82	24	6,738
1922-23	5	1,433	30	27,831	6	243	41	29,507
1923-24	3	2,850	20	33,615	5	69	28	36,534
1924-25	...	...	4	6,400	7	69	11	6,469
1925-26	...	...	3	819	3	51	6	870
1926-27	...	...	...	...	2	15	2	15

The vessels built in 1926-27 were of wood.

## SEAMEN.

Matters relating to the employment of seamen are subject to control by the Commonwealth Government in terms of the Federal Navigation Act. Provision is made for the regulation of the methods of engagement and discharge, the form of agreement, rating, the ship's complement, discipline, hygiene, and accommodation. Mercantile Marine offices were established in March, 1922, to undertake functions performed hitherto by State shipping offices at Sydney and Newcastle, where engagements and discharges are registered.

The following statement shows the number of transactions at the offices during the last five years:—

Year ended 30th June.	Engagements registered.			Discharges registered.			Licenses to ship.		
	Sydney.	New-castle.	Total.	Sydney.	New-castle.	Total.	Sydney.	New-castle.	Total.
1923	24,329	3,248	27,577	24,885	3,108	27,993	1,006	234	1,240
1924	24,036	2,936	26,972	24,316	2,916	27,232	1,024	361	1,385
1925	24,148	3,581	27,729	25,140	3,445	28,585	964	305	1,269
1926	28,356	3,658	32,014	27,894	3,390	31,284	1,545	250	1,795
1927	23,921	4,152	28,073	24,064	4,099	28,163	874	211	1,085

The rates of wages, hours of labour, and conditions under which crews work on vessels engaged in the interstate and coastal trade of Australia are fixed by awards and agreements under the Commonwealth Conciliation and Arbitration Act. The rates for seamen were assessed on a labourer's basic wage\* and an additional sum of £2 per month for skill.

The monthly rates payable to officers and engineers vary according to the size of the vessels on which they are engaged. The rates ruling in December, 1927, were as follow:—

Occupation.	Rates of Wages per month.						
	£	s.	d.	£	s.	d.	
Officers—Chief	22	5	6	to	33	5	6
Second	20	5	6	„	30	5	6
Third	21	5	6	„	27	5	6
Junior	£20 5s. 6d.						
Engineers—Chief	31	2	6	to	51	12	6
Second	25	12	6	„	33	12	6
Third	23	2	6	„	28	2	6
Fourth	20	2	6	„	25	2	6
Firemen	£18 12s. 6d.						
Trimmers	£16 12s. 6d.						
Seamen—Steamers	£16 12s. 6d.						
Cooks	13	13	6	to	23	3	6
Stewards	15	2	6	„	21	12	6
Stewardesses	10	5	0	„	11	7	6

Except where provided specifically in the awards and agreements, the ordinary hours of work for seamen are eight per day, and overtime must be paid for time worked in excess of eight hours. Manning conditions are regulated by committees representing the shipowners and the unions.

Compensation to seamen is provided by a Federal law, the Seamen's Compensation Act, 1911, which applies to ships in the service of the Commonwealth (exclusive of naval and military service), and to ships trading with

\* See Chapter relating to Wages.

Australia, or engaged in any occupation in Australian waters, or in trade and commerce with other countries or among the States. The schedules of the Act indicate the amount of compensation payable, in case of death or total or partial incapacity resulting from personal injury by accident to seamen in the course of their employment. Methods of procedure for the recovery of compensation are prescribed by regulations under the Act.

Seamen employed on New South Wales ships, *i.e.*, ships registered in New South Wales, or owned or chartered by the Government or by a person or body corporate whose place of business is in the State, may claim compensation under the Workers Compensation Act of New South Wales, if they agree not to proceed under the Federal law.

#### SAFETY OF LIFE AT SEA.

The navigation laws contain stringent provisions designed to prevent unseaworthy ships from proceeding to sea, and to ensure that all vessels are manned by competent crews, that life-saving appliances are carried, and that special arrangements are made to safeguard dangerous cargoes. Regulations have been framed for the prevention of collisions, also rules regarding the lights and signals to be used.

On account of the regularity of the coast of New South Wales and the absence of islands, navigation in the seaboard waters is usually safe. Along a coastline less than 700 miles in length there are 29 light-houses, and in the ports of Sydney, Newcastle, Port Kembla, and in many other shipping places, lighted beacons, leading lights, and other guides have been placed for the safety of harbour navigation.

The lights on the sea coast are under the control of the Commonwealth, and a description of the more important light-houses was published in the 1921 issue of this Year Book at page 274.

Pilotage is a State service as the sections of the Navigation Act which authorise its transfer to Federal authority have not been brought into operation. A pilot must be engaged for every vessel entering or leaving a port of New South Wales unless the master holds a certificate of exemption. Such certificates may be granted to British subjects only, for use in respect of British ships registered in Australia or New Zealand and employed in the trade between ports in Australasia and the South Sea Islands, or engaged in whaling. The pilotage rates are shown on page 81.

Wrecks and shipping casualties which occur to British merchant shipping on or near the coast of New South Wales are investigated by Courts of Marine Inquiry.\* The majority of wrecks reported are small coasters under 200 tons. The following statement shows the wrecks reported in each of the last five years. The figures relate to vessels with crews who were domiciled in New South Wales:—

Year ended 30th June.	British Vessels.				Total Tonnage.	Crews and Passengers.	Lives Lost.
	Steam.	Motor.	Sailing.	Total.			
1923	6	1	...	7	3,862	193	46
1924	7	...	...	7	747	69	2
1925	3	...	1	4	10,413	154	2
1926	3	...	...	3	2,606	150	1
1927	3	...	...	3	2,951	273	7

\* See chapter relating to Law Courts.

Lifeboat stations are maintained at Sydney and at Newcastle, and life-saving appliances are kept at certain places along the coast. The pilot vessels are fitted for rescue work, and steam tugs are subsidised for assisting vessels in distress.

The Royal Shipwreck Relief and Humane Society of New South Wales affords relief to distressed seamen and their dependents and to the crews and necessitous passengers wrecked in New South Wales waters. It is maintained by public subscription, without subsidy from the State. The relief given during the year 1926-7 amounted to £1,593.

## RAILWAYS AND TRAMWAYS.

THE first two projects for the construction of railways in New South Wales were originated by private companies, but it was soon recognised that the undertakings were beyond their financial resources, and the works were transferred to the Government. Since then it has become an established policy that all railways shall be under Government control, although a few private lines have been constructed for local purposes.

The management of the State railways and tramways is entrusted to Railway Commissioners appointed by the Governor. The railway and tramway property is vested in them as a body corporate; they conduct the services on existing lines and construct the new lines authorised by the Legislature. By-laws for the regulation of the services, including those by which rates of freight and fares are prescribed, must be approved by the Government before they become operative. The Commissioners pay all receipts into consolidated revenue, and moneys to be expended on services and on construction are appropriated annually by Parliament. The finances of the railways and tramways, as a Government business undertaking, and their relation to the revenue, expenditure, and public debt of the State, are discussed in the chapter of this volume entitled "Public Finance."

A Royal Commission appointed in 1924 to report on the railways and tramways of New South Wales recommended that the Railway Commissioners be given full control over their funds, with responsibility for the renewal of loans and the raising of future capital; also that they be recouped by the State Treasury for losses incurred upon developmental lines for a period of ten years after they have been open for traffic. The Royal Commission made other important recommendations in regard to organisation and administration, of which a summary was published on page 250 of the 1924 issue of the Year Book.

There are three Railway Commissioners, viz., the Chief Commissioner and two assistant Commissioners, appointed for a period of seven years, in terms of the Government Railways (Amendment) Act of 1924. The Act provides also for the appointment by the Chief Commissioner of four Area Commissioners, to supervise operations within areas allotted to them. Their headquarters are in Sydney, Newcastle, Orange, and Goulburn respectively.

The following statement shows the mileage and cost of the railways and tramways administered by the Railway Commissioners of New South Wales, also the results of working during the last two years:—

Particulars.	1925-26.			1926-27.		
	Railways.	Tramways.	Total.	Railways.	Tramways.	Total.
Lines open for Traffic 30th June—	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Mileage .. .. .	5,742	228	5,970	5,750	210	5,960.
Cost of Construction and Equipment .. .. .	£ 105,237,668	£ 11,434,523	£ 116,672,191	£ 112,789,149	£ 11,536,050	£ 124,325,199
Year ended 30th June—						
Earnings .. .. .	16,939,032	3,619,496	20,558,528	18,906,543	3,806,098	22,712,641
Working Expenses .. .. .	12,519,393	3,319,996	15,839,389	13,795,853	3,487,834	17,283,687
Balance after paying Working Expenses .. .. .	4,419,039	299,500	4,718,539	5,110,690	318,264	5,428,954
Interest on Capital .. .. .	5,249,710	577,900	5,827,610	5,562,308	588,180	6,150,488
Deficit .. .. .	830,671	278,400	1,109,071	451,618	263,916	721,534



The mileage of lines open for traffic, as shown above, represents the extent of the routes covered by railways or tramways irrespective of the number of tracks laid thereon. Particulars relating to the length of railways laid with one or more tracks are shown on page 92, and the track mileage of the tramways is stated on page 109.

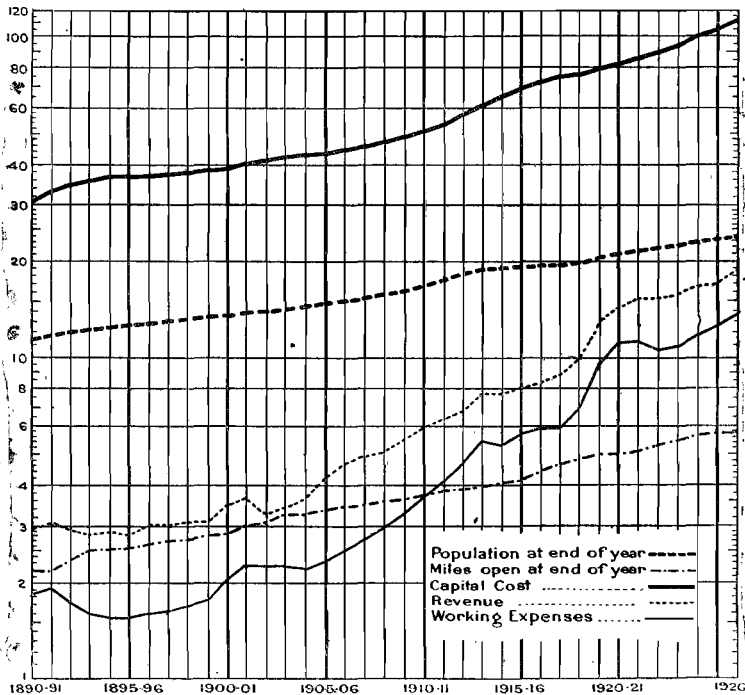
The capital cost of the railways and tramways open for traffic as at 30th June, 1927, amounted to £124,375,199. On the railways £112,739,149 had been spent, and in 1926-27 they showed a deficiency of £451,618 after paying interest. Operations on the tramways showed a deficiency of £269,916.

RAILWAYS.

The particulars relating to State railways, as stated in this chapter, refer to the lines operated by the Railway Commissioners of New South Wales, and are exclusive of the following lines, built for the special

RAILWAYS, 1890-91 TO 1926-27.

Ratio Graph.



The numbers at the side of the graph represent £1,000,000 of capital cost, revenue and working expenses; 100,000 of population and 1,000 miles of railway.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

purposes of Government departments:—The Goondah-Burrinjuck line, 26 miles, is a two-foot gauge railway running from the main Southern line to Burrinjuck Dam. It is maintained by the Water Conservation and Irrigation Commission and used for general traffic. A light line, 10 miles

long, also connecting with the main Southern line, was built by the Department of Public Works to convey materials for the construction of the Cordeaux Dam. Another line runs from Liverpool to the military area at Holdsworthy, and is operated by the Railway Commissioners of New South Wales. There are also 164 miles of border railways in the Riverina district of New South Wales, which are the property of the State of Victoria. Information relating to them is shown on page 105.

On 26th September, 1855, the first railway line, 14 miles in length, was opened for traffic between Sydney and Parramatta, and communication was established between Newcastle and East Maitland on 11th April, 1857. The subsequent growth of the State railways may be traced in the table given below. The Campbelltown to Camden, and Yass tramways are included in the figures relating to mileage as they are worked with the railways.

Period.	Opened during the period.	Total opened at end of period.	Year ended June.	Opened during the period.	Total opened at end of period.
	miles.	miles.		miles.	miles.
1855-64	143	143	1921	28	5,043
1865-74	260	403	1922	73	5,116
1875-84	1,215	1,618	1923	202	5,318
1885-94	883	2,501	1924	205	5,523
1895-1904	780	3,281	1925	133	5,656
1905-14	686	3,967	1926	86	5,742
1915-24	1,556	5,523	1927	8	5,750

The total length of State lines open at 30th June, 1927, was 5,750 miles, distributed as follows:—Southern system, 1,976 miles; Western, 2,145 miles; and Northern, 1,629 miles; and in addition there were 1,166 miles of sidings and crossovers.

The progress can be gauged fairly by comparing the population and area or territory to each mile of line open for traffic at different periods. In 1900 the average population per mile of line was 482, and in 1927 it was 413, while the area of territory has decreased from 4,434 square miles in 1860 to 54 square miles in 1927. The following statement shows the extension since 1860:—

Year.	Population to each Mile of Line open.	Area to each Mile of Line open.	Year.	Population to each Mile of Line open.	Area to each Mile of Line open.
	No.	sq. miles.		No.	sq. miles.
1860	4,979	4,434	1900	482	110
1865	2,861	2,170	1905	443	95
1870	1,471	916	1910	443	85
1875	1,360	710	1915	455	75
1880	881	366	1920	406	62
1885	548	179	1925	402	55
1890	523	142	1927	413	54
1895	501	123			

In addition to increasing the facilities by the construction of new lines, provision for the rapidly extending traffic is being made by the duplication of existing main lines, and by the electrification of the busy suburban railways.

There are duplicate lines on the main western line as far as Orange; the southern line is duplicated as far as Cootamundra, the northern line as far as Branxton, and the South Coast line to Wollongong; except certain tunnels.

The following statement shows the length of line laid with one or more tracks at intervals since 30th June, 1901:—

At 30th June.	Single.	Double.	Triple.	Quadruple.	Total.
	miles.	miles.	miles.	miles.	miles.
1901	2,678	158½	...	8½	2,845
1911	3,476½	276	...	8½	3,761
1921	4,428	572	7½	35½*	5,043
1926	5,083	606½	9½	43*	5,742
1927	5,090	609	8	43†	5,750

\* Includes 1 mile 9 chains with five tracks.

† Includes 3½ miles with six tracks.

#### COST OF RAILWAY CONSTRUCTION.

The average cost per mile open for traffic of the Government railway lines, excluding expenditure for rolling stock, machinery, furniture, and workshops and stores, was £15,060. The average varies greatly according to the class of traffic for which the lines are constructed and the number of tracks laid, also by reason of the different physical characteristics of the wide expanse of territory through which they run.

The standard rails are 100 lb. in the metropolitan area, 90 lb. on the main trunk lines, and 80 lb. on branch lines. Sleepers of Australian hardwood, measuring 8 ft. x 9 in. x 4½ in., are laid at the rate of eighteen per 40 feet of rail along the permanent-way.

The amount expended on rolling stock, etc., to 30th June, 1927, was £26,189,850, viz.:—Rolling stock, £20,111,073; machinery, £2,616,432; workshops, £1,889,309; furniture, £10,036; and stores advance account, £1,563,000.

The total capital expenditure on lines open for traffic amounted to £112,789,149, an average of £19,615 per mile, as at 30th June, 1927. The growth of the capital expenditure may be seen in the following table:—

Period.	Capital expended during period.	Total capital expended to end of period.	Period.	Capital expended during period.	Total capital expended to end of period.
	£	£		£	£
1855-9	1,278,416	1,278,416	1900-4	4,296,241	42,288,517
1860-4	1,353,374	2,631,790	1905-9	5,324,149	47,612,666
1865-9	2,049,539	4,681,329	1910-4	13,652,203	61,264,869
1870-4	2,163,217	6,844,546	1915-9	15,336,722	76,601,591
1875-9	3,561,949	10,406,495	1920-4	16,753,576	93,355,167
1880-4	9,673,643	20,080,138	1925	6,269,049	99,623,216
1885-9	9,759,029	29,839,167	1926	5,614,452	105,237,668
1890-4	6,016,104	35,855,271	1927	7,551,481	112,789,149
1895-9	2,137,005	37,992,276			

Of £112,789,149 expended to 30th June, 1927, an amount of £659,930 was provided from consolidated revenue, leaving a balance of £112,129,219 raised by debentures and stock. The capital expended during 1926-27 included the following items:—Rolling stock, £1,542,960; electrification of existing lines, £2,417,093; construction of new lines, £2,131,234. Of the last-mentioned sum approximately £2,000,000 was expended on the city underground railway.

#### EARNINGS AND EXPENSES.

As the carriage of goods and live stock constitutes the principal source of railway revenue, the earnings in each year are affected by the seasons experienced in the agricultural and pastoral districts. In unfavourable seasons the carriage of fodder and the transfer of live stock at reduced rates cause a diminution in the earnings, and at the same time an increase

in the working expenses. The extension of the lines into sparsely settled districts also causes an increase in the proportion of working expenses to total earnings, as several of these lines earn little more than cost of maintenance.

The following table shows the gross earnings, working expenses, and the proportion of the expenditure to receipts, in various years from 1901 to 1927:—

Year ended 30th June.	Gross Earnings.	Working Expenses.		Year ended 30th June.	Gross Earnings.	Working Expenses.	
		Total.	Proportion to gross earnings.			Total.	Proportion to gross earnings.
	£	£	per cent.		£	£	per cent.
1901	3,573,779	2,118,201	59·3	1924	15,616,577	10,917,491	69·9
1911	6,042,205	3,691,061	61·1	1925	16,769,452	11,939,686	71·2
1921	14,267,205	11,032,678	77·3	1926	16,939,032	12,519,993	73·9
1922	15,213,019	11,116,302	73·1	1927	18,906,543	13,795,853	73·0
1923	15,221,333	10,649,974	70·0				

The working expenses during the year ended 30th June, 1927, represented 73 per cent. of the gross earnings. In 1907 the proportion was 53 per cent., the lowest since 1881, then it rose in nearly every year until it exceeded 77 per cent. in 1920-21. The increase was due mainly to advances in the salaries and wages of the staff, in the prices of coal and other necessary materials.

The following table shows the gross earnings, working expenses, and net earnings per train mile and per average mile open at intervals since 1901:—

Year ended 30th June.	Per train mile.			Per average mile open.		
	Gross Earnings.	Working Expenses.	Net Earnings.	Gross Earnings.	Working Expenses.	Net Earnings.
	d.	d.	d.	£	£	£
1901	79·68	47·23	32·45	1,268	751	517
1911	85·27	52·09	33·18	1,627	994	633
1921	150·23	116·17	34·06	2,843	2,198	645
1922	166·82	121·89	44·93	2,996	2,189	807
1923	168·39	117·82	50·57	2,929	2,049	880
1924	173·66	121·40	52·26	2,860	1,999	861
1925	172·70	122·96	49·74	3,010	2,143	867
1926	165·09	122·02	43·07	2,960	2,188	772
1927	172·36	125·77	46·59	3,290	2,401	889

The average earnings per mile open increased from £1,268 to £3,290 during the period under review, but the proportionate increase in working expenses was so much greater that the average net earnings increased by less than 72 per cent. The average net earnings per mile open in 1926-27 were the highest since the opening of the railways in 1855.

#### NET EARNINGS AND INTEREST ON CAPITAL.

The net revenue from railways for the year ended 30th June, 1927, was £5,110,690, while the capital expended on lines open for traffic to that date was £112,789,149, including £659,930 paid from consolidated revenue. The amount available to meet the interest charges on the interest-bearing capital invested represents a return of 4·69 per cent. The following table shows the net earnings and the interest returned on the capital expended on railways,

including the cost of construction and equipment, for the year 1901 and subsequent periods:—

Year ended 30th June.	Net Earnings.	Interest returned on Capital invested	Year ended 30th June.	Net Earnings.	Interest re- turned on Ca- pital invested.
	£	per cent.		£	per cent.
1901	1,455,578	3·78	1924	4,699,086	5·13
1911	2,351,144	4·67	1925	4,829,766	5·01
1921	3,234,527	4·01	1926	4,419,039	4·30
1922	4,096,717	4·88	1927	5,110,690	4·69
1923	4,571,359	5·22			

State railways being regarded as a developmental agency in the settlement of the country rather than as a revenue-producing enterprise, freights and fares have not been raised sufficiently to cover the increases in cost of maintenance and interest charges which occurred in recent years. There was an appreciable increase in the return on capital cost in 1921-22 and 1922-23; then various reductions were made in freight and fares, and the ratio of earnings to cost declined again. Subsequently, in November, 1926, higher charges were made for the carriage of a number of commodities, and in December, 1927, passenger fares were increased.

#### NON-PAYING LINES.

Many of the railways of New South Wales have been constructed with the view of promoting settlement and developing the natural resources of the State rather than of meeting requirements already existing, and traffic over a number of lines is conducted at a loss. Even on portions of the main lines the earnings do not cover working expenses and interest on the capital cost, but most of the unprofitable lines are branch lines of comparatively recent construction.

Of the main lines, only the southern line returns a profit over its whole length; the western line from Nyngan to Bourke, the northern line from Tamworth to Wallangarra, the North Coast lines, and the South Coast line from Kiama to Nowra are all worked at a loss.

The Royal Commission of Inquiry in 1924 recommended that the railway finances be relieved of the losses incurred on developmental lines during the first ten years after they have been opened for traffic.

Particulars relating to non-paying lines are shown below, mainly for the year ended 31st December, 1926:—

Line.	Length.	Capital Cost.	Interest.	Working Expenses.	Earnings.	Loss after providing for work- ing ex- penses and interest.
<b>Northern—</b>						
Main Line—Tamworth to Wallangarra	m. c.	£	£	£	£	£
	211 27½	3,861,896	172,986	348,174	472,204	48,906
Branch lines .. .. .	476 77½	2,587,481	130,528	191,037	218,272	108,293
Total Northern .. .. .	688 24½	5,890,377	303,464	539,211	690,476	152,199
North Coast .. .. .	522 67½	8,723,674	448,746	571,823	693,768	326,861
Southern—Branch lines .. .. .	1,069 60½	7,766,913	399,486	511,037	530,468	350,060
South Coast—Kiama to Nowra .. .. .	22 50½	405,747	20,872	26,398	25,467	21,803
<b>Western—</b>						
Main Line—Nyngan to Bourke	126 43½	770,850	39,653	55,377	65,477	29,553
Branch Lines .. .. .	1,028 28½	7,818,153	399,473	640,594	655,712	384,355
Total Western .. .. .	1,155 0	8,589,003	439,126	695,971	721,189	413,908
Suburban—Clyde to Carlingford .. .. .	4 41½	68,728	3,278	19,980	6,273	16,935
Total specified lines .. .. .	3,473 14	31,448,442	1,614,972	2,364,420	2,667,576	1,311,816

Similar data in calendar years are not available for all lines, but the deficiency shown in the table is so much greater than the total annual deficiency, viz., £830,671 in 1925-26, and £451,618 in 1926-27, that it is apparent that the paying lines returned a substantial surplus over expenses and interest.

## DISTRIBUTION OF EARNINGS AND EXPENSES.

A statement of the various items of earnings and working expenses of all lines during each of the last five years is shown below:—

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
<i>Earnings.</i>	£	£	£	£	£
Passengers ... ..	6,004,702	6,076,988	6,186,368	6,311,690	6,643,337
Mails, parcels, horses, etc. ... £	689,651	720,900	755,725	789,539	830,208
<b>Total Coaching ... ..</b>	<b>6,694,353</b>	<b>6,797,888</b>	<b>6,942,093</b>	<b>7,101,229</b>	<b>7,473,545</b>
Refreshment-rooms ... ..	471,557	517,322	595,606	664,427	684,536
Goods—					
Merchandise ... ..	4,361,189	4,629,348	5,482,686	5,263,711	5,890,130
Wool ... ..	541,998	491,583	627,138	683,968	849,622
Livestock ... ..	1,462,727	1,246,749	1,155,272	1,366,844	1,563,973
Minerals ... ..	1,502,855	1,728,594	1,745,833	1,626,600	2,186,868
<b>Total Goods... .. £</b>	<b>7,868,769</b>	<b>8,096,274</b>	<b>9,010,929</b>	<b>8,941,123</b>	<b>10,496,593</b>
Rents ... ..	111,041	125,009	138,152	145,642	156,829
Miscellaneous ... ..	75,613	80,084	82,672	86,611	101,040
<b>Total Earnings ... .. £</b>	<b>15,221,333</b>	<b>15,616,577</b>	<b>16,769,452</b>	<b>16,939,032</b>	<b>18,906,542</b>
<i>Working Expenses.</i>					
Maintenance of way and works	1,891,233	1,865,096	2,176,435	2,001,724	2,146,257
Rolling stock—					
Maintenance ... ..	2,520,375	2,516,098	2,779,139	2,753,772	3,026,627
Locomotive power—					
Coal, etc. ... ..	919,793	950,859	997,746	1,087,203	1,227,169
Other ... ..	1,609,961	1,683,222	1,773,435	2,086,681	2,370,427
Other rolling stock ... ..	197,851	210,484	222,311	179,646	199,691
Transportation and traffic ... ..	2,806,970	2,939,236	3,121,001	3,391,092	3,733,225
General charges ... ..	290,105	293,531	309,994	407,342	463,078
Refreshment-rooms ... ..	411,245	456,565	532,219	606,960	617,469
Other Expenses ... ..	2,441	2,400	27,406	5,573	11,910
<b>Total Working Ex-</b>					
<b>penses ... .. £</b>	<b>10,649,974</b>	<b>10,917,491</b>	<b>11,939,686</b>	<b>12,519,993</b>	<b>13,795,853</b>
<b>Net Earnings ... .. £</b>	<b>4,571,359</b>	<b>4,699,086</b>	<b>4,829,766</b>	<b>4,419,039</b>	<b>5,110,690</b>

During 1926-27 the earnings derived from the carriage of passengers represented 35 per cent. of the total; mails, parcels, etc., 4.4 per cent.; goods, 55.5 per cent.; and refreshment-rooms 3.6 per cent. The expenditure on locomotive power represented 26 per cent. of the working expenses; transportation and traffic, 27 per cent.; maintenance of rolling stock, 22 per cent.; and maintenance of way and works, 16 per cent.

## COACHING AND GOODS TRAFFIC.

Goods traffic is the principal source of revenue, though the proportion of earnings from coaching is higher now than in the earlier years reviewed in the following table which shows the proportion of earnings from the coaching and goods traffic at intervals since 1901. In calculating the

percentages, earnings from refreshment-rooms and from miscellaneous sources and rents have been included, the greater part being classed with earnings from coaching traffic.

Year ended 30th June.	Proportion of Total Earnings.		Year ended 30th June.	Proportion of Total Earnings.	
	Coaching, etc.	Goods and Live- stock.		Coaching, etc.	Goods and Live- stock.
	per cent.	per cent.		per cent.	per cent.
1901	38·3	61·7	1924	48·0	52·0
1911	40·6	59·4	1925	46·1	53·9
1921	48·7	51·3	1926	47·1	52·9
1922	47·5	52·5	1927	44·4	55·6
1923	48·1	51·9			

The proportion of earnings from goods traffic varies with seasonal and other conditions which affect the production of wool, wheat, coal, etc. In 1926-27 it was greater than in any year since 1918-19. This was due partly to a bountiful season and partly to the fact that rates of freight were increased in November, 1926, while fares remained unaltered.

### Coaching Traffic.

The following table shows the number of passenger journeys and the receipts from coaching traffic since 1901:—

Year ended 30th June.	Passenger Journeys.	Gross Earnings from Coaching Traffic.	Per head of population.	
			Passenger Journeys.	Gross Earnings from Coaching Traffic.
	No.	£	No.	s. d.
1901	29,261,324	1,336,489	21·4	19 7
1911	60,919,628	2,385,725	37·2	29 2
1921	120,735,140	6,384,031	57·8	61 1
1922	121,298,861	6,636,529	57·0	62 4
1923	123,714,639	6,694,353	57·0	61 7
1924	128,101,184	6,797,888	58·0	61 6
1925	128,532,038	6,942,093	57·0	61 7
1926	130,725,581	7,101,229	56·9	61 10
1927	141,615,866	7,473,545	60·3	63 8

Particulars are shown below regarding the passenger traffic during the year ended 30th June, 1927, on suburban lines, *i.e.*, those within 34 miles of Sydney or Newcastle, and on country lines:—

Description.	Suburban Lines.			Country Lines.		
	First- class.	Second- class.	Total.	First- class.	Second- class.	Total.
Journeys—						
Ordinary Passengers ...	4,735,490	44,109,199	48,844,689	1,265,154	5,717,486	6,982,640
Season Ticket Holders...	9,829,794	28,956,666	38,786,460	1,476,844	1,848,785	3,325,629
Workmen's ...	...	42,685,980	42,685,980	...	990,408	990,408
Total Passenger Journeys	14,565,284	115,751,845	130,317,129	2,741,998	8,556,679	11,298,677
Miles Travelled ...	110,846,691	871,732,604	982,579,295	2,460,716	508,191,257	72,798,417
Average Mileage per Pas- senger ...	7·61	7·53	7·54	100·15	59·39	60·28
Amount Received from Passengers ...	£ 358,187	2,106,918	2,465,105	1,857,041	2,321,191	4,178,232
Average Receipts per Pas- senger per mile... d.	0·78	0·58	0·60	1·62	1·09	1·28

On the suburban lines in 1926-27 the average journey was about  $7\frac{1}{2}$  miles, the rate paid by first-class passengers was  $\frac{4}{5}$ d. per mile and by second-class passengers  $\frac{3}{8}$ d. per mile. On country lines the average journey by

first-class passengers was 100 miles and by second-class 59 miles, the rates per mile being 1½d. and slightly over 1d. respectively. The journeys of first-class passengers on suburban lines represented 11 per cent. of the total suburban journeys, and a similar proportion of the mileage. The corresponding proportions on country lines were 24 per cent. of the journeys and 35 per cent. of the mileage.

Information relating to passenger mileage from 1911 onwards is contained in the following table. The figures in respect of mileage in the last three years are not strictly comparable with those of earlier years owing to an alteration in the basis of estimating the mileage travelled by season ticket-holders:—

Year ended 30th June.	Passenger Train Mileage. (000 omitted.)	Passenger Journeys. (000 omitted.)	Total Passenger Miles. (000 omitted.) *	Amount received from Passengers.	Average Number of Passengers carried per Train.	Average Mileage per Passenger Journey. *	Average Receipt per Passenger Mile. *	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked. *
				£			d.	d.	
1911	8,094	60,920	906,217	2,074,860	112	14·88	0·55	8·17	244,066
1921	11,301	120,735	1,620,857	5,736,256	143	13·42	0·85	11·40	322,976
1922	11,379	121,299	1,610,619	5,934,616	142	13·28	0·88	11·74	317,231
1923	11,822	123,715	1,679,903	6,004,702	142	13·58	0·86	11·65	323,260
1924	11,808	128,101	1,721,161	6,076,988	146	13·44	0·85	11·39	315,216
1925	12,616	128,532	1,637,380	6,186,368	130	12·74	0·91	11·55	293,907
1926	14,038	131,726	1,675,091	6,311,690	119	12·81	0·90	11·59	292,733
1927	15,044	141,616	1,765,378	6,643,337	117	12·47	0·90	11·26	307,184

\*The figures for the last three years are not strictly comparable with those for preceding years.

### Goods Traffic.

The following figures illustrate the growth of the good traffic in recent years:—

Year ended 30th June.	Goods and Live-stock Traffic.		Per head of Population	
	Tonnage.	Gross Earnings.	Tonnage.	Gross Earnings.
		£		£ s. d.
1901	6,398,227	2,203,249	4·7	1 12 4
1911	10,355,565	3,585,424	6·3	2 3 9
1921	15,563,131	7,270,856	7·4	3 9 7
1922	14,532,811	7,953,909	6·8	3 14 9
1923	13,801,310	7,868,769	6·4	3 12 5
1924	15,693,127	8,036,274	7·1	3 13 3
1925	16,208,476	9,010,929	7·2	4 0 0
1926	15,032,811	8,941,123	6·5	3 17 10
1927	17,224,894	10,490,593	7·3	4 9 4

The tonnage and gross earnings in 1926-27 were the largest on record. The quantities of minerals (other than coal, etc.), wool, and general merchandise, were greater than in any previous year, and the tonnage of grain and flour, coal and coke, and live stock was much above the average.



The next statement shows the classes of goods carried on the railways in various years since 1901.

Year ended 30th June.	General Merchandise.		Wool.	Live Stock.	Minerals.		Total Goods.
	Grain, Flour, etc. (Up Journey).	Other.			Coal, Coke, and Shale.	Other.	
1901	Tons. 504,880	Tons. 1,257,742	Tons. 99,104	Tons. 200,339	Tons. 3,956,033	Tons. 370,129	Tons. 6,398,227
1911	787,632	2,298,078	137,599	485,021	6,059,648	587,587	10,355,565
1921	1,216,834	3,375,443	93,760	732,804	8,881,796	1,262,494	15,563,131
1922	1,651,994	3,350,796	128,085	603,067	7,491,001	1,307,868	14,532,811
1923	827,775	3,572,401	124,033	736,895	7,154,346	1,385,860	13,801,310
1924	1,175,533	3,653,111	111,597	742,611	8,501,944	1,508,331	15,693,127
1925	2,065,247	3,502,935	143,175	651,599	8,181,176	1,664,344	16,208,476
1926	1,450,813	3,656,355	154,946	766,557	7,145,225	1,858,915	15,032,811
1927	1,523,519	3,971,798	189,605	810,515	8,289,937	2,439,520	17,224,894

The gross earnings in respect of the various classes of goods carried during 1926-27 were as follows:—Coal, coke, and shale, £1,584,463; other minerals, £602,405; live stock, £1,563,973; grain and flour, £1,014,531; wool, £849,622; general merchandise, £4,875,599.

The following table contains information relating to ton mileage in 1911, and later years. "Ton-mileage" is the product of the load in tons and the distance in miles over which the load is carried. The average distance in 1926-27 was 98 miles and the average earnings per ton mile 1½d.:

Year ended 30th June.	Goods Train Mileage. (000 omitted.)	Tons Carried. (000 omitted.)	Ton-miles. (000 omitted.)	Earnings, exclusive of haulage, tonnage dues, etc.	Average Freight-paying Load carried per Train.	Average Miles per Ton.	Earnings per Ton-mile.	Density of Traffic per average mile worked.
				£	Tons.		d.	Tons.
1911	8,913	10,055	810,949	3,079,783	90·98	80·65	0·91	218,408
1921	11,491	15,262	1,418,386	6,501,914	123·43	92·94	1·10	282,631
1922	10,508	14,197	1,365,961	7,851,887	130·00	96·21	1·38	269,049
1923	9,871	13,567	1,166,238	7,761,788	118·15	85·96	1·60	224,417
1924	9,775	15,516	1,392,390	7,976,077	142·44	89·74	1·37	255,005
1925	10,689	16,027	1,647,448	8,872,202	154·12	102·80	1·29	295,718
1926	10,587	14,809	1,509,555	8,769,785	142·58	101·93	1·39	263,802
1927	11,282	16,864	1,654,815	10,335,666	146·68	98·13	1·50	287,994

\* Exclusive of coal, etc., on which shunting charges only were collected.

#### EXPANSION OF TRAFFIC.

The expansion which has taken place in the earnings and in the volume of traffic on the railways of New South Wales will be seen from the following comparison. The average annual earnings during the quinquennium

1926-27 show an increase of £4,395,162, or 36 per cent., as compared with the average of the previous five years. The number of passengers increased by 19 per cent., and the volume of goods traffic by 16 per cent., while the revenue from these sources increased by 31 per cent. and 38 per cent. respectively.

Particulars.	Annual Average.		Increase.	
	Five years ended 30th June, 1922.	Five Years ended 30th June, 1927.	Total.	Per cent.
Earnings—				
Coaching Traffic ... ..	£ 5,329,162	7,001,822	1,672,660	31
Goods and Live Stock ... ..	£ 5,447,799	7,545,485	2,097,686	39
Coal, Coke, and Shale... ..	£ 1,005,931	1,336,052	330,121	33
Refreshment-rooms, Rents, etc.	£ 512,533	807,228	294,695	57
Total earnings ... ..	£ 12,295,425	16,690,587	4,395,162	36
Passengers ... ..	No. 109,912,389	130,537,850	20,625,461	19
Goods and Live Stock ... ..	Tons 6,521,899	7,738,927	1,217,028	19
Coal, Coke, and Shale ... ..	Tons 6,957,409	7,853,197	895,788	13
Total Tonnage... ..	13,479,308	15,592,124	2,112,816	16

#### FARES AND FREIGHT CHARGES.

Passenger traffic is greatest within the Sydney and Newcastle suburban areas, and the fares charged within a 34 miles radius of either of the cities are lower than those for equal distances outside those areas. The following table shows the fares charged for ordinary single journeys at quinquennial intervals since 1911, over stated distances from either Sydney or Newcastle. Cheaper fares are available for journeys to tourist districts and holiday resorts.

#### Single Tickets.

Distance.	30th June, 1911.		30th June, 1921.		30th June, 1926.		31st December, 1927.	
	First-class.	Second-class.	First-class.	Second-class.	First-class.	Second-class.	First-class.	Second-class.
Miles.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1	0 2	0 1	0 3½	0 2	0 2	0 1½	0 2½	0 2
5	0 5	0 4	0 8	0 6	0 8	0 6	0 8½	0 6½
10	0 9	0 6	1 3	0 10½	1 2	0 10½	1 3	0 11
20	1 6	0 11	2 5	1 6	2 0	1 6	2 1	1 7
30	2 2	1 5	3 7	2 4	2 10	2 1½	3 0	2 3½
34	2 6	1 7	4 1	2 7½	3 2	2 4½	3 4	2 6½
50	4 6	2 11	7 7	5 0	6 8	4 9	6 10	4 11
100	10 9	7 1	18 7	12 2	17 7	12 0	17 9	12 2
200	23 3	14 9	40 7	25 7	37 7	25 4	37 9	25 6
300	35 9	22 1	62 2	38 3	56 5	37 11	56 7	38 1
400	48 3	28 8	83 7	49 10	73 8	49 5	73 10	49 7
500	58 0	33 4	100 8	57 10	86 4	57 10	86 6	58 0

Between July, 1917, and June, 1921, railway fares were increased by 66 per cent. During 1923-24 second-class fares were lowered slightly and first-class fares were reduced to an appreciable extent. In December, 1927, fares were raised again, and the increases on second-class tickets ranged from 33 per cent. to 7 per cent. in the suburban area.

The average fare paid by suburban passengers, including those who held periodical tickets, increased by about 50 per cent. between 1911 and 1926-27. Similar information is not available in respect of country traffic, but, generally, the first-class single fares were between 50 per cent. and 60 per cent. higher in 1927 than in 1911, and the second-class single fares were about 70 per cent. higher.

Particulars relating to changes in the cost of monthly periodical tickets since 1911 are shown below:—

*Periodical Tickets.*

Distance.	30th June, 1911.		30th June, 1916.		30th June, 1921.		30th June, 1926.*	
	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.
Miles.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1	7 6	5 0	9 0	6 0	14 6	9 9	12 11	9 8
5	16 0	10 9	19 3	13 0	30 9	20 6	27 4	20 6
10	22 9	15 0	27 3	18 0	44 0	29 0	38 3	28 8
20	30 3	20 3	36 3	24 3	58 0	39 3	52 3	39 2
30	34 3	22 9	41 0	27 3	66 6	44 9	58 0	43 6
34	35 9	23 6	43 0	28 3	69 3	46 0	59 9	44 10
50	41 0	26 3	49 3	31 6	79 9	51 0	77 0	51 3
100	57 9	34 6	69 3	41 6	112 6	66 9	100 3	66 9
200	83 0	49 0	99 6	58 9	156 3	92 6	138 9	92 6
300	100 6	61 6	120 6	73 9	181 9	112 6	168 0	112 0
400	118 0	74 0	141 6	88 9	207 0	131 3	197 0	131 3
500	135 6	86 6	162 6	103 9	231 6	150 6	225 9	150 6

\* Still in operation, December, 1927.

The above rates represent the maximum charges, but liberal concessions are made to school pupils, youths, and women. Periodical tickets for short distances within the suburban area cost nearly 60 per cent. more than in 1916, but for longer journeys the proportionate increase is less. During 1922 there were slight reductions in respect of second-class periodical tickets, and charges for first-class tickets over long distances were substantially reduced. Further reductions were made in 1924, in rates for distances up to 34 miles.

Workmen's weekly tickets are issued in the suburban areas to enable persons to travel to and from their work. They are available for one journey each way on every week day, the forward journey being by certain trains only. The charges for these tickets were increased by about 30 per cent. in December, 1927. The rates at various dates since June, 1911, were as follows:—

Distance.	Workmen's Weekly Tickets—Second Class.				
	June, 1911.	June, 1916.	June, 1921.	June, 1926.	December, 1927.
	s. d.	s. d.	s. d.	s. d.	s. d.
1	0 6	0 9	1 3	1 3	1 8
5	1 6	1 9	2 11	2 11	3 11
10	2 2	2 6	4 1	4 1	5 6
20	3 0	3 4	5 5	5 5	7 4
30	3 10	4 2	6 11	6 11	9 0
34	4 2	4 6	7 5	7 5	9 8

*Freight Charges.*

The system adopted in fixing freights on merchandise and live stock is to charge the lowest scale of freight on commodities of low values and on those which are used to assist production. The charge per ton mile decreases as the distance hauled increases.

The following table gives the charges per ton for haulage of the different classes of freight over distances of 100 and 500 miles at various dates since June, 1911:—

Class of Freight.	30th June, 1911.		30th June, 1921.		30th June, 1926.		31st Dec., 1926.*	
	100 miles.	500 miles.	100 miles.	500 miles.	100 miles.	500 miles.	100 miles.	500 miles.
Ordinary Goods (per ton)—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Highest Class Freight...	44 11	115 9	75 0	193 3	76 8	197 6	76 8	197 6
Lowest „ „ ...	3 7	11 11	6 6	15 0	6 9	12 4	6 9	12 4
Agricultural Produce ...	7 6	12 0	11 5	18 2	11 5	19 0	12 0	19 11
Butter ... ..	18 10	56 4	31 7	94 0	24 10	57 7	27 4	63 4
Beef, Mutton, Veal, etc. (frozen) ... ..	9 2	45 10	14 7	72 11	18 11	43 11	18 11	43 11
Wool—Greasy ... ..	25 0	68 9	37 11	104 4	41 8	109 5	41 8	109 5
„ —Scoured ... ..	29 2	75 0	44 3	113 10	45 10	115 8	45 10	115 8
Minerals—Crude Ore—								
Not exceeding £20 per ton in value ... ..	4 2	15 8	6 5	22 6	6 5	22 5½	6 5	22 5½
Not exceeding £10 per ton in value ... ..								
Live Stock (per truck)—	63 4	173 9	110 5	303 4	109 9	299 9	120 9	329 8

\*Still in operation at 31st December, 1927.

The highest class freight includes expensive, bulky, or fragile articles, such as boots, drapery, drugs, groceries, furniture, liquors, crockery, glass-ware, cutlery, ironmongery, confectionery, and carpets; the lowest class applies to fertilisers.

The freight charges for a distance of 100 miles in 1921 were from 50 to 100 per cent. higher than in 1911. For a distance of 500 miles the increases have not been so great proportionately, and the charges for frozen meat have been reduced. In November, 1926, some of the rates were increased as shown in the table.

## GRADIENTS.

In many cases the railways of New South Wales pass through mountainous country over the Great Dividing Range which separates the narrow coastal plain from the interior. Consequently steep gradients and sharp curves are features of many sections, including parts of the trunk lines where the traffic is heavy.

In the southern system, the railway station at Roslyn, near Crookwell, is situated at an altitude of 3,225 feet above sea level; and at Nimmitabel,

on the Goulburn to Bombala railway, the height is 3,503 feet. In the western system a height of 3,503 feet is attained at Newnes Junction, on the Blue Mountains, and 3,623 feet at Oberon, the terminus of a branch from Tarana. On the northern line Ben Lomond is 4,473 feet above sea level.

Numerous deviations have been made during recent years in order to secure easier grades and curves, with the result that considerable economy in working and expedition in traffic have been effected.

The following statement shows the number of miles on different gradients in June, 1927:—

Gradients.	Southern System.	Western System.	Northern System.	Total.
1 in	miles.	miles.	miles.	miles
18 to 30	12½	7	3	22½
31 „ 40	65½	61½	54½	181½
41 „ 50	74½	54	87½	216
51 „ 60	65½	80½	62½	209
61 „ 70	57½	69½	40½	167½
71 „ 80	178	142½	178	498½
81 „ 90	45½	58½	47½	151
91 „ 100	118½	179½	92½	390½
101 „ 150	224	254½	157½	635½
151 „ 200	127½	117	91	335½
201 „ 250	62½	70½	43½	176½
251 „ 300	90½	104½	67½	263
301 „ level	852½	905½	703½	2,462
Total...	1,975	2,105½	1,628½	5,709½

The above table is exclusive of the Government line from Broken Hill to Tarrawingee, measuring 39 miles 41 chains, and that at Wollongong of 1 mile 8 chains.

#### SIGNALLING AND SAFETY APPLIANCES.

In the matter of signalling and safety appliances the railways of New South Wales have progressed with modern invention. The points are interlocked on all the lines with the exception of a few in remote country districts where the traffic is light. An automatic signalling system is in operation on the suburban lines and is being installed in country districts.

Particulars regarding the various systems employed for the safe working of the lines in 1921 and 1927 are shown below:—

Single Line.	1921.		1927.	
	Mls.	Chs.	Mls.	Chs.
By automatic or track block system	...	...	...	82 16
electric train tablet	...	...	315 17	260 17
electric train staff	...	...	1,822 43	2,611 48
train staff and ticket with line clear reports	...	...	1,451 38	1,361 29
train staff and ticket without line clear report	...	...	714 1	691 8
train staff and one engine only	...	...	116 57	76 15
			4,419 76	5,082 53
Double Line.				
By automatic or track block system	...	...	251 8	342 4
absolute manual block system	...	...	382 0	359 18
permissive manual block system...	...	...	5 12	4 60
telephone	...	...	0 33	...
			638 53	706 2

All passenger and freight vehicles in use on the railways are fitted with automatic brakes.

## ROLLING STOCK.

A classification of the rolling stock of the State railways is shown in the following table:—

Classification.	June, 1926.		June, 1927.	
	No.	Capacity.	No.	Capacity.
Locomotives ... ..	1,402	Tractive power. lb. 35,369,000	1,420	Tractive power. lb. 35,997,000
Coaching—		Passengers.		Passengers:
Special and Sleeping ... ..	106	2,428	113	2,548
First Class ... ..	487	27,795	515	29,694
Second Class ... ..	1,013	62,413	1,074	67,450
Composite ... ..	219	11,682	219	11,707
Dining ... ..	1	38	2	68
Motor Passenger ... ..	22	1,144	28	1,456
Brake Vans ... ..	146	78	146	78
Horse Boxes, Mail Vans, etc. ...	273	...	241	300
Total ... ..	2,267	105,578	2,338	113,301
Goods—		tons.		tons.
Open Waggons ... ..	17,255	287,345	17,158	287,368
Livestock Waggons ... ..	3,156	19,564	3,172	19,908
Louvred Vans ... ..	1,007	14,944	1,032	16,360
Refrigerator Vans ... ..	237	3,430	237	3,430
Brake Vans ... ..	643	...	636	...
Other ... ..	69	755	74	841
Total ... ..	22,367	326,038	22,309	327,907
Departmental—				
Loco. Coal, Ballast Waggons, etc. ...	1,601	...	1,580	...

The average tractive power of the railway locomotives, as at 30th June, 1927, was 25,350 lb.; the average capacity of the passenger vehicles was 58 passengers, and of the goods stock 15 tons. Additions to railway rolling stock during 1926-27 included 23 locomotives, 78 suburban passenger cars designed for use on the electric railways, and 6 rail motors and 5 trailers for country services.

## SYDNEY AND SUBURBAN PASSENGER SERVICE.

The passenger traffic between Sydney and suburbs is conducted by suburban railways and tramways maintained by the State, and by ferry and motor omnibus services conducted by private enterprise.

The railway suburban traffic is principally on the main trunk line, which runs in a westerly direction from Sydney through Granville and Parramatta. The main southern system branches from the western line at Lidcombe (10 miles from Sydney), and another branch runs southward from Granville (13 miles), joining the line from Lidcombe at Cabramatta. The Northern system branches off at Strathfield (8 miles from Sydney). The South Coast or Illawarra railway, which has a branch from Sydenham (3 miles) to Bankstown (11 miles), brings passengers from the suburbs situated south of Sydney on the western shore of Botany Bay. A line is being constructed from Bankstown to Regent's Park on the Lidcombe section of the main southern line. The suburban railways are being extended into the city and are being converted to electric traction.

Tramways run through the city streets from the Central Railway Station to Circular Quay. The populous suburbs of the north, western, central, and eastern divisions of the metropolitan area are served by tramways. On the north shore of Port Jackson there is a railway to connect the ferry service at Milson's Point with Hornsby on the main northern line, and at various points along the shores of the harbour tramways connect with the ferry services plying to the Circular Quay.

On account of the expansion of the commercial interests of New South Wales, and the consequent growth of population in and around Sydney, where the trade of the State is centralised, the requirements of suburban traffic are rapidly outgrowing the capacity of the main city thoroughfares, which were not originally designed for this class of traffic. Thus the extension of the tramway system, combined with the increase in the mercantile vehicular traffic, has resulted in a state of congestion in some of the city streets that demands remedy, and it has become urgently necessary to provide a more effective method of transporting the rapidly increasing traffic. The matter is being investigated by a committee appointed by the Government.

*City and Suburban Electric Railways.*

The city electric railway, which is under construction, will form a complete two-track loop railway around the city, running, for the most part underground, along the eastern side of the city to Circular Quay and returning along the western side to the Central Station. The scheme includes the construction of a branch from the city railway to Bondi for the eastern suburbs, and a branch from the main suburban line to Balmain to serve the western suburbs. The completion of the Sydney Harbour bridge with four lines of railway, as well as roadways and footways, will place the northern suburbs in direct communication with the city.

The construction of the city railway was commenced in 1916 by a private company under contract with the Government, but the contract was cancelled and the work was suspended in 1917. Construction was resumed by the Railway Commissioners in February, 1922, under authority to complete only a portion of the railway—sufficient to accommodate the traffic from one of the existing suburban systems. This part provides for tracks through the eastern part of the city from the existing lines at Redfern to an underground station at St. James, Queen's Square, and for eastern suburbs tracks

from St. James Station to a cross-over near Park-street. Six tracks are being constructed into the city over a stone-faced viaduct and bridges extending from Eddy-avenue to Campbell-street, and two of the tracks have been carried along the eastern side of the city to St. James, which is a temporary terminal station. This eastern part of the railway was opened for traffic in December, 1926. Work on the western section was commenced in November, 1925.

The eastern section of the city railway being the first to be opened for traffic, the most easterly of the suburban lines, viz., the Illawarra, were the first to be converted to the electric system. Electric trains were run on the Illawarra lines on 1st March, 1926, and since the opening of the City Railway the services have been extended to St. James Station. The work of converting the North Sydney line is nearly finished, both steam and electric trains being used pending its completion. Work on the main suburban lines is in progress.

#### RAIL MOTOR SERVICES.

Rail motors have been provided in a number of country districts where the population is not sufficient to warrant the provision of ordinary services. The first rail motor was put into operation in 1919 on the line between Grafton and Lismore, a distance of 87 miles. Second-class accommodation was provided for passengers, also a trailer for the transport of cream. The experiment proved successful, and the use of rail motors on country branch lines is being extended.

#### VICTORIAN GOVERNMENT RAILWAYS IN NEW SOUTH WALES.

In the southern portion of New South Wales the Government of Victoria has acquired certain railway interests by the purchase from a private company of a line between Deniliquin and Moama, and by agreement with the Government of New South Wales for the construction and maintenance of five border railways.

The agreement provides that the railways will be on the 5 ft. 3 in. gauge, but all the works within New South Wales are to be constructed suitably for conversion to the standard gauge, viz., 4 ft. 8½ in. They will be operated by the Victorian Railway Commissioners, but the fares and rates for the carriage of passengers, goods, and live stock thereon shall not be less than the rates charged for similar mileage on the Victorian Railways. In the construction and working of the lines the same conditions and rates of wages as prevail in Victoria will be observed.

Of the lines authorised under the agreement, one from Moama to Balranald, and another from Gonn Crossing to Stony Crossing, have been opened for traffic.

The third line from Euston to Lette, 30 miles, to serve en route the Benanee Settlement Area, is under construction. The fourth line will cross the Murray at or near Golgol, New South Wales, and extend into this State for a distance not exceeding 20 miles.

The agreement provided also for an inquiry by the Victorian Government into the question of constructing a line to extend the Victorian railways to or towards Oaklands in New South Wales. After inquiry it was decided to construct a line from Yarrowonga to Oaklands, 37 miles.

The railway between Deniliquin and Moama, 44 miles 33 chains on the 5 ft. 3 in. gauge, was constructed by a private company, and opened for



traffic in 1876. It became part of the Victorian railway system in December, 1923, and a branch line to Balranald, 120 miles, was opened for traffic in March, 1926. The capital expended to the end of February, 1927, was £967,336. During the year ended February, 1927, the receipts amounted to £75,243, working expenses to £62,294, and interest to £41,827. The number of passengers was 38,773, the goods traffic amounted to 91,048 tons, and the live stock carried numbered 784,861. Of a train mileage of 129,559 miles, 102,397 were by steam traction and 27,162 by rail motor.

#### PRIVATE RAILWAY LINES.

The established policy in New South Wales has been to keep the railways under State control, and at the present time there are only 112½ miles of private lines in operation, with the exception of short lines connecting coal and other mines with the main railways, on some of which provision has been made for the carriage of passengers and goods.

During the year 1888 a line of 3 ft. 6 in. gauge, and 35 miles 48 chains in length, was laid down from Silverton and Broken Hill to the South Australian border. A short line connects the Government railway at Liverpool with the Warwick Farm Racecourse.

The Seaham Coal Company's line connects the West Wallsend and Seaham Collieries with Cockle Creek. The South Maitland system supplies the mining districts of East Greta, Stanford-Merthyr, and Cessnock. The Hexham-Minmi line runs between the collieries in the townships mentioned. The line of the Commonwealth Oil Corporation extends from Newnes Junction, on the Western line, to the Wolgan Valley.

The following table shows the operations of the private railway lines open to the public for general traffic during the year 1926:—

Name of Private Railway.	Line.			Total Capital Expended.	Reserve Fund.	Debentures Outstanding.	Train Miles run.	Passengers carried.	Goods carried.	Live Stock carried.
	Length.	Gauge.								
Silverton ...	35	48	3 6	£ 547,162	£ 42,000	£ ...	No. 118,429	No. 42,884	tons. 868,007	No. 147,240
Warwick Farm ...	0	50	4 8½	§	...	...	No. 204	No. 100,248	...	748
Seaham Colliery...	6	0	4 8½	£ 16,000	...	...	No. 8,066	No. 12,186	tons. 11,257	...
South Maitland— East Greta, Stan- ford Merthyr, and Cessnock ...	19	35	4 8½	£ 664,290	...	...	No. 487,073	No. 921,672	tons. 153,012	...
Hexham-Minmi ...	6	0	4 8½	§	...	...	No. 1,836	...	...	450
New Red Head ...	12	0	4 8½	§	...	...	No. 72,365	No. 633,695	...	11,997*
Commonwealth Oil Corporation.	33	0	4 8½	£ 194,000	...	£ 373,577	No. 3,008	No. 96	tons. 302	...

\* Excluding coal.

§ Not available.

The Silverton Company has 20 locomotives, 665 goods vehicles, and 1 passenger carriage; and additional passenger carriages are hired from the South Australian Government railways as required. On the Warwick Farm line Government rolling-stock is used. The Seaham Colliery has 2 locomotives, 2 passenger carriages, and 2 goods vehicles, and Government rolling stock is hired. On the South Maitland system there are 26 locomotives, 30 passenger carriages, and 50 goods carriages. The Hexham-Minmi Company has 1 locomotive and 1 passenger carriage; and the Commonwealth Oil

Corporation has 4 locomotives, 3 passenger carriages, and 67 goods carriages and vans. The New Red Head line is operated by the Government Railways Commissioners.

In addition to the private railway lines shown in the previous table, there are several branches, connected principally with coal and other mines, with a total length of 156 miles, a summary of which is given below:—

District.	Length. m. ch.	Gauge. ft. in.
Connected with Main Suburban Line ... ..	2—66	4 8½
„ Northern Line ... ..	101—55	4 8½
„ Western „ ... ..	28— 8	4 8½
„ South Coast „ ... ..	{ 3—40 19—77	{ 3 6 4 8½

#### RAILWAY GAUGES OF AUSTRALIA.

Particulars relating to gauge of Government Railways in each State as at 30th June, 1927, and of private railways open for general traffic as at 31st December, 1926, are given below. The lines have been classified according to the States in which they are located. Particulars of private lines used exclusively for special traffic are not included in the figures:—

State.	Miles at each Gauge open for traffic.						Total Miles.
	2ft.	2ft. 6in.	3ft.	3ft. 6in.	4ft. 8½in.	5ft. 3in.	
New South Wales...	36	...	...	76	5,797	164	6,073
Victoria ... ..	...	122	11	...	5	4,367	4,505
Queensland... ..	191	7	...	6,392	...	...	6,590
South Australia (inc. N. Territory) ... ..	...	...	...	1,994	597	1,245	3,836
Western Australia... ..	...	...	...	4,195	454	...	4,649
Tasmania ... ..	42	...	...	808	...	...	850
Total ... ..	269	129	11	13,465	6,853	5,776	26,503

The distances by rail between Sydney and the other capital cities are as follows:—Brisbane 715 miles, Melbourne 591 miles, Adelaide 1,074 miles, and Perth 2,761 miles. The journey from Sydney to Broken Hill *via* Melbourne and Adelaide is over 1,400 miles, but a line across New South Wales opened for traffic in November, 1927, affords direct communication over a distance of about 700 miles.

Diversity of gauge hampers interstate railway communication, and in a journey from Queensland to Western Australia breaks of gauge occur at Wallangarra, where the systems of Queensland and New South Wales meet; at Albury, on the border of New South Wales and Victoria; at Terowie and at Port Augusta in South Australia; at Kalgoorlie, where the Commonwealth and Western Australian lines connect.

The subject of a uniform gauge to connect the capital cities of the mainland has been discussed at conferences between the Prime Minister of the Commonwealth and Premiers of the States, and was investigated by a Royal Commission in 1921. It has been resolved that the adoption of a uniform gauge is essential to the development and safety of the Commonwealth, and that the gauge should be 4 ft. 8½ in., but an agreement has not been reached in regard to any comprehensive scheme for giving effect to the resolutions.

As an outcome of the negotiations, however, steps are being taken to provide railway communication on a uniform gauge between Sydney and Brisbane. For this purpose an agreement has been made between the Commonwealth and the States of New South Wales and Queensland for the construction of a line on the 4 ft. 8½ in. gauge between Kyogle, on the North Coast railway in New South Wales, and Brisbane. The construction of the new railway and the strengthening of an existing line between Kyogle and Grafton have been undertaken by the two States concerned. The cost is estimated at £4,000,000, of which New South Wales has agreed to pay £1,288,088, Queensland £468,613, and the Commonwealth £2,243,299. The journey between Sydney and Brisbane over the new route will be shorter by 100 miles than the journey via Wallangarra.

Another agreement has been made between the Commonwealth and South Australia for the construction of a 4 ft. 8½ in. line in South Australia, from Port Augusta to Red Hill, and for laying a third rail on the existing 5 ft. 3 in. line between Red Hill and Adelaide. By these works a line on the 4 ft. 8½ in. gauge would be provided from Adelaide to Kalgoorlie, the trans-Australian journey would be shortened by about 70 miles, and the breaks of gauge at Terowie and Port Augusta would be eliminated.

#### RAILWAYS OF NEW SOUTH WALES AND OTHER COUNTRIES.

The length of railways—State and private—in various countries is shown below in relation to population and area. The figures for the Australian States include the Federal Government lines as at 30th June, 1927, and the private lines available for special traffic in 1926, as well as those used for general traffic. The particulars relating to other countries are the latest available.

Country.	Length of Railways.	Per Mile of Line Open.		Country.	Length of Railways.	Per Mile of Line Open.	
		Population approx.	Area.			Population approx.	Area.
	miles.	No.	sq.mls.		miles.	No.	sq.mls.
New South Wales	6,224	381	50	Italy ... ..	13,083	3,100	9
Victoria ... ..	4,540	380	19	Austria ... ..	4,114	1,588	8
Queensland ... ..	7,638	117	88	Hungary ... ..	5,330	1,600	7
South Australia and Northern Territory ... ..	3,852	149	235	Russia (Soviet) ... ..	46,255	3,000	177
Western Australia	5,256	73	186	Union of S. Africa	12,879	575	37
Tasmania ... ..	1,057	197	25	India ... ..	38,579	8,300	47
New Zealand ... ..	3,281	438	32	Japan ... ..	10,414	5,700	14
Great Britain and Northern Ireland	21,157	2,134	4	Canada ... ..	42,090	225	89
Irish Free State ... ..	2,668	1,184	10	United States of America	250,156	455	12
France ... ..	33,688	1,164	6	Argentina ... ..	22,627	446	51
Germany ... ..	34,748	1,800	5	Mexico ... ..	16,406	870	47
				Brazil ... ..	19,026	1,700	173

#### TRAMWAYS.

The tramways of New South Wales, with one exception, are the property of the State Government. The standard gauge of 4 ft. 8½ in. has been adopted for all lines. The electric system was introduced into Sydney at the close of 1899, and is used now for nearly all tramways in the metropolitan district. The work of converting the Newcastle lines from the

steam to the electric system is in progress, and a portion has been operated by electricity since December, 1923. The length of line open for traffic at 30th June, 1927, was 209½ miles, representing 356 miles of track and 57 miles of sidings, loops, and crossovers.

Line.	Route Mileage.	Track Mileage.
Electric—	mils. ch.	mils. ch.
City and Suburban ... ..	118 0	215 21
North Sydney ... ..	22 61	41 9
Ashfield to Mortlake and Cabarita ... ..	8 38	15 9
Rockdale to Brighton-le-Sands ... ..	1 20	1 20
Manly to The Spit and Manly to Narrabeen .. ..	11 50	16 37
Newcastle City and Suburban * .. ..	34 45	52 38
	196 54	341 54
Steam—		
Kogarah to Sans Souci ... ..	5 45	6 79
Sutherland to Cronulla ... ..	7 32	7 32
	12 77	14 31
Total ... ..	209 51	356 5
Sidings, loops, and cross-overs ... ..	.....	56 72

\* Including portion under steam system.

There has been little extension of the tramway system in recent years owing to the impending electrification of the metropolitan suburban railways and to the competition of motor transport. A number of steam tramway services, which had been operated at a loss for a number of years, were discontinued as from 1st January, 1927, viz., Arncliffe to Bexley, 2 miles 50 chains; Parramatta to Northmead, 2 miles 10 chains; East to West Maitland, 4 miles 5 chains; and the Broken Hill lines 10 miles 4 chains. The capital cost of these lines is being written off to working expenses.

The capital cost of the State tramways to 30th June, 1927, amounted to £11,586,050, or £54,583 per mile open. The cost of construction was £5,733,942, or £27,013 per mile, and the expenditure on rolling-stock, workshops, machinery, etc., amounted to £5,852,108.

In the following table are given particulars of the miles open, cost of construction, and the financial results of the State tramways at intervals since 1901:—

Year ended 30th June.	Total Length of Lines.	Capital Expended on Lines open for Traffic.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest Returned on Capital.
	Miles.	£	£	£	£	per cent.
1901	79½	2,194,493	551,674	462,471	89,203	4·10
1911	189½	5,121,586	1,365,631	1,143,949	221,682	4·53
1921	227½	9,060,757	3,471,738	2,943,252	528,486	5·98
1922	22½	9,505,327	3,610,135	3,015,616	594,519	6·41
1923	225	9,375,031	3,598,114	3,092,306	505,808	5·19
1924	227½	10,758,958	3,633,016	3,061,531	542,385	4·93
1925	228½	11,131,454	3,619,272	3,174,802	444,470	4·06
1926	228½	11,431,523	3,619,496	3,319,996	299,500	2·65
1927	209½	11,586,050	3,806,098	3,437,534	318,264	2·77

During the year ending 30th June, 1927, the percentage of working expenses to the total receipts was 91.64, as compared with 91.73 in the

previous year. The net earnings amounted to £318,264, or 2.77 per cent. on cost of construction and equipment, as compared with 5.13 per cent., the interest payable on the loan liabilities of the State. The net return per average mile open was £1,454, as compared with £1,311 in the previous year.

Until recently the tramways usually yielded a substantial surplus over working expenses and interest. In 1921-22, for instance, the surplus amounted to £127,191, and in each of the two succeeding years there was a small surplus. During the last two years, however, interest charges exceeded net earnings by £278,400 in 1925-26, and £269,916 in the following year. One of the main causes of the unfavourable financial results of the tramway services is the growing competition of motor transport. The motor omnibuses in the Metropolitan traffic district numbered 180 in 1921, and 533 in December, 1927. Tramway traffic is affected also by a more general use of other motor vehicles.

### *Working of Tramways.*

The following statement shows the results of working in respect of the various sections of tramways during the year ended 30th June, 1927:—

Line.	Cost of Construction and Equipment.	Passengers carried.	Gross Revenue.	Working Expenses.	Excess Revenue (+) or Expenses (-).	Interest on Capital.	Loss, allowing for interest.
	£	No.	£	£	£	£	£
<b>Electric—</b>							
City and Suburban ...	8,110,571	279,671,372	3,030,973	2,627,045	(+) 403,928	409,810	5,382
North Sydney ...	1,132,288	26,600,040	282,778	279,055	(+) 2,223	57,660	55,437
Ashfield to Mortlake and Cabarita ...	246,092	8,208,856	75,995	79,129	(-) 3,134	12,605	15,739
Manly to The Spit and Manly to Narrabeen ...	338,789	4,697,949	60,121	72,120	(-) 11,999	18,951	30,950
Rockdale to Brighton-le-Sands ...	31,517	1,635,311	13,539	8,005	(+) 5,534	1,610	13,924
Newcastle City and Suburban ...	1,431,326	21,349,627	285,773	559,488	(+) 26,277	75,417	49,140
<b>Steam—</b>							
Arncliffe to Bexley* ...	12,239	260,975	2,375	17,297	(-) 14,922	888	15,810
Kogarah to Sans Souci ...	56,595	2,452,130	23,303	42,434	(-) 19,131	2,721	21,852
Parramatta to Northmead* ...	7,475	293,444	2,831	19,587	(-) 16,756	640	17,396
Sutherland to Cronulla ...	49,029	904,434	17,040	25,788	(-) 8,748	2,516	11,264
East to West Maitland* ...	25,337	322,356	3,553	19,143	(-) 15,590	1,557	17,147
Broken Hill* ...	64,162	741,617	8,425	37,843	(-) 29,418	3,805	33,223
<b>Total, All Lines</b> ...	<b>11,586,050</b>	<b>347,231,141</b>	<b>3,806,098</b>	<b>3,487,834</b>	<b>(+) 318,264</b>	<b>588,180</b>	<b>269,916</b>

\* Services discontinued 1st January, 1927—cost is being written off to working expenses. † Profit.

The gross receipts of all sections of steam tramways and of two of the electric tramways were insufficient to cover working expenses, and only one section, the Rockdale to Brighton-le-Sands line, showed a surplus over expenses and interest. The Newcastle lines, which are partly steam and partly electric, yielded net earnings amounting to £26,277, but there was a deficiency over interest payments amounting to £49,140. The result, however, was much better than in 1925-26, when the deficit was £139,335.

*Comparison of Tramway Traffic.*

The following statement contains a comparison of the passenger traffic and the tram mileage since 1901:—

Year ended 30th June.	Length of line open at 30 June.		Passengers carried.	Tram mileage.	Earnings per tram mile.		Working Expenses per tram mile.	
	miles.	No.			s.	d.	s.	d.
1901	79½	93,703,685	6,835,926	1	7½	1	4½	
1911	189¾	230,275,938	22,541,429	1	2½	1	0½	
1921	227¼	337,689,873	28,654,172	2	5	2	0½	
1922	229½	330,938,567	29,318,532	2	5½	2	0½	
1923	225	331,001,822	30,071,022	2	4¾	2	0¾	
1924	227½	340,957,725	32,110,054	2	3	1	11	
1925	228½	339,576,776	33,761,796	2	1¾	1	10½	
1926	228½	339,411,765	34,214,733	2	1½	1	11½	
1927	£09¾	347,231,141	34,188,015	2	2¾	2	0½	

There was a rapid extension of the tramway system between 1901 and 1911, and the traffic increased, but the average earnings declined from 1s. 7½d. to 1s. 2½d. per tram mile, and the excess of earnings over working expenses from 3d. to 2½d. Ten years later the earnings and expenses per tram mile were twice as high, the net earnings reached the maximum of 4¾d. per tram mile in 1921-22, then declined, the average during the last two years being only 2½d.

The decline in tram mileage during 1926-27 was due to the closing of a number of tramways. There was an increase during the year in the mileage on all the lines existing at 30th June, 1927, also in the number of passengers, except on the Manly lines.

The following comparison shows the traffic on the city and suburban lines and the North Sydney lines; also the profit and loss after allowing for working expenses and interest. All lines which communicate directly with the city of Sydney are included in the category "City and Suburban." The Ashfield, Kogarah, Arncliffe, and Rockdale lines, which acted as feeders to the railways, and the Manly lines have not been included:—

Year ended 30th June	City and Suburban.				North Sydney.			
	Length of line.	Passengers carried.	Tram mileage.	Profit after paying interest.	Length of line.	Passengers carried.	Tram mileage.	Profit after paying interest.
	miles.	000.	miles.	£	miles.	000.	miles (000).	£
1911	97¼	197,871	19,107	75,677	16¾	15,897	1,929	(—) 6,029
1921	114¾	277,687	23,272	205,258	21¾	26,539	2,859	3,575
1922	115¼	271,385	23,785	284,085	23	26,753	2,979	(—)22,770
1923	115¾	272,939	24,261	207,200	23	27,659	3,246	(—)10,040
1924	116¾	280,313	25,769	188,472	23¼	27,135	3,345	(—)15,874
1925	117¾	275,300	26,525	128,418	23½	25,196	3,310	(—)53,734
1926	117¾	273,504	26,346	19,824	22¾	25,269	3,215	(—)47,389
1927	118	279,671	26,462	(—) 5,882	22¾	26,600	3,205	(—)55,437

(—) Denotes loss.

The city and suburban lines yielded a profit amounting to £284,085 in 1921-22, then it began to decline steadily until 1925-26. In the following year the net earnings were less than the interest payable on the capital

cost. The number of passengers was highest in 1923-24, and it was slightly lower in 1926-27, though the tram mileage was greater by nearly 700,000 miles.

For a number of years the receipts of the North Sydney lines have not been sufficient to cover working expenses and interest, and the loss increased from £10,040 in 1922-23 to £55,437 in 1926-27.

#### *Tram Fares.*

The tramways are divided into sections of an average length of nearly 2 miles.

From November, 1920, to December, 1927, the fares on week-days were charged at the following rates, viz., 2d. for one section and 1d. for each additional section up to 6d. for a journey of five or six sections. The rates on Sundays were higher by 1d. per journey between 1st November, 1920, and 11th February, 1923, when the extra charge was withdrawn, making the rates uniform for all days. In December, 1927, the fare for each journey extending over two, three or four sections was increased by 1d.

#### PRIVATE TRAMWAYS.

There is only one tramway under private control within the State, viz., a steam line, which passes through the town of Parramatta, commencing at the Park and continuing as far as the Newington Wharf at Duck River, a distance of 2 miles 66 chains, where it connects with the Parramatta River steamers conveying passengers and goods to and from Sydney. The line has been constructed to the standard gauge of 4 ft. 8½ in., and was opened in 1883.

#### WORKSHOPS AND ELECTRICITY WORKS.

A large number of workshops have been established to meet the requirements of the various branches of the railways and tramways. The principal locomotive and carriage shops were situated at Eveleigh, close to the Central Railway Station. On this site the workshops could not be extended to meet the increasing requirements of the railway system, and some of the buildings had to be demolished to make way for extra tracks for the suburban electric railways. Therefore a new site was selected at Chullora, 11 miles distant, and workshops are being constructed on an area of 485 acres. Some of the workshops at Chullora are now in use, and when the scheme is complete all the works at Eveleigh will be removed.

Engine repairs are undertaken at Honeysuckle Point (Newcastle) and at a number of smaller workshops in country localities. There are five large workshops—at White Bay (Sydney), Lidcombe, Newcastle, Goulburn, and Bathurst—to supply the needs of the permanent-way branch by the preparation of structural steelwork, fish-plates, tools, implements, and other articles. The principal tramway workshops are situated at Randwick, in Sydney, and there is a smaller establishment at Newcastle.

Particulars regarding the railway and tramway workshops are published in the chapter of this volume entitled *Factories*.

For the supply and distribution of electric current there are three main generating stations, viz., Ultimo and White Bay, in Sydney, and one in Newcastle. A number of substations are in operation throughout the suburban areas. The capacity of the station at White Bay is being increased

to meet the requirements of the electric railways. Electric current is supplied in bulk from the power houses to a number of public bodies. During 1926-27 the electric energy generated at Ultimo was 50,841,800 kilowatt hours, at White Bay 241,653,800 kilowatt hours, and at Newcastle 44,515,100 kilowatt hours. A power-house is being constructed at Lithgow near the State coal-mine.

The rolling stock used on the main railway lines is lighted by electricity, the current being generated by axle-driven motors.

#### EMPLOYMENT AND WAGES.

The average number of persons employed on existing lines of railways and tramways during each year since 1920-21 is shown in the following statement, also the amount of salaries and wages paid:—

Year ended 30th June.	Average number of Employees.			Salaries and Wages paid.		
	Railways.	Tramways.	Total.	Railways.	Tramways.	Total.
				£	£	£
1921 ...	37,558	9,018	46,576	9,153,089	2,278,998	11,432,087
1922 ...	36,832	9,734	46,566	9,337,305	2,384,457	11,721,762
1923 ...	36,216	9,897	46,113	8,740,230	2,357,704	11,097,934
1924 ...	38,853	10,608	49,461	9,397,574	2,527,025	11,924,599
1925 ...	39,025	10,708	49,733	9,884,596	2,689,473	12,574,069
1926 ...	42,174	11,246	53,420	11,192,851	2,947,313	14,140,164
1927 ...	45,265	11,524	56,789	12,509,021	3,143,657	15,652,678

The foregoing figures are exclusive of the staff of the Construction Branch, numbering 1,613 in 1925-26, and 2,018 in 1926-27.

#### COAL SUPPLIES FOR RAILWAYS AND TRAMWAYS.

Coal for use in connection with the railways and tramways is an important item of working expenses. In the report of a recent Royal Commission of Inquiry the opinion was expressed that the consumption of coal by railway locomotives was too high in relation to the tractive effort required, and it was recommended that steps be taken to economise it.

During the year ended 30th June, 1927, the quantity of coal used amounted to 1,722,575 tons. The quantity used for locomotive purposes was 1,342,034 tons, for gas-making 7,437 tons, for power houses 326,885 tons, and for other purposes 46,219 tons.

A coal-mine at Lithgow, on the main Western line, is worked by the Railway Commissioners to supply coal for the railways. The output during the year 1926-27 was 286,704 tons.

#### RAILWAY AND TRAMWAY ACCIDENTS.

All accidents are recorded which occur in the working of the railways and tramways, or on railway or tramway premises, to persons other than servants of the Department, however slight the injuries may be. In the case of employees of the Department all accidents must be reported which cause the employee to be absent from his ordinary work for at least five hours on any of the three days immediately following the day on which the accident occurred.



The railway and tramway accidents during each year of the quinquennium ended 30th June, 1927, are shown in the following table:—

Year ended 30th June.	Passengers.		Employees.		Others.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
<i>Railway Accidents.</i>								
1923 ...	10	258	16	5,737	30	210	56	6,205
1924 ...	9	246	24	5,768	57	211	90	6,225
1925 ...	5	279	34	5,382	35	213	74	5,874
1926 ...	14	271	32	6,506	41	204	87	6,981
1927 ...	41	298	46	7,702	48	250	135	8 250
<i>Tramway Accidents.</i>								
1923 ...	7	527	1	1,156	19	315	27	1,998
1924 ...	3	405	3	1,204	17	345	23	1,954
1925 ...	11	451	3	1,084	23	338	37	1,873
1926 ...	10	366	4	1,186	25	419	39	1,971
1927 ...	8	405	3	1,537	19	417	30	2,359

The deaths of eleven railway employees and one tramway employee included in the figures for the year 1926-27 were results of accidents not connected with the movement of the railway or tramway vehicles. The majority of injuries to employees occurred in similar accidents, the number so injured in 1926-27 being 7,324 in the railway service and 1,258 in the tramway service.

The number of passengers carried on the railways during the year ended June, 1927, was 141,615,806, and on the tramways 347,231,141. The accident rates per million passengers were as follows:—Railways: Killed 0.29, injured 2.10. Tramways: Killed 0.02, injured 1.17. The higher rates for the railways are due mainly to the greater length of the average journey travelled by railway passengers.

The amount of compensation paid in respect of injuries to passengers and damage to goods during each of the last five years was as follows:—

Accidents.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Railway—	£		£	£	£
Passengers ...	3,478	9,646	11,592	10,150	60,469
Goods ...	11,339	12,558	10,989	18,168	25,563
Tramway ...	24,612	19,819	33,870	27,163	24,000
Total ... £	39,429	42,023	56,451	55,481	110,032

## AVIATION.

Civil aviation in Australia is subject to the Air Navigation Act, 1920, which authorises the Governor-General of the Commonwealth to make regulations to control air navigation, applying the principles of the Convention for the Regulation of Aerial Navigation signed in Paris on 13th October, 1919.

The Federal Government has surveyed routes and established landing places in various parts of Australia, and subsidises private aerial services. In New South Wales aerial mails are carried under a contract for a service between Cootamundra and Adelaide via Mildura in Victoria and Hay and Narrandera in New South Wales, with branch services between Hay and Melbourne via Deniliquin and Echuca, and between Broken Hill and Mildura.

Particulars relating to aircraft in New South Wales in each of the five years ended June, 1927, are shown below:—

Particulars:	Year ended 30th June.				
	1923.	1924.	1925.	1926.	1927.*
Companies or persons owning aircraft ...	12	9	4	4	9
Aeroplanes ... ..	19	9	5	6	10
Staff employed—Pilots ... ..	5	4	3	3	5
Others ... ..	5	1	3	2	6
Flights—Number ... ..	927	930	721	347	5,897
Hours ... ..	286	314	277	201	1,593
Mileage (approximate) ... ..	18,606	20,131	19,915	13,742	109,880
Passengers carried ... ..	1,456	1,403	1,073	411	5,337
Accidents—Persons killed... ..	...	...	2	...	...
Persons injured ... ..	...	...	...	...	1

\*Incomplete.

Two persons were killed in 1925 during a flight by an unlicensed pilot. The Australian Aero Club in Sydney has been established for the advancement of civil aviation. Facilities for training are provided, and efforts are being made to reduce the cost of aircraft in order to popularise this method of transport for business and other purposes.

## MOTOR AND OTHER LICENSED VEHICLES.

Motor vehicles and drivers in New South Wales must be registered. Public vehicles, whether motor or horse-drawn, and the persons driving them must be licensed if they ply or stand in a public street for hire.

The police issue licenses for motor vehicles and drivers, control the motor traffic, and collect the motor taxes in all parts of the State. In the Metropolitan traffic area they regulate the street traffic, vehicular and pedestrian, and supervise the registration of public vehicles. In municipalities and shires outside the Metropolitan traffic district, the local councils are authorised by the Local Government Act to control public vehicles and to enact by-laws for the regulation of street traffic. In other areas, i.e., in the unincorporated portion of the western division of New South Wales vehicles used to convey passengers for hire must be licensed under the Stage Carriages Act. The police have general authority, under the Police Offences Act, to take action against dangerous or disorderly traffic in any part of the State.

### REGISTRATIONS AND LICENSES.

Licenses in respect of public vehicles plying within the Metropolitan traffic district only are effected under the Metropolitan Traffic Act, the annual fees being as follows:—Omnibus, £2; cab, van, dray, wagon, £1; driver or conductor of a horse-drawn vehicle, 5s., or of a motor vehicle, 10s.

Motor vehicles, except those registered under the Metropolitan Traffic Act, must be registered under the Motor Traffic Act. The annual fee payable for a motor cycle is 2s. 6d.; other motor vehicle, £1; driver, 10s.; motor cycle rider, 5s. For a learner's permit to drive 5s. is charged and a similar fee when the registration of a motor vehicle is transferred.

The maximum fee which may be charged by local councils in respect of the license of a public vehicle is £1 per annum, and for a driver's license 5s. per annum.

Particulars of registrations of public vehicles are available only for the Metropolitan traffic district. The number of horse-drawn vehicles on the register at 31st December, 1921, was 2,274, viz., 643 cabs, 1,623 vans, and 8 omnibuses. Six years later there were only 516, viz., 137 cabs, 379 vans.

The number of certificates of registration and licenses in respect of motor vehicles in force at 31st December, 1927, is shown below in comparison with similar information for earlier years:—

Registrations of Motor Vehicles.	Number in force at 31st December—				
	1911.	1921.	1925.	1926.	1927.
Public vehicles under Metropolitan Traffic Act—					
Cab ... ..	175	407	503	779	997
Van ... ..	3	376	1,519	1,723	2,016
Omnibus ... ..	4	180	582	486	525
Other motor vehicles—					
Car ... ..	3,975	28,665	82,175	104,675	129,985
Lorry ... ..					
Cycle ... ..					
	2,788	11,291	22,536	25,424	28,054
Total Motor Vehicles	6,945	44,443	123,591	156,073	192,094
Per 100 of Population ...	0.4	2.1	5.4	6.6	8.0

The figures show that there has been a remarkable development in motor transport in recent years, the number of vehicles in 1927 being more than four times the number in 1921. The number of vans and lorries rose from 3,900 to 32,533, and the number of motor cabs in the Metropolitan area from 407 to 997.

The rapid expansion of motor omnibus services within the Metropolitan district is illustrated by the increase in registered vehicles from 180 in 1921 to 582 in 1925. There was a decrease in 1926, then the number began to rise again. These figures do not represent the total number of motor omnibuses as those plying outside or beyond the Metropolitan traffic district are registered as motor cars under the Motor Traffic Act.

The increase in motor transport facilities is shown also by the following statement of the number of persons holding licenses to drive motor vehicles at the end of the years specified:—

Drivers, etc., of Motor Vehicles.	Licenses in force at 31st December—				
	1911.	1921.	1925.	1926.	1927.
<b>Public Vehicles—Metropolitan Traffic Act—</b>					
Cab drivers ... ..	248	627	899	2,174	2,087
Van drivers ... ..	9	523	2,090	2,194	2,401
Omnibus drivers ...	6	441	2,086	1,926	1,756
Omnibus conductors	9	200	1,472	1,118	1756
<b>Other Vehicles—Motor Traffic Act—</b>					
Car drivers ... ..	5,517	52,538	147,532	183,630	224,575
Cycle riders ... ..	3,323	16,115	28,888	32,228	34,267

The number of persons who obtain licenses to drive horse-drawn vehicles for hire in the Metropolitan traffic district is decreasing rapidly. The licenses in force at 31st December, 1927, were:—Cab drivers, 170; van drivers, 401; as compared with 2,658 licenses at the end of the year 1921, viz.:—Cab drivers, 756; van drivers, 1,884; and omnibus drivers, 18.

#### TAXATION OF MOTOR VEHICLES.

A tax is levied on every motor vehicle and it must be paid annually, by the person in whose name the vehicle is registered, when the certificate of registration is issued or renewed. Until 1st January, 1925, the rates of tax were fixed in relation to horse-power, but since that date they have been based upon the weight of the vehicle and the type of tyre used. Under the Motor Vehicles (Taxation) Act, 1924, as amended in 1926, the rates per  $\frac{1}{2}$  cwt. imposed on vehicles with solid tyres are as follows:—Car, 3s. 3d., lorry 3s. 6d., omnibus, 5s. 6d. If the tyres are pneumatic, semi-pneumatic rubber, or super-resilient, the rate for a car or lorry is 2s. 9d. per  $\frac{1}{2}$  cwt., and for an omnibus, 4s. 3d. per  $\frac{1}{2}$  cwt. The tax on a motor cycle is 22s. 6d., or if a side car is attached £2. For tractors the rate is 3s. 6d. per  $\frac{1}{2}$  cwt. up to a maximum of £15. Trailers and other motor vehicles are

taxable at the rate of 3s. 6d. per  $\frac{1}{2}$  cwt. Tractors, motor lorries, and other motor vehicles owned by farmers and used solely for carting the produce of their farms are taxable at half-rates. A reduction of 6d. per  $\frac{1}{2}$  cwt. is allowed on vehicles of British manufacture. The following are exempt from taxation, viz.:—Ambulance motor vehicles; those used by manufacturers or dealers for trial purposes; and so much of the weight of a motor vehicle used solely for mining purposes in the Western Division of the State as exceeds 5 tons; motor vehicles owned by the council of a municipality or shire and used solely for the purposes of road construction, maintenance, or repair; trailers and motor vehicles used solely for work on farms; trailers owned by farmers and used solely for carting the produce of their farms, or owned by timber-cutters and used solely for carting their timber from forest to mill.

The net proceeds of taxes, fees, and penalties under the Motor Vehicles (Taxation) Act, the Metropolitan Traffic Act, and the Motor Traffic Act, in the two years ended June, 1926, and since 1st July, 1927, have been paid to the Main Roads Board for the maintenance and construction of roads. The total receipts under these Acts during 1921 and each of the last five years, as recorded by the Police Department, are shown below:—

Act.	1921.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£	£
Metropolitan Traffic ...	4,834	6,017	6,659	8,267	9,120	9,175
Motor Traffic ...	51,712	85,874	117,993	200,934	254,586	313,216
Motor Vehicles Taxation	131,025	219,952	300,248	657,979	856,354	1,035,639
<b>Total ...</b>	<b>187,571</b>	<b>311,843</b>	<b>424,900</b>	<b>867,180</b>	<b>1,120,060</b>	<b>1,358,030</b>

The revenue in respect of the registration of vehicles and drivers increased from £56,546 in 1921 to £322,391 in 1927. The rates of taxation in respect of motor vehicles were raised from 1st January, 1925, and the receipts increased rapidly, the amount collected in 1927 being more than three times the tax in 1924.

#### TRAFFIC ACCIDENTS.

The following table shows particulars of accidents which occurred in public streets within the Metropolitan Traffic District and were reported by the police during recent years:—

Year.	Accidents in which no persons were injured.	Persons Killed or injured in Accidents caused by—				Total Number of Persons.	
		Trams.		Motor Vehicles.		Killed.	Injured.
		Killed.	injured.	Killed.	Injured.		
1911	963	10	633	5	130	28	1,212
1921	1,199	10	318	36	792	62	1,616
1922	1,878	12	556	48	1,071	76	1,972
1923	2,761	7	294	58	1,443	89	2,368
1924	4,396	9	318	63	2,128	88	3,130
1925	6,054	20	289	89	2,510	118	3,317
1926	7,366	11	303	144	3,660	187	4,861
1927	8,079	17	339	157	4,443	206	5,644

The table shows that there has been a marked increase in the number of street accidents since 1911. The number of persons killed or injured in tram accidents, as shown above, does not include accidents due to persons getting on or off trams in motion. Accidents due to motor vehicles are increasing rapidly. During the year 1927 the motor accidents reported by the police in localities outside the Metropolitan traffic district numbered 1,643. In these accidents 112 persons were killed and 1,117 were injured.

## POSTS AND TELEGRAPHS

The postal, telegraph, and telephone services of New South Wales have been controlled by the Commonwealth Government since 1st March, 1901. The services are administered by a Minister of the Crown, with a permanent salaried officer in charge of the central executive office, and a deputy in each State.

### POSTAL SERVICES.

Post offices have been established throughout the State, even in localities where there are few residents. If the volume of business does not warrant the establishment of a full service, receiving offices are opened for the collection of mail matter for conveyance to and from the nearest post office. The transport of mails in outlying districts has been expedited considerably in recent years by reason of an extended use of motor vehicles and by a few aerial services. The number of inland mail services in operation in New South Wales in 1926-27 was 2,120. The cost of road services amounted to £300,449, and of railway services to £169,260.

Ocean mail services are conducted in accordance with arrangements made between the Commonwealth Government and the steamship owners. Some of the services between Australia and the Pacific Islands are subsidised by the Commonwealth, and the Orient Steamship Company receives £130,000 per annum for a four-weekly service with Europe. Mails are conveyed along other routes at poundage rates. They are despatched at least once a fortnight to Europe, *via* Suez, and there is regular communication with America and with Eastern ports.

The number of post offices and the volume of postal business in New South Wales in various years since 1901 are shown below. The figures relating to postal articles represent the sum of the following:—(a) Articles posted for delivery within the Commonwealth, (b) those despatched to places beyond the Commonwealth, (c) articles received from places beyond the Commonwealth. Particulars of postal matter received in New South Wales from other Australian States have been excluded from the table as the figures for recent years are not available:—

Year.	Post Offices.	Receiving Offices.	Postal Articles (000 omitted).				Postal Articles per Head of Population.
			Letters, Post-cards, and Registered Articles.*	Newspapers.	Packets.	Parcels*.	
1901	1,684	524	77,388	48,109	13,679	894	102.3
1911	1,948	542	176,511	66,432	34,198	1,649	167.4
1920-21	2,031	578	242,259	59,437	19,768	3,292	155.4
1921-22	2,032	556	240,088	66,381	21,043	3,908	155.7
1922-23	2,040	559	254,196	66,647	30,296	4,273	163.6
1923-24	2,059	584	270,315	71,800	47,240	4,495	178.2
1924-25	2,063	601	296,399	72,711	51,198	5,102	188.8
1925-26	2,086	593	318,832	73,802	59,438	5,663	199.2
1926-27	2,091	591	352,039	81,396	60,210	5,954	212.3

\* Registered Parcels are classified as "Parcels."

During the year 1926-27 the average number of postal articles per head of population was as follows:—Letters, etc., 150; newspapers, 35; and packets and parcels, 28. The mail matter carried in 1926-27 included the following articles despatched to or received from countries outside Australia, viz., letters, postcards, and registered articles, 51,670,000; newspapers, 11,249,000; packets, 5,832,000; and parcels, 846,000. The total number of registered articles other than parcels was 3,051,000, of which 437,000 were to or from other countries.

Mainly for the convenience of people who reside at a distance from the trading centres, a system of value-payable parcel post has been established. The Department accepts for transmission within the Commonwealth parcels or letters sent in execution of orders, and collects from the addressees on behalf of the senders the charges due thereon. The system applies also to registered articles transmitted to or from Papua. During the year ended 30th June, 1927, the number of such parcels posted in New South Wales was 252,300, and the value collected was £402,186, the revenue, including postage, commission on value, registration, and money-order commission being £32,450.

#### TELEGRAPHS AND CABLES.

The telegraph system embraces the whole Commonwealth. It has been extended steadily since January, 1858, when the system was opened to the public in New South Wales, and modern equipment has been installed in the chief centres to expedite the transmission of messages.

Cable communication with Europe and other countries is supplied by four main routes. One cable lands in Fremantle (Western Australia) and in Durban (South Africa); and two land in Banjoewangie (Java), viz., one from Roebuck Bay (Western Australia) and the other, which is duplicated, from Darwin (Northern Territory). The fourth route is by the Pacific Cable from Southport (Queensland), via Norfolk Island, Fiji, and Fanning Island to Bamfield (Canada). A branch cable runs from Norfolk Island to New Zealand, and there are two direct cables to New Zealand, which land near Sydney, one at La Perouse, and the other at Bondi. Lines have been laid also between the Australian mainland and Tasmania and New Caledonia. The Pacific cables are maintained by the Governments of the United Kingdom, Canada, New Zealand, and Australia.

For cable messages to Great Britain, the ordinary rate is 2s. per word. Deferred cablegrams written in plain language and subject to a delay not exceeding twenty-four hours may be exchanged at half the ordinary rates with Great Britain and with a number of other British and foreign countries. Week-end cable letters may be transmitted between Australia and the United Kingdom and British North America, the rate to and from Great Britain being 12s. 6d. for twenty words and 7½d. for each additional word. Daily letter telegrams with normal delivery after 48 hours may be exchanged with a number of countries at rates which are much below the ordinary rates, the minimum charge between Australia and the United Kingdom being 15s. for twenty words and 9d. for each additional word. Special conditions, with cheap rates, have been arranged for the transmission of press messages by telegraph or cable.

The following table shows the number of telegrams despatched in New South Wales for delivery within the Commonwealth and the number despatched to and received from countries outside Australia, in various years since 1901. Messages to and from Tasmania are classified as Australian telegrams and not as cablegrams. The total number of telegrams



handled in New South Wales cannot be stated, as full particulars are not available regarding messages received from other States nor those in transit.

Year.	Telegraph Stations.	Telegrams despatched for delivery in Australia.	Cablegrams.		Revenue Received.
			Despatched.	Received.	
1901	978	2,669,724	59,360	72,735	£ 186,135
1911	1,406	4,314,252	129,809	123,910	253,398
1920-21	2,252	5,906,243	249,705	263,482	489,805
1921-22	2,324	5,512,449	252,815	269,188	500,116
1922-23	2,411	5,451,331	272,989	282,953	513,954
1923-24	2,538	5,757,942	275,847	277,803	512,382
1924-25	2,792	5,896,347	320,600	310,543	528,677
1925-26	2,894	6,214,370	350,146	350,129	516,176
1926-27	2,985	6,090,777	357,860	360,572	503,682

#### WIRELESS TELEGRAPHY.

A chain of stations has been erected around the coast of Australia and in the Pacific Islands under the control of the Commonwealth to give wireless communication with shipping. Three of the stations, including the Sydney station, are capable of long distance communication. In May, 1922, the commercial radio stations were transferred, under an agreement with the Federal Government, to the Amalgamated Wireless (Australasia), Limited, in which the Commonwealth has a controlling interest. The company undertook to erect in Australia a high-power station capable of direct communication with Great Britain, to arrange for suitable corresponding stations in Great Britain and Canada, and to provide a system of feeder stations for communication between the main high-power stations and the capital cities of Australia and shipping around the coast. Under an amended agreement, ratified by the Wireless Agreement Act of 1924, the company was relieved of its obligations in respect of the high-power stations and agreed to erect in Australia a station to be operated under the beam system for communication with similar stations in Great Britain and Canada. The service between Australia and Great Britain was opened in April, 1927. The rate for ordinary messages is 1s. 8d. per word, and deferred messages are cheaper. The service with Canada was opened in June, 1928.

The radio traffic at Sydney Wireless Station during 1926-27 consisted of 33,696 paying messages, 420,794 words; 427 service messages, 4,131 words; and 3,162 weather messages, 60,801 words.

Private installations for wireless communication and for broadcasting may be operated under license, but they are not permitted to engage in commercial traffic unless authorised to do so. The wireless licenses issued in New South Wales during the year ended 30th June, 1927, included the following: Coast 1, ship 32, land 4, broadcasting 9, broadcast listeners 56,995, experimental 283, dealers' listening 860, portable 5. There has been marked expansion in regard to wireless telegraphy in New South Wales, the number of licenses having increased from 4,089 since 30th June, 1924.

A Royal Commission appointed by the Government of the Commonwealth in 1927 investigated matters relating to wireless broadcasting and to the development and utilisation of wireless services for public requirements. The Commission made a number of recommendations for the improvement of the broadcasting services, the reduction of license fees, the restriction of charges made by the Amalgamated Wireless (Australasia) Limited in respect of patent rights, also for the restoration of the land and coastal stations to the Postmaster-General's control.

## TELEPHONES.

The telephone system was established in Sydney in 1880. Exchanges have since been provided in many other centres, and the system has been installed in a large number of country districts. In the Metropolitan district a number of automatic exchanges are in operation. Trunk lines serve a wide area of the State, and a line between Sydney and Melbourne was brought into use in 1907, and between Sydney and Brisbane in 1924. The "carrier wave" system of operating long-distance telephone traffic was introduced in September, 1925. By this means a number of conversations may be conducted simultaneously over one pair of wires.

The following table shows the growth of the telephone service in New South Wales since 1901:—

Year.	Exchanges.	Number of Lines Connected.	Public Telephones.	Telephone Instruments connected.
1901	48	9,864	72	13,778
1911	268	34,551	722	43,032
1920-21	921	74,490	1,693	96,710
1921-22	960	80,042	1,787	104,108
1922-23	1,026	87,352	1,815	113,645
1923-24	1,085	97,310	1,945	125,995
1924-25	1,201	107,497	2,165	139,557
1925-26	1,326	117,249	2,379	152,969
1926-27	1,436	127,784	2,555	167,301

The number of exchanges as stated above includes offices with two or more lines connected. In June, 1927, there were also 304 post offices with one subscriber's line connected.

The annual ground rent for an exclusive telephone service ranges from £3 in respect of exchanges where the number of subscribers' lines does not exceed 300, to £5 where there are over 4,000 lines. For each effective outward call where the number of lines connected with the exchange does not exceed 600, a charge of 1d. per call is made; at other exchanges the charge is 1½d.

The telephone traffic during the year 1926-27 included 10,334,000 trunk line calls and 133,996,000 effective local calls. The latter consisted of 121,397,000 calls by subscribers, 6,087,000 by means of public telephones, and 6,512,000 by Commonwealth and State Government departments. The revenue from trunk line traffic amounted to £382,489, representing an average of 8·88d. per call.

## FINANCIAL RESULTS OF POSTAL SERVICES.

Particulars regarding the financial results of operations in the various branches of the post office in New South Wales during the year ended 30th June, 1927, are shown below:—

Branch.	Earnings.	Working Expenses.	Surplus.	Interest on Capital.	Net Profit.
	£	£	£	£	£
Postal ... ..	2,196,299	1,948,226	248,073	52,683	195,390
Telegraph ... ..	540,440	579,285	(—) 38,845	51,041	(—) 89,886
Telephone ... ..	1,771,611	1,437,290	334,321	404,634	(—) 70,313
<b>Total, All Branches...</b>	<b>4,508,350</b>	<b>3,964,801</b>	<b>543,549</b>	<b>508,358</b>	<b>35,191</b>

(—) Denotes loss.

The services earned a substantial surplus over expenses in the whole Commonwealth, as well as in New South Wales, during each of the four years ended June, 1924. In the succeeding years the net earnings were not sufficient to pay interest on the capital cost. The earnings were affected by reductions made in postal charges in October, 1923, and expenditure increased owing to expansion of business, higher wages, and additional costs of maintenance.

A comparative statement of the financial results for the whole Commonwealth is shown in the following statement:—

Year. ended 30th June.	Earnings.	Working Expenses.	Surplus.	Interest on Capital.	Net Profit.
	£	£	£	£	£
1921	8,511,494	6,724,543	1,786,951	643,183	1,143,768
1922	9,347,656	7,103,536	2,244,120	703,039	1,541,081
1923	9,898,158	7,651,864	2,246,294	780,235	1,466,059
1924	9,724,801	8,448,777	1,276,024	911,672	364,352
1925	10,074,854	9,230,630	844,224	1,086,546	(—)242,322
1926	10,802,917	9,829,065	973,852	1,259,189	(—)285,337
1927	11,650,265	10,411,508	1,238,757	1,410,818	(—)172,061

(—) Denotes loss.

The accounts are exclusive of the figures relating to wireless telegraphy.

## SOCIAL CONDITION.

THE social condition of the people of New South Wales, judged from the standpoint of health and living conditions, compares favourably with that of any other part of the world. The climate is salubrious with abundant sunshine, and the supply of food is sufficient for the whole community. Wages, hours of labour, and other industrial conditions are regulated with the object of preserving the health of the workers and of enabling even the lowest paid employee to maintain a family according to a fairly comfortable standard of living, and family allowances are paid for the benefit of dependent children in families with small incomes. Special provision is made to safeguard the welfare of juveniles and of women in industrial occupations.

The system of government is based on a broad franchise which embraces every adult citizen. The legal system is based on principles which give equal status to all citizens, the land laws are designed to promote a healthy growth of rural settlement, and the tariff laws aim at the extension of local industries without any encroachment upon existing standards of industrial employment. The railways, being owned by the State, are used to develop national resources, and the burden of taxation is rendered proportionate to the means of the individual taxpayer, *e.g.*, by a graduated taxation of incomes. Legal restrictions have been placed upon gambling and upon the manufacture and sale of intoxicating liquors and deleterious drugs in order to minimise the social evils attendant upon poverty and drunkenness. Education is free at both primary and secondary public schools.

The mildness of the climate enables the people to engage in outdoor recreation at all times of the year, and facilitates measures for the prevention of sickness and the encouragement of hygienic conditions of life which find their reflex in low death rates, in the decreasing incidence of preventable diseases, and in the absence of certain endemic diseases, such as typhus, which are a constant menace to health in some other countries. For persons who need special treatment, on account of sickness, etc., hospitals and other institutions have been established, and pensions are paid to the aged and infirm and to widows with dependent children.

## HOSPITALS AND CHARITIES.

### PUBLIC HEALTH SERVICES.

The principal State services in relation to public health in New South Wales are organised as the Department of Public Health under the control of a Minister of the Crown. The department includes two branches, one directed by the Board of Health and the other by the Director-General of Public Health. Their functions, though distinct, are closely co-ordinated, and the Director-General, who is a medical practitioner and a permanent salaried officer of the Government, is *ex officio* President of the Board of Health. The Board consists of ten members, including five legally qualified medical practitioners, all being nominated by the Government. It is the executive and administrative authority in connection with the health laws. It acts in an advisory capacity towards the Minister for Public Health and the Government, and exercises general supervision in regard to public health matters. The Director-General of Public Health controls the State medical service and the State institutions for the treatment of the sick and infirm, and a microbiological laboratory.

Other Government departments administer measures in connection with public welfare, assistance to public hospitals, charitable relief, and the medical inspection of school children, and a special department has been organised for the care of children.

The executive personnel of the Department of Public Health includes medical officers and sanitary inspectors. The former are permanent salaried officers, appointed by the Government, who devote the whole of their time to matters relating to public health.

It was intended that all the more densely-populated districts should be placed under the supervision of medical officers, but up to the present they have been appointed only in the Metropolitan area and in the Hunter River district, which includes Newcastle. Outside these areas expert advice may be obtained from medical officers attached to the central staff of the Public Health Department, who visit localities when required. In every town a local medical practitioner is appointed as a Government medical officer for the purpose of attending to Government medical work, *e.g.*, inquests, sickness in gaols, etc.; they have no regular duties nor special legal powers, and are paid in fees for services rendered.

In the Department of Public Health there are three special divisions, *viz.*, industrial hygiene, maternal and baby welfare, and tuberculosis, each in charge of a medical officer. The medical officers act also as medical referees in regard to claims under the Workers' Compensation Act.

The most important legislative enactments relating to public health are the Public Health Act, dealing with public health and sanitation; Acts relating to dairies supervision, noxious trades, diseased animals and meat, pure food, and to private hospitals; and provisions of the Local Government Act which specify the powers and duties of the municipal and shire councils for safeguarding health in the incorporated areas. The authorities are empowered to take steps to prevent the spread of infectious diseases, to regulate the erection of dwellings, and to order the demolition or improvement of insanitary buildings, to prohibit the manufacture or distribution of unwholesome or adulterated foods and drugs, (with special powers in relation to milk and meat), to regulate the conduct of noxious trades, to deal with nuisances, etc. Control of sanitation by means of by-laws and regulations is the method adopted generally, as being readily adaptable to the varying conditions of a widely-scattered community.

Executive duties in relation to public health devolve primarily upon the local authorities, who carry out the functions under supervision of the Board of Health as the central controlling authority. Within municipalities the duties are undertaken by the local councils, and outside municipal areas they are performed either by the shire councils or by persons or bodies specially appointed for the purpose.

In addition to the organisation under the control of the State Government there is a Federal Department of Public Health, which discharges important functions in regard to quarantine, industrial hygiene, etc., and conducts research relating to causes of diseases and of deaths, and to methods of prevention and cure.

A Federal Health Council was constituted in November, 1926, to advise the Commonwealth and State Governments on health questions generally and to devise measures for co-operation and for promoting uniformity in legislation and administration. The membership includes the principal health officers of each State, with the Federal Director-General of Health as chairman. A conference was held between the Council and the Statisticians of the Commonwealth and of the States in March, 1928, for the purpose of discussing methods for improving the existing systems of collecting and compiling statistics of morbidity and mortality. At its second session following the conference the Council adopted a number of resolutions regarding these matters.

*Government Expenditure on Charitable Relief.*

The expenditure by the Government of New South Wales on hospitals and charitable relief in 1926-27 amounted to £2,466,453.

The following statement shows the growth of expenditure since the year ended 30th June, 1921:—

Payments from—	1921.	1924.	1925.	1926.	1927.
Consolidated Revenue ... ..	£ 1,803,287	£ 1,916,479	£ 1,924,186	£ 2,133,740	£ 2,219,051
Public Works Account .. ..	117,185	96,168	167,383	241,521	247,492
Total ... ..	£ 1,920,472	2,012,647	2,091,569	2,375,261	2,466,453

The expenditure from Consolidated Revenue on hospitals and charities includes the cost of maintenance of the State institutions, also subsidies granted to other institutions.

The expenditure from public revenue on eleemosynary objects in New South Wales includes the expenditure from Consolidated Revenue, as stated above, the subvention to friendly societies and pensions to widows which are paid by the State Government, and the old-age and invalidity pensions and maternity allowances provided by the Commonwealth Government. The expenditure in 1926-27 amounted to £6,662,336, or £2 16s. 9d. per head. A classification of the items is shown below in comparison with the expenditure in 1911-12 and in 1921-22. Expenditure in connection with the medical inspection of school children is not included, nor expenditure from the public works and loan funds, nor costs of administration, except in regard to the Child Welfare Department, the mental hospitals, and the protection of aborigines.

Head of Expenditure.	1911-12.	1921-22.	1925-26.	1926-27.
	£	£	£	£
General Hospitals and Charitable Institutions	130,368	511,971	714,477	711,801
Mental Hospitals ... ..	212,616	537,096	604,458	639,342
Child Welfare ... ..	106,557	472,268	506,204	520,591
Government Asylums for the Infirm ...	87,708	164,679	170,582	175,809
Destitute Persons, Medical Services, Relief, Charitable Societies, etc. ...	36,905	175,266	102,744	139,966
Aborigines' Protection ... ..	16,475	22,506	25,969	27,788
Subvention to Friendly Societies ... ..	14,000	56,801	54,880	59,080
Widows' Pensions ... ..	...	...	126,555	553,706
Miscellaneous ... ..	2,401	22,117	9,906	3,754
State ... ..	607,030	1,962,704	2,315,175	2,831,837
Old-age and Invalidity Pensions ... ..	821,993	2,029,077	3,238,349	3,565,179
Maternity Allowances... ..	...	277,065	273,450	265,320
Commonwealth ... ..	821,993	2,306,142	3,511,799	3,830,499
Total ... ..	£ 1,429,023	4,268,846	5,826,974	6,662,336
Expenditure per head of Population—	£ s. d.	£ s. d.	£ s. d.	£ s. d.
State ... ..	0 7 2	0 18 5	1 0 2	1 4 1
Commonwealth ... ..	0 9 8	1 1 8	1 10 7	1 12 8
Total ... ..	£ 0 16 10	2 0 1	2 10 9	2 16 9

The expenditure in 1926-27 was more than four and a half times the amount spent in 1911-12. The cost to the State increased from 7s. 2d. per head of population to 24s. 1d., and to the Commonwealth from 9s. 8d. to 32s. 8d.

## TREATMENT OF SICKNESS.

Institutions for the treatment of sickness and disease have been established in various localities throughout the State. There are private hospitals which are owned by private persons and conducted as business enterprises; public hospitals which are maintained by the State, or by the people resident in the districts in which the hospitals are located, with the assistance of subsidy from the public funds, or by charitable organisations; special hospitals, State and private, for the treatment of mental and nervous ailments; and a State lazaret for the segregation of persons afflicted with leprosy.

The State exercises a measure of supervision over the practice of professional persons engaged in the treatment of sickness and disease, and medical practitioners, dentists, and pharmacists are required to register with a board established for each profession under statutory authority. At the end of the year 1927 there were on the registers 3,025 medical practitioners, 1,885 dentists, and 1,686 pharmacists.

Nurses also are required to register in terms of the Nurses Registration Act, 1924. Four classes of nurses may be registered, viz., general, mental, midwifery, and infants. In the case of midwifery nurses, registration must be renewed annually. The Registration Board may suspend nurses temporarily from practice in order to prevent the spread of infection and may pay compensation to midwifery nurses suspended for that reason. The number of nurses on the registers at 31st December, 1927, was as follows:—general 4,106, midwifery 2,838, mental 708, infants 42, but many are registered under more than one classification.

Special efforts are made to provide for the treatment of sickness and accident in sparsely populated districts. The Government subsidises medical practitioners with a view to encouraging them to practise in outlying bush settlements. Usually the subsidy is the amount necessary to bring their earnings to a certain sum. The Bush Nursing Association appoints nurses in country localities. The nurse in each district works under the supervision of a local committee, who pay expenses and fix charges for her services, etc., persons in necessitous circumstances being exempt from the payment of fees.

*Private Hospitals.*

A private hospital may not be conducted except under license in accordance with the Private Hospitals Act of 1908, as amended by the Nurses Registration Act, 1924. The legislation applies to all establishments in which a charge is made for treatment, except those maintained or subsidised by the State or licensed under the Lunacy Act or the Inebriates Act. The licenses are issued annually by the Minister for Public Health on the recommendation of the Board of Health, and it is prescribed that every private hospital must be under the direct control of a person approved by the Board. Licensees are required to comply with regulations as to structure, management, and inspection.

At 31st December, 1926, the private hospitals numbered 637, viz., 263 in the metropolitan district and 374 in the country. The classification of the hospitals and their accommodation, according to the nature of the cases received, are shown in the following statement:—

District.	Private Hospitals.				Number of Beds.			
	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Total.	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Total.
Sydney ... ..	No. 79	No. 28	No. 158	No. 263	No. 1,669	No. 443	No. 676	No. 2,788
Country ... ..	147	17	210	374	1,353	224	800	2,377
Total ... ..	226	43	368	637	3,022	667	1,476	5,165

There has been an increase of 194 in the number of private hospitals since 1911, when there were 114 in Sydney and 329 in the country. In 501 hospitals the accommodation at the end of 1926 did not exceed 10 beds, 91 had from 11 to 20 beds, and 45 hospitals had over 20 beds.

#### Public Hospitals.

Institutions for the care of the sick are classed as public hospitals, unless they are owned and maintained entirely by private persons. Some are maintained wholly by the State, those in the metropolitan district being the Coast Hospital for medical, surgical and infectious cases, the Lady Edeline Hospital for babies, two convalescent hospitals, and a number of institutions for maternity cases. There are two State institutions in the country, viz., the Waterfall Hospital for Consumptives and the David Berry Hospital at Berry for general treatment.

The Public Hospitals Act of 1898 and an amending Act passed in 1900 may be applied by proclamation to any hospital maintained partly by private contributions and partly by grants from the public funds. The Acts define the procedure for the election of officers for the management of the institution, and prescribe that a committee of management, trustees, auditors and other officers for each hospital must be elected annually by the contributors who have paid at least 10s. to the hospital during the preceding twelve months, or who have contributed £10 in one sum. The committee appoints the treasurer, secretary, medical officers and staff, and makes rules for the management and control of the hospital.

Some of the public hospitals are under the aegis of religious denominations, and are conducted by religious communities who own the establishments or by committees nominated by subscribers. They are open to persons of all creeds, and the majority of them receive a small subsidy from the State.

The figures shown in the following tables relating to public hospitals do not include particulars relating to institutions used exclusively for soldiers and sailors, nor of the following State institutions, viz., the convalescent hospitals (two in number), maternity hospitals and rest homes, the leper lazaret, and the three asylum hospitals. Excluding those institutions there were 161 public hospitals in New South Wales at the end of 1926, viz., 27 in the metropolitan district, with 4,515 beds, and 134 in the country with 4,959 beds. The hospitals in the metropolitan district included 14 general hospitals, with 3,184 beds; 3 hospitals for children, 464 beds; 5 for women, 609 beds; 3 for incurable cases, 185 beds; one institution for convalescents, 76 beds; and a dental hospital. All the hospitals in the country provided general treatment, except four for consumptives, 572 beds, and one for convalescents, 110 beds.

The extent to which the hospital services have increased since 1901 is shown below:—

Year.	Public Hospitals.			Beds.		
	Metropolitan.	Country.	Total.	Metropolitan.	Country.	Total.
1901	15	103	118	1,453	1,938	3,391
1911	21	120	141	2,113	2,976	5,089
1921	26	128	154	3,841	4,234	8,075
1922	26	132	158	3,975	4,395	8,370
1923	26	132	158	4,241	4,506	8,747
1924	26	132	158	4,399	4,617	9,016
1925	26	133	159	4,451	4,778	9,229
1926	27	134	161	4,515	4,959	9,474



The figures show a remarkable expansion in regard to hospital accommodation, the tendency being to enlarge existing institutions rather than to establish new hospitals. The average number of beds per hospital in 1926 was 59, as compared with 29 in 1901. The accommodation as stated includes beds in the open air, which numbered 1,229 in 1926.

The medical staffs of the public hospitals consist for the most part of practitioners who give their services free of charge, the proportion of honorary medical officers being greater in the metropolitan district than in the country. The following statement shows particulars of the medical and nursing staffs attached to the public hospitals during 1926:—

Hospitals.	Medical Staff.		Nursing Staff.		
	Honorary.	Salaried.	Nurses.	Wardsmen & Wardmaids.	Total.
Metropolitan ...	554	153	1,657	93	1,750
Country... ..	373	136	1,359	120	1,479
<b>Total</b> ...	<b>927</b>	<b>289</b>	<b>3,016</b>	<b>213</b>	<b>3,229</b>

The number of indoor patients treated, as shown below, represents the aggregate of the number of cases treated at each hospital, those admitted more than once during a year being counted each time admitted. The figures include transfers, of which particulars are not available, but the patients treated in the convalescent hospitals are excluded, as the majority of such cases are known to have been transferred from other hospitals. The figures relating to outdoor patients are exclusive of those treated at the dental hospital, who numbered 14,000 in 1926.

Year.	Indoor Patients.					Outdoor Patients treated during the Year.
	Treated during the Year.	Died.	Remain- ing at end of Year.	Average per day.		
				Number.	Per 1,000 of mean popula- tion.	
1901	32,012	2,477	2,247	2,045	1.50	80,259
1911	56,564	3,550	3,409	3,302	1.98	116,346
1921	97,034	5,493	4,859	5,763	2.73	250,035
1922	97,059	5,502	5,145	5,779	2.69	274,177
1923	106,143	6,178	5,345	6,045	2.76	270,771
1924	113,178	5,923	5,212	6,291	2.82	303,566
1925	117,347	5,919	5,528	6,456	2.82	352,333
1926	131,003	6,559	5,892	6,862	2.96	399,663

There has been a rapid increase in the number of cases treated in the public hospitals, and the average daily number of patients per 1,000 of the population has risen by nearly 50 per cent. since 1911.

Of the indoor patients in 1926, the metropolitan hospitals provided treatment for 68,854, and 62,149 were accommodated in the country institutions, the corresponding figures in 1911 being 29,610 and 26,954.

The number of outdoor patients, as stated, represents the aggregate of the number of distinct persons who received outdoor relief at each hospital where records are kept. The number is incomplete as records of this form of relief are not kept at many hospitals, especially in country districts. The bulk of the cases are treated at five metropolitan hospitals in or close to the city, where the numbers were recorded in 1926 were as follows:—Sydney Hospital, 73,339; St. Vincent's, 69,643; Royal Prince Alfred, 52,764; Royal Alexandra for Children, 31,999; Lewisham, 32,855. The total number of outdoor patients recorded in the metropolitan district was 339,534, and in the country 60,129, including 20,558 at the Newcastle Hospital.

The following statement shows the receipts and expenditure (including loans) of the public hospitals during the year 1926. The figures include particulars of the State hospitals, except those connected with the asylums for the infirm, which were excluded because it is not practicable to separate the expenditure incurred in the treatment of sickness from the expenses in respect of the ordinary functions of the asylums.

The receipts and expenditure of the Thomas Walker Convalescent Hospital, which is privately endowed, are excluded also.

Items.	Amount.			Per cent. of Total.		
	Metropolitan.	Country.	Total.	Metropolitan.	Country.	Total.
Receipts (including loans)—						
State Aid ... ..	£ 445,526	£ 305,971	£ 751,497	46·4	45·8	46·2
Subscriptions, Donations, and Entertainments ...	320,134	238,138	568,272	34·4	35·7	34·9
Contributions by Patients	113,177	98,765	211,942	11·8	14·8	13·0
Miscellaneous ... ..	70,733	24,746	95,479	7·4	3·7	5·9
Total Receipts	£ 959,570	667,620	1,627,190	100	100	100
Expenditure—						
Buildings and Repairs ...	176,795	136,655	313,450	21·3	20·1	20·8
Salaries and Wages ...	314,586	240,050	554,636	37·8	35·4	36·7
Provisions, Stores, and Out- patients ... ..	268,613	256,142	524,755	32·3	37·7	34·7
Miscellaneous ... ..	71,396	45,992	117,388	8·6	6·8	7·8
Total Expenditure	£ 831,390	678,839	1,510,229	100	100	100

According to the hospital accounts the State aid received by the metropolitan institutions in 1926 amounted to £445,526, or 46·4 per cent. of the total receipts. Of this sum £94,242 represented the expenditure in connection with the Coast Hospital and the Lady Edeline Hospital; the Sydney Hospital received £99,225; the Royal Prince Alfred £72,550; the Royal Alexandra Hospital for Children £42,750; the Royal North Shore £38,274; the Women's Hospital £18,979; the St. George District Hospital £13,352;

Balmain and District Hospital £14,291; Western Suburbs £9,613; and Marrickville £9,415. The Benevolent Society of New South Wales received State aid for two institutions, viz., Royal Hospital for Women £11,178 and the Renwick Hospital for Infants £6,873; an aggregate amount of £3,110 was distributed amongst five hospitals conducted under the auspices of religious organisations. The balance, £11,674, was distributed amongst five institutions, and four hospitals (including the Thomas Walker Convalescent Hospital) were not subsidised.

In the country districts State aid represented 45.8 of the receipts. The amount included £41,512 for the upkeep of the Waterfall Hospital for Consumptives and the David Berry Hospital. The hospitals at Newcastle and Broken Hill received £50,077 and £24,171 respectively, £190,211 were granted to 127 institutions, and two hospitals did not receive any aid from the State during the year. The foregoing particulars are exclusive of details regarding one hospital for which a return was not supplied.

Subscriptions, donations, bequests, and the proceeds of benefit entertainments, etc., yielded 34.9 per cent. of the hospital revenue, and contributions by patients represented 13 per cent.

The growth of hospital receipts and expenditure since 1901 is illustrated in the following statement:—

Year.	Receipts.					Expenditure.				
	State aid.	Subscriptions and Donations.	Contributions by Patients.	Other.	Total.	Buildings and Repairs.	Salaries and Wages, Provisions, Stores, etc.	Other.	Total.	
	£	£	£	£	£	£	£	£	£	
1901	91,363	50,939	23,693	16,727	182,727	17,354	141,399	17,365	176,118	
1911	159,147	131,244	50,099	22,867	363,357	50,902	263,037	34,877	348,816	
1921	507,268	344,253	148,755	62,368	1,062,645	160,499	818,715	80,067	1,059,281	
1922	495,740	373,584	150,265	62,039	1,081,619	155,120	819,074	83,668	1,057,862	
1923	503,797	430,790	159,297	69,015	1,165,899	218,025	869,409	89,939	1,177,373	
1924	616,023	417,339	167,419	82,167	1,282,948	242,077	933,097	91,126	1,266,300	
1925	614,459	510,546	184,961	94,453	1,404,419	255,669	1,013,359	98,064	1,367,092	
1926	751,497	568,272	211,942	95,479	1,627,190	313,450	1,079,391	117,388	1,510,229	

PER HEAD OF POPULATION.										
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1901	1	4	0	9	0	4	0	3	2	8
1911	1	11	1	7	0	7	0	3	4	4
1921	4	10	3	3	1	5	0	7	10	1
1922	4	7	3	6	1	5	0	7	10	1
1923	4	8	3	11	1	5	0	8	10	8
1924	5	6	3	9	1	6	0	9	11	6
1925	5	5	4	6	1	7	0	10	12	4
1926	6	5	4	11	1	10	0	10	14	0

The average amount of hospital receipts per head of population has risen more than threefold since 1911, the amount in 1926 being 14s. per head, of which State aid represented 6s. 5d. Contributions by patients showed an average of 1s. 10d. per head of population, but fees paid while in hospital do not constitute the total amount of their payments, as many of them contribute at other times in the form of subscriptions, donations, etc.

The average annual cost of maintenance per patient in hospitals, calculated on the average daily number of patients during 1926, was £165, exclusive of the cost of buildings and repairs. The cost of outdoor treatment and district nursing also is excluded where the information is available, but the amount is not recorded separately in the accounts of many hospitals, including several where large numbers of outdoor patients are treated, e.g., Sydney and St. Vincent's.

The following statement shows the annual cost in various groups of hospitals classified according to the number of patients:—

Average daily Number Resident.	1925.		1926.				
	Number of Hospitals.	Average Cost per Occupied Bed.	Number of Hospitals.	Average cost per occupied bed.			
				Wages.	Provisions, Stores, etc.	Miscellaneous.	Total.
		£		£	£	£	£
3 to 5 ... ..	12	266-57	14	170-87	109-66	30-68	311-21
5 ,, 10 ... ..	31	240-49	21	129-97	96-88	25-84	252-69
10 ,, 15 ... ..	18	179-86	29	90-28	89-64	17-92	197-84
15 ,, 20 ... ..	21	169-95	16	81-98	74-87	13-87	170-72
20 ,, 25 ... ..	5	137-23	10	62-08	74-03	14-19	150-30
25 ,, 30 ... ..	9	133-69	8	57-52	61-88	9-52	128-92
30 ,, 35 ... ..	5	116-73	5	49-58	69-91	9-97	129-46
35 ,, 40 ... ..	5	124-74	3	31-03	58-22	5-78	95-03
40 ,, 100 ... ..	25	136-98	32	60-02	65-70	14-71	140-46
Over 100 ... ..	15	165-56	13	90-93	68-50	14-66	174-09
Total* ... ..	146	160-10	151	80-18	70-02	14-81	165-01

\* Excluding hospitals where daily average was less than three patients, and those for which data were not supplied.

The average cost per occupied bed decreased as the number of patients increased up to 40, where the average was £95 per annum. Apparently it was higher in the larger institutions situated in the metropolitan area or in important centres of population where expensive equipment has been installed, and many accident cases are treated daily.

On account of increased prices, wages, etc., during recent years, difficulty has been experienced in respect of many hospitals in meeting obligations and in providing accommodation for all persons seeking admission.

During the year 1926 the debit balance of the current accounts of the metropolitan hospitals decreased by £49,403, and the invested funds increased by £78,777. In regard to the country hospitals, the current accounts showed a credit balance, though it decreased by £10,688 during the year. The invested funds also showed a slight decrease.

Hospitals.	Current Account.		Invested Funds.	
	At 1st Jan., 1926.	At 31st Dec., 1926.	At 1st Jan., 1926.	At 31st Dec., 1926.
	£	£	£	£
Metropolitan ...	(-) 352,838	(-) 303,435	299,987	378,764
Country ...	38,701	23,013	223,300	222,769
Total ...	(-) 314,137	(-) 275,422	523,287	601,533

(-) Indicates debit balances.

#### TREATMENT OF COMMUNICABLE DISEASES.

Within the State, the Board of Health is vested with authority to make provision for the treatment and prevention of infectious diseases. The Federal Government is responsible for the administration of the quarantine laws in respect of vessels, persons, and goods arriving from overseas ports.

Cases of such diseases as leprosy, bubonic plague, smallpox, scarlet fever, typhoid fever, diphtheria, infantile paralysis, cerebro-spinal meningitis, and, since 1st April, 1926, encephalitis lethargica, must be notified to the Board of Health. Typhus, yellow fever, and cholera were proclaimed as

notifiable diseases on 12th August, 1927. Cases of bubonic plague are rare, no case has occurred since 1923. Cases of pulmonary tuberculosis must be notified in certain areas, as proclaimed.

Where necessary, provision is made for the isolation of infectious cases. In the metropolis the majority are treated at the Quarantine Station, or at the Coast Hospital. Country cases are accommodated in special wards of the local hospitals.

The following table shows the notifications of the various diseases in 1921 and in each of the last four years. Particulars relating to the deaths and death rates are shown in the chapter relating to Vital Statistics:—

Disease.	1921.	1924.	1925.	1926.	1927.			Total.
					Metro- politian. District.	Hunter River District.	Other Districts.	
Typhoid Fever ...	949	768	533	698	179	47	234	460
Scarlet Fever ...	1,060	3,421	3,043	4,755	5,793	305	2,271	8,369
Diphtheria ...	6,854	4,364	3,004	3,579	2,079	546	1,434	4,059
Infantile Paralysis ...	184	108	57	81	13	2	10	25
Cerebro-Spinal Meningitis ...	30	29	37	32	12	8	5	25
Encephalitis lethargica	†	†	†	...	2	...	1	3
Pulmonary Tuberculosis ...	1,240	1,096	1,195	1,265	988	58	112	1,158
Leprosy ...	2	2	7*	1	3	...	1	4
Bubonic Plague ...	2	...	...	...	...	...	...	...

\*Includes one case from Queensland.

†Notifiable since 1st April, 1926.

#### Leprosy.

Persons suffering from leprosy are segregated in the Leper Lazaret, which was opened for the admission of patients in 1883, though statutory provision for the compulsory notification of the disease and detention of lepers was not made until 1890. In 1926 one new case was admitted, one patient died and two were discharged, and in 1927 four persons were admitted and two died. There were 17 inmates in the lazaret on 31st December, 1927, viz., 14 males and 3 females. Their birthplaces were New South Wales 7, Queensland 1, England 1, Ireland 1, Sweden 1, Greece 1. Two were born in China, 2 in the Pacific Islands, and 1 was an Australian aboriginal. The cost of management in 1926 was £3,369, or an average of £204 3s. 2d. per inmate.

#### Tuberculosis.

A remarkable reduction in the mortality from tuberculosis from 15 to 4 per 10,000 of population has been effected since the enactment of the Dairies Supervision Act of 1886, the Pure Food Act of 1908, and other legislation for the protection of the food supply from insanitary conditions, but the fact, as shown in the chapter Vital Statistics, that tuberculosis causes over 5 per cent. of the deaths in New South Wales demonstrates the necessity for further drastic measures to prevent the spread of the disease.

Pulmonary tuberculosis was proclaimed as notifiable in the Metropolitan and Newcastle districts in 1915, and in the Blue Mountains tourist district in 1916. The Board of Health may prohibit affected persons from working in connection with the preparation or packing of food. Arrangements have been made for the organisation of a special division of the Department of Public Health for the cure and prevention of tuberculosis.

For the treatment of cases of tuberculosis there are four special institutions which are classified as public hospitals, viz., the State Hospital at Waterfall, the Queen Victoria Homes for Consumptives at Wentworth Falls and Thirlmere, and the R. T. Hall Sanatorium at Hazelbrook.

Tuberculous cases are received also at the Sacred Heart Hospice for the Dying, Sydney, and at private hospitals. At the hospitals attached to the State asylums at Rookwood and Newington, accommodation is reserved for a limited number of tuberculous patients, and arrangements have been made with the Government of South Australia to provide sanatorium treatment in that State for patients from Broken Hill.

The Waterfall Hospital is the largest institution for the treatment of persons suffering from pulmonary tuberculosis. It contains 417 beds, and 631 males and 335 females were treated during 1926. The expenditure was £40,562; the average cost of treatment, excluding buildings, repairs, etc., was £97 9s. 6d. per occupied bed.

The dispensary system for the treatment of tuberculosis was inaugurated in Sydney in 1912 by the National Association for the Prevention and Cure of Consumption, when a dispensary was opened in the city. Throat and chest dispensaries have been established also in connection with three Metropolitan hospitals, and at Newcastle. Medical advice is given to patients, and nurses are employed to visit their homes and instruct the inmates in precautionary measures to prevent the spread of the disease.

#### *Venereal Diseases.*

The treatment of venereal diseases is regulated under the Venereal Diseases Act, 1918, which came into operation on 1st December, 1920. It prescribes that all persons suffering from such diseases must place themselves under treatment by a qualified medical practitioner, and must remain under treatment until cured. Medical practitioners are required to notify all cases to the commissioner appointed under the Act. Treatment by unqualified persons is prohibited, also the sale of certain drugs used in connection with these diseases, except when prescribed by a qualified medical practitioner.

Clinics have been established at seven metropolitan public hospitals, and free treatment is provided at subsidised hospitals, drugs and instruments being supplied by the Government. Special wards for these cases have been opened at the Coast Hospital and at the Newington and Liverpool State Hospitals, and an isolation block is under construction at the Royal Prince Alfred Hospital.

The notifications during the year 1926 numbered 6001, of which 5,614 cases were notified in the metropolitan area, and 57 in the Newcastle district. Public hospitals and clinics notified 3,402 cases, and 2,599 notifications were made by private medical practitioners. It is not considered, however, that notification is fully effective.

Prisoners suffering from venereal diseases are detained for treatment in lock hospitals attached to the gaols, in terms of the Prisoners Detention Acts, 1908 and 1918. Such prisoners may be detained even after the definite sentence is served, until certified by the medical officer as free from disease. During the year ended 30th June, 1927, ninety-seven cases of venereal diseases were treated in the gaols, and orders for detention in the lock hospitals were obtained in the cases of 60 men and 3 women. Prisoners were detained for curative treatment during the year for periods ranging up to five months after the expiration of their sentence.

#### TREATMENT OF MENTAL DISEASES.

The law relating to persons suffering from mental diseases is contained in the Lunacy Act of 1898. Its provisions apply mainly to those who may be certified as insane and incapable of managing their affairs. Such persons may be admitted to an institution, if certified by two qualified medical practitioners, either at the request of relatives or friends, or upon

the order of two Justices of the Peace. But relatives have the right of custody of insane persons brought before the Justices if they can give a satisfactory assurance that proper care will be taken of them. Persons found to be insane by proceedings before the Supreme Court in its lunacy jurisdiction may be admitted to mental hospitals upon the order of the Judge. The influx of insane persons to New South Wales is restricted under the Lunacy Act, which renders the owner, charterer, agent, or master of a vessel liable for the maintenance of any such person landed in the State.

The estates of persons proved to be incapable, through mental infirmity, of managing their affairs, are placed under the management and care of the Master in Lunacy.

Special courses of training in the treatment of mental and nervous diseases are provided for medical students at the Sydney University, where a chair of psychiatry was established in 1922.

#### *Mental Hospitals.*

The Government has set apart a number of institutions for the reception and treatment of insane persons, and private institutions may be licensed for the purpose. Licenses may be granted also for the reception of a single patient, but unauthorised persons are not permitted to take charge for profit of a person of unsound mind. All institutions for mental cases, including reception houses, etc., for their temporary accommodation, are subject to inspection by the Inspector-General of Mental Hospitals. With his consent, harmless patients may be boarded out or released on leave, or they may be discharged to relatives or friends who undertake to care for them.

There are ten Government mental hospitals, in addition to a hospital for criminal insane, and three private institutions licensed to receive mental patients. Under an arrangement with the Government of South Australia, patients from Broken Hill are accommodated in a hospital in that State, the cost of their maintenance being paid by the Government of New South Wales.

At 30th June, 1927, there were in the mental hospitals and licensed houses in New South Wales 8,124 patients—4,542 males and 3,582 females; in the South Australian hospitals there were 24 men and 16 women from this State; 188 men and 258 women were on leave from the institutions; so that the total number of persons under cognisance as being of unsound mind was 8,610, consisting of 4,754 males and 3,856 females. These figures are exclusive of voluntary patients. The number at intervals since 1901 is shown below:—

At 30th June.	Number of Mental Patients.			Proportion per 1,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1901*	2,684	1,804	4,488	3·72	2·75	3·26
1911*	3,810	2,573	6,383	4·27	3·18	3·75
1921	4,510	3,432	7,942	4·21	3·33	3·78
1922	4,497	3,500	7,997	4·11	3·32	3·72
1923	4,456	3,569	8,025	3·99	3·32	3·66
1924	4,496	3,649	8,145	3·96	3·34	3·66
1925	4,553	3,712	8,265	3·93	3·33	3·64
1926	4,634	3,802	8,436	3·92	3·34	3·64
1927	4,754	3,856	8,610	3·93	3·32	3·63

\* At 31st December.

The proportion of the population who were under official cognisance as mental patients has declined slightly since 1921. In order to ascertain the general rate of insanity amongst the population, it would be necessary to take into consideration the patients treated in their homes, and those suffering from mental disorders in a form which does not warrant certification as insane nor compulsory detention in a mental hospital.

The law does not make provision for the treatment of persons in the early stages of mental derangement, when specialised care is most likely to be beneficial. Steps towards meeting the needs of such persons were initiated recently by the establishment of a psychiatric clinic, where voluntary patients suffering from the milder forms of mental and nervous disorders are received upon their own request. Outdoor treatment is provided also. During the year 1926-27 the number of resident patients under treatment at the clinic was 488, and there were 131 in the institution at 30th June, 1927. At the other State mental hospitals voluntary patients are treated and the total number resident at 30th June, 1927, including those at the psychiatric clinic, was 295, viz., 156 males and 139 females. Psychiatric clinics have been established also within the wards of three general hospitals in the metropolitan district and in four country towns.

Reception houses have been established in Sydney, Newcastle, Kenmore (Goulburn), and Orange, where persons showing symptoms of mental diseases are placed under observation and cases of short duration are treated. The number under observation and care during 1926-27 was 1,951, and 1,123 were transferred to mental hospitals. At the State Penitentiary at Long Bay 82 persons were under observation during the year, and 14 were sent to mental institutions.

The number of admissions and readmissions to mental hospitals in various years since 1901 are shown below:—

Year ended 30th June.	Admissions.			Re-admissions.		
	Males.	Females.	Total.	Males.	Females.	Total.
1901*	387	309	696	77	75	152
1911*	674	387	1,061	113	73	186
1921	711	622	1,333	115	106	221
1922	684	552	1,236	135	106	241
1923	563	457	1,020	104	118	222
1924	679	508	1,187	95	114	209
1925	673	571	1,244	102	82	184
1926	709	612	1,321	130	87	217
1927	807	620	1,427	87	56	143

\* Calendar Year.

Of the admissions and re-admissions in 1926-27, natives of New South Wales numbered 930, England 245, Ireland 70, Scotland 58, other British countries 205, foreign countries, 57, and in 5 cases the nationality was unknown.

During 1926-27 the number of patients who died in mental hospitals was 612, or 7.6 per cent. of the average number resident; 607 persons, or 7.5 per cent., were discharged as recovered; 155, or 1.9 per cent., as relieved, and 2 were discharged without showing any improvement.



The records of persons admitted during 1926-27 show that, among the exciting causes of insanity, mental anxiety, intemperance in drink, and venereal diseases were the most prominent. Among predisposing causes the most important were hereditary influence, old age, and congenital defects.

The average weekly cost of maintaining mental patients in Government institutions during the year 1926-27 was 28s. 1d. per patient, of which the State paid 23s. 11d., the balance being derived from private contributions. The following table shows the average weekly cost per patient during the last seven years:—

Year ended 30th June.	Annual Cost of Maintenance of Patients.	Cost of Maintenance per Patient per week.		
		To State.	Private Contributions.	Total.
	£	s. d.	s. d.	s. d.
1921	512,797	23 10	3 3	27 1
1922	497,711	21 7	4 1	25 8
1923	476,181	20 9	3 8	24 5
1924	518,727	22 8	3 8	26 4
1925	506,891	21 1	3 11	25 0
1926	562,281	22 11	4 0	26 11
1927	599,657	23 11	4 2	28 1

Variations in the cost of maintenance are due mainly to changes in rates of wages and in the prices of provisions. The cost of voluntary patients is included. During the year ended June, 1927, salaries and fees amounted to £379,451, the cost of provisions, stores, etc., was £184,016; fuel, light, and water, £25,893 and miscellaneous items, £10,297. These amounts are exclusive of the value of the farm products grown and consumed at the institutions, viz., £21,830.

#### DEAF-MUTISM AND BLINDNESS.

The number of persons who were deaf and dumb, as ascertained at the census of 1921, was 761, equivalent to one person to every 2,762 of the population, and the number of persons afflicted with blindness was 1,057 or one person in every 1,989.

A classification of deaf mutes and blind persons, according to ages, is shown below:—

Age Group.	Deaf Mutes.			Blind Persons.			Proportion per 1,000 of Population.	
	Males.	Females.	Total.	Males.	Females.	Total.	Deaf Mutes.	Blind.
Years.								
4 and under	89	86	175	39	26	65	·26	·10
15-39	205	158	363	137	73	210	·42	·24
40-64	81	92	173	220	132	352	·37	·76
65 and over...	21	29	50	234	196	430	·55	4·76
Total ...	396	365	761*	630	427	1,057*	·36	·50

\* Includes 1 male and 2 female blind deaf mutes.

The care and education of the deaf and dumb and the blind are undertaken at several institutions. The New South Wales Institution for the Deaf and Dumb and the Blind is maintained partly by Government

subsidy and partly by public subscriptions. Special educational courses are provided, the fees being remitted in cases of financial inability. The Sydney Industrial Blind Institute undertakes the care of the adult blind, and provides industrial training to enable them to earn a livelihood. Homes for the blind are conducted in connection with this institution, and a free circulating library of embossed books is provided. Institutions for the instruction of deaf mutes are conducted by Roman Catholic religious societies at Waratah for girls, and at Castle Hill for boys.

Under the Commonwealth invalid pension system provision is made for the payment of pensions to permanently blind persons above the age of 16 years.

#### WELFARE OF CHILDREN.

The Child Welfare Act of 1923 amended and consolidated the principal laws relating to the welfare of children in New South Wales, viz., the State Children Relief Act, 1901, the Children's Protection Act, 1902, the Infant Protection Act, 1904, and the Neglected Children and Juvenile Offenders Act, 1905.

The provisions of the Act which relate to neglected or uncontrollable children, juvenile offenders, and children in institutions, apply to boys and girls under 18 years of age, and the other sections to children under 16 years. The Act authorises State relief in regard to neglected and destitute children, and it contains provisions for regulating the adoption of children and their maintenance in foster homes and in institutions, for protecting them from ill-treatment and neglect, for preventing their employment in dangerous occupations, and for regulating their employment in public performances and in street trading. Special Courts, called Children's Courts, are maintained to deal with cases relating to children, and to adjudicate in regard to affiliation proceedings.

Orders of a magistrate to compel parents to meet the obligation of maintaining their legitimate children are made in terms of the Deserted Wives and Children's Acts of 1901 and 1913.

The Notification of Births Act of 1915 requires that in proclaimed districts the health authorities must be notified within thirty-six hours of the birth of a child. In this manner cases in which advice or assistance is needed are brought under cognisance. A Federal law, passed in 1912, authorises the payment of an allowance of £5 to mothers, to assist in defraying the expenses incidental to childbirth.

The Juvenile Smoking Suppression Act and the Liquor Act prohibit the use of tobacco by juveniles and the supply of intoxicating liquor to them, and the Public Instruction Act requires children between the ages of 7 and 14 years to attend school regularly. The employment of children in factories and industrial apprenticeship are subject to laws which are discussed in the chapters relating to Factories and to Employment.

#### *Maternity Allowances.*

The Maternity Allowances Act of the Commonwealth, which came into operation on 10th October, 1912, provides for the payment to mothers of a sum of £5 in respect of each birth occurring in Australia. Payments are made in respect of still-born children if viable, but one allowance only is payable in the case of plural births. The allowances may be paid only to women who are inhabitants of, or who intend to settle in the Commonwealth, and they are not payable to Asiatics or to aboriginal natives of Australia or of the Pacific Islands.

The following statement shows the number of claims passed for payment in New South Wales in each year of the last seven years, in comparison with the number of confinements:—

Year.	Confinements. (excluding Still- births).	Maternity Allowances.	
		Claims passed for payment.	Amount.
			£
1921 ... ..	54,047	54,390	271,950
1922 ... ..	54,641	55,900	279,500
1923 ... ..	53,602	54,600	273,000
1924 ... ..	53,125	54,130	270,650
1925 ... ..	54,065	55,100	275,500
1926 ... ..	52,573	53,420	267,100
1927 ... ..	53,268	53,790	268,950

In each of the last twelve years the number of claims passed for payment exceeded the number of confinements. This is due mainly to the fact that still-births are not included in the number of confinements, though maternity allowances are paid in respect of the births of viable children.

The maternity allowances paid in New South Wales up to the end of the year 1927 amounted, in the aggregate, to £4,011,740.

#### *Baby Health Centres and Day Nurseries.*

With the object of reducing the wastage of child life due to preventable causes the Government has established baby health centres in various parts of the city and suburbs, and in country towns.

A staff of nurses and an honorary medical officer are attached to each centre. The nurses instruct the mothers in hygiene at the centres and in their homes, and make arrangements for medical or dental treatment of mothers and children when necessary.

In December, 1927, there were 65 centres, viz., 37 in the metropolitan area and 28 in the country. During the year 1927 the attendances numbered 260,000, and the nurses made 84,500 visits to cases within the area served by the centres. The corresponding figures for the previous year were 210,244 attendances and 87,179 visits.

The Royal Society for the Welfare of Mothers and Children, incorporated in 1919, was established with the object of co-ordinating measures for the welfare of mothers and children. The society maintains two welfare centres in the city and conducts two training schools, where nurses may receive post-graduate training in infant hygiene and mothercraft. Associations of medical practitioners and of nurses, charitable organisations, and institutions for children are affiliated with the Society.

Five day nurseries have been established in the metropolis by the Sydney Day Nursery Association. Mothers who work outside their homes may leave their children at the nurseries during the daytime for the sum of 6d. per day. Food, clothing, and medical advice are provided, also kindergarten tuition. The average attendance is over 100 per day.

In the outlying country districts nurses engaged by the Bush Nursing Association afford assistance to mothers and advise them as to the feeding and treatment of children.

*Adoption of Children.*

The Child Welfare Act of 1923, as amended in 1924, makes legal provision for the permanent adoption of children upon order of the Supreme Court in its equitable jurisdiction. Application to the Court may be made by adopting parents or by the Minister of Public Instruction on their behalf. If over 12 years of age, the child's consent to adoption is necessary, unless the Court dispenses with it owing to special circumstances.

An order of adoption terminates all rights and liabilities between the child and his natural parents, except the right to inherit property by reason of kinship. An adopted child takes the surname of his adopting parent in substitution for his own surname, and orders of adoption are registered by the Registrar-General. Application for orders of adoption may be heard in open court, or in public or in private chambers.

Up to the end of the year 1927 over 800 children had been adopted in accordance with the provisions of the Act, and a large number of adoptions had been arranged pending action by the Court.

*Deserted Children.*

In cases of desertion of wife or of legitimate children, the husband or father may be ordered, in terms of the Deserted Wives and Children Acts, to pay weekly or monthly contributions for their support. Cases in relation to illegitimate children are dealt with under the Child Welfare Act. The father may be ordered to pay the expenses incidental to birth and to make periodical payments for maintenance. In certain cases the mother also may be required to contribute. For disobedience of or non-compliance with orders under these Acts offenders may be fined, or they may be committed to prison, and from the value of their work while in prison the cost of their upkeep may be deducted and the balance applied to the satisfaction of the orders.

Legislation has been enacted to provide for reciprocity in respect of orders for maintenance between New South Wales and other parts of the British Empire.

The following statement shows the number of cases in respect of wife and child desertion dealt with in the Courts of Petty Sessions and the Children's Courts during the year 1927:—

Cases.	Applications for Orders.			Non-compliance with Orders.		
	Order made.	Order refused.	Case withdrawn.	Order obeyed subsequently.	Defendant imprisoned.	Case withdrawn or dismissed.
For maintenance—Wife ...	1,218	168	1,362	1,281	885	1,343
Child. ...	449	41	434	1,622	1,056	1,220
For expenses incidental to birth of illegitimate child ...	412	45	171	31	6	2
Total ...	2,079	254	1,967	2,934	1,947	2,565

In one case in which an order was made the mother was the respondent.

*Children under State Supervision.*

The function of supervising the children under the care of the State is exercised by the Child Welfare Department under the direction of the Minister for Education.

The Government has established shelters for the reception and temporary detention of children, industrial schools, and homes for cases requiring segregation or special treatment, and the Children's Courts may order near relatives to pay the cost of maintaining children therein. Children in institutions may be apprenticed or placed out in suitable employment or may be discharged to the custody of parents or other suitable persons.

The gross amount expended by the Government during the year ended 31st December, 1927, on account of the services of the Child Welfare Department, was £526,657. Of this amount, £105,341 represented payments to guardians of children boarded out apart from their parents; and allowances to mothers towards the support of their own children amounted to £259,765. Contributions by parents and relatives and repayments of maintenance allowances amounted to £18,351.

The following statement shows the annual expenditure of the Department during the last four years:—

Year.	Payments for Children.		Institutions, Homes, Hostels, etc.	Salaries.	Miscellaneous.	Total Expenditure.	Contributions by Parents and other Revenue.	Net Expenditure.
	Boarded-out.	In their own homes.						
1924 ...	£ 96,474	£ 300,394	£ 41,524	£ 53,844	£ 17,324	£ 509,560	£ 16,359	£ 493,201
1925 ...	100,954	361,104	46,566	59,111	19,500	587,235	14,746	572,489
1926 ...	104,273	310,474	55,600	64,298	41,781	576,426	17,919	558,507
1927 ...	105,341	259,765	45,318	71,246	44,987	526,657	18,351	508,306

The total expenditure increased from £94,064 in the year ended April, 1911, to £390,652 in 1920-21 and to £587,235 in 1925. The increase was due partly to an increase in the number of children assisted, but in a greater degree to increases in the rates of payment, owing to higher cost of living. Thus, in 1911, the average rate of payment for children boarded out apart from their parents was about 5s. 3d. per week, and for children with their mothers 3s. The weekly rate for children apart from their mothers is now 15s. if under 1 year of age and 10s. at ages 1 to 14 years, and the rates for the majority of the children living with their mothers is 10s. The expenditure of the Child Welfare Department has decreased since the commencement of the Widows' Pensions Act in March, 1926.

The number of children under the supervision of the State, classified in accordance with the statutory provisions under which they were controlled, is shown in the following statement. The figures for dates prior to December, 1923, relate to the month of April following the year stated. The number in December, 1926, was 22,079.

Classification.	1911.	1921.	1923.	1924.	1925.	1926.
State wards {	4,677	5,439	5,205	5,352	5,577	5,676
Boarded out, etc. {			562	713	702	708
In shelters and industrial schools ...	4,453	11,462	12,039	13,586	16,718	10,014
Children of widows, etc. ...	263	689	688	679	577	737
In licensed institutions ...	559	290	326	449	479	505
In foster homes... ...	216	280	680	884	821	891
Employed in theatres ...	1,148	1,381	1,992	2,583	3,036	3,548
On probation from Children's Courts ...						
Total ...	11,316	19,541	21,492	24,246	27,910	22,079

These figures do not include the children who are licensed to engage in street trading under conditions which are described later.

*State Wards.*

The boarding-out system has been adopted in regard to State wards, and treatment in institutions is restricted to special cases. The children are boarded out until they are 14 years of age to approved persons, the maximum number of children under the care of one guardian being three, except in cases of families comprising a greater number, brothers and sisters being placed usually in the same home. The children are supervised by salaried inspectors, whose efforts are supplemented by honorary officers. Women inspectors visit infants placed out apart from their mothers, and all such infants in the metropolitan area must be submitted to medical examination every fortnight during the first twelve months of life.

The State wards may be apprenticed with suitable employers or they may be restored to the custody of parents or other suitable persons. The children may be supervised for two years after their period of boarding out or apprenticeship has terminated.

For apprentices, the terms of indenture prescribe a wage payment and pocket-money on a specified scale. The wages are banked to the credit of the apprentice and one-third of the accumulated amount is paid to them on completion of apprenticeship, the balance remaining at interest till age 21 is attained. The majority of the girls are apprenticed in domestic service, and the boys to farmers, orchardists, and artisans in country districts.

The children boarded out as State wards in December, 1927, consisted of 3,099 boys and 2,626 girls, and they were distributed as follows:—

Classification.	December, 1926.			December, 1927.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Boarders—Subsidised ... ..	2,320	1,930	4,250	2,371	1,999	4,370
Unsubsidised ... ..	264	292	556	281	307	588
Adopted ... ..	72	119	191	52	90	142
Apprentices ... ..	414	265	679	395	230	625
Total ... ..	3,070	2,606	5,676	3,099	2,626	5,725

These figures do not include the children in the State industrial schools at Mittagong, Gosford, and Parramatta, nor those in the metropolitan shelters.

*Relief of Children of Deserted Wives, etc.*

A most important provision of the Child Welfare Act provides for contributions towards the support in their own homes of the children of widows in necessitous circumstances or of wives deprived of their husbands' support through desertion, illness, infirmity, or imprisonment. Relief in this form may be granted also in respect of illegitimate children. In 1926 contributions were paid to 4,035 mothers for the support of 10,014 children, and in 1927 to 4,258 mothers for 10,225 children.

Since March, 1926, when the payment of widows' pensions was commenced, relief has not been payable under the Child Welfare Act in respect of children whose mothers are qualified for widows' pensions, but the Child Welfare Department assists the children of widows who are not eligible for such pensions, such as those qualified to receive invalid pensions which are provided by the Commonwealth Government.

*Children in Foster Homes.*

The law regarding the reception of children in foster homes, as amended by the Child Welfare Act, 1923, prescribes that such places must be licensed if one or more children under 7 years are received. No person,

without a written order of the Court, may receive a child under 7 years of age to be maintained apart from its mother in consideration of the payment of money. The payments must be by periodical instalments, and the instalments may not be paid for more than four weeks in advance, nor exceed the sum of 30s. per week.

The number of foster homes registered in 1926 was 424, and the number of children 962. Twenty-five of the children died during the year, 279 were discharged to their parents, and 153 were removed from State supervision for other reasons, so that 505 remained in the foster homes at the end of the year. In 1927 the foster homes numbered 457 and the children 975. There were 27 deaths, and 266 children were discharged to the care of their parents. The number of children in the homes at 31st December, 1927, was 525.

#### *Children in Charitable Institutions.*

There are a number of children in institutions conducted by religious bodies and other organisations where they have been placed by their guardians in preference to being boarded out under the State system. Some of the institutions receive children from the Children's Courts. Those in which children under the age of 7 years are received must be licensed under the Child Welfare Act. In a few cases the parents contribute towards the support of the children, but usually they are maintained by the organisations which conduct the establishments.

At the end of the year 1926 there were 3,773 children in these charitable institutions, and there were 918 in the State institutions under the direct control of the Child Welfare Department, such as homes for delicate children, industrial schools, and shelters. Particulars of the children in the various kinds of institutions are shown below:—

Institutions.	Metropolitan.		Country.		Total.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Total.
Lying-in Homes ... ..	9	9	11	17	20	26	46
Benevolent Asylums ... ..	...	...	3	...	3	...	3
Orphan Asylums ... ..	43	309	1,094	833	1,137	1,142	2,279
Neglected Children's Homes—State ...	95	128	528	167	623	295	918
Others	265	620	29	23	294	643	937
Institutes for Deaf, Dumb, and Blind	92	63	35	43	127	106	233
Infants' Homes ... ..	88	83	41	39	129	122	251
Refuges and Night Shelters ... ..	4	1	...	...	4	1	5
Other Charitable Institutions ... ..	14	5	...	...	14	5	19
<b>Total ... ..</b>	<b>610</b>	<b>1,238</b>	<b>1,741</b>	<b>1,122</b>	<b>2,351</b>	<b>2,340</b>	<b>4,691</b>

#### *Delinquent Children.*

Cases of juvenile offenders under the age of 18 years are dealt with in the Children's Courts, by magistrates with special qualifications for the treatment of delinquent children.

Leniency is an outstanding feature in the treatment of the young offenders, and a large number are released after admonition, or on probation, committal to an institution being a final resort. The children brought before the courts are classified into distinct groups, according to the special treatment they require, consideration being given to the character of the child and the circumstances surrounding the committal of the offence, the home environment, the character of the parents, and the nature of their control.

Children committed to institutions may be detained in custody until the expiration of the period specified by the Court, or until reaching the age of 18 years. They may be indentured as apprentices with suitable employers or restored to the custody of parents or guardians.

A truant school is conducted at Guildford for the detention of boys under 14 years of age who are persistent truants. The average period of detention is between two and three months. The gross enrolment during 1926 was 193, and the average daily attendance 60.

The other State institutions for the reformation and training of delinquent children include the Farm Home for Boys at Mittagong, the Gosford Farm Home for Boys, and the Girls' Industrial School at Parramatta. Under certain conditions children may be committed to approved institutions established by the religious organisations.

The Mittagong Farm Home is primarily for the reception of children who require treatment before being released on probation, and others guilty of minor delinquencies. The Gosford institution is for older boys, who need stricter discipline or who show tendencies liable to be developed into criminal habits, and for those who have failed to respond to probation or to treatment in the Mittagong Farm Home. At Gosford 278 boys were admitted during the year 1926, and 253 were discharged. The number at the end of the year was 263. The Industrial School for Girls at Parramatta is divided into two branches for the purpose of classifying the inmates, and a training home is attached. The institution receives uncontrollable girls between the ages of 13 and 18 years. During the year 1926 the number of girls admitted was 187, and 137 were discharged. The number remaining at 31st December, 1926, was 167.

#### *Mentally-deficient Children.*

Experience obtained by the medical inspection of school children indicates that about 1 per cent. require special tuition on account of mental deficiency and efforts are being made to establish a comprehensive system for their treatment. Classes for such children have been established at eight schools in the metropolitan district. The classes are limited to about 15 pupils, so that each may receive individual attention, and in some cases the children have made sufficient progress for transfer to the ordinary schools.

A residential school for subnormal children was opened in 1927 at Glenfield, where four cottages and a central administrative building were erected on a plan which will allow the construction of four additional cottages if required. In each cottage accommodation is provided for 32 children. The site occupies 110 acres in a healthy locality, 4 miles from Liverpool, and the buildings are connected with the metropolitan water supply and electricity systems.

#### *Employment of Children.*

In other chapters of this volume particulars are shown regarding the employment of children in factories and as apprentices. There are two classes of employment in which children may not be employed unless licensed under the Child Welfare Act, viz., in public theatrical performances and in street trading.

Theatre licenses may be issued in respect of children over 7 years, subject to such restrictions and conditions as the Minister may think fit. The licenses may be rescinded at any time upon sufficient cause being shown.

Street trading is defined as hawking, singing or performing for profit, or any like occupation conducted in a public place. Boys under 12 years and girls are not allowed to engage in street trading, and the boys under 16 years must be licensed, and are required to wear a metal arm-badge whilst trading.



Precautions are taken by supervisors to ensure the regular school attendance of licensees under 14 years of age. Boys between the ages of 12 and 14 may trade between the hours of 7 a.m. and 7 p.m.; and boys over 14 years of age, between 6 a.m. and 10 p.m.

Particulars relating to the licenses issued during the last five years are shown below:—

Year.	Theatre Licenses issued.	Street Trading Licenses.				Licenses Granted.
		Applications by Boys.				
		Under 14 years of age.	14 to 16 years of age.	Total.		
1922	580	1,169	721	1,890	1,836	
1923	680	1,234	490	1,724	1,724	
1924	884	1,400	564	1,964	1,964	
1925	821	1,285	616	1,901	1,901	
1926	894	1,477	678	2,155	2,155	

With few exceptions the street trading licenses are issued to newspaper vendors. The licenses are issued half-yearly, therefore the number issued each year is approximately double the number of boys licensed. The number of licenses current at the end of 1927 was 925, viz., 650 held by boys under 14 and 275 by boys over 14 years of age. The number of theatre licenses in 1927 was 612.

#### *Medical Inspection of School Children.*

A system of medical inspection of school children was organised in New South Wales in 1913. The inspections are conducted by a staff attached to the Department of Education, consisting of 19 medical officers, 19 dentists (including 8 only partly employed in school work), 8 nurses, and 15 dental assistants.

Under existing arrangements an annual visit of inspection is made to nearly every school in the metropolitan area for the examination of the children in the first-class and those whose thirteenth birthday occurs in the year. Medical supervision is maintained in regard to special cases, and an annual test is made of the vision of all the children. Outside the metropolitan area a triennial visit is paid to each school, so that every child is examined twice during the period of compulsory school attendance, *i.e.*, between the ages of 7 and 14 years.

Parents are notified of their children's defects, and are urged to have them treated. In the Metropolitan district children may be treated as outdoor patients at hospitals, or at the school dental clinics, two in number. In the country two oculists treat defects of vision, and there are eleven travelling dental clinics. One of the oculists is in charge of a travelling hospital, to which are attached two of the dental clinics.

During 1926 the number of children examined was 74,316, and 33,426 were found to have defects. The most numerous defects were in respect of teeth, 24,147 cases, nose and throat 9,737 cases, vision 4,635 cases, and hearing 1,898 cases. In addition to these children who were submitted for a full medical examination, the health of 76,845 children, examined in former years, was reviewed during 1926.

The work of the medical officers of the Department of Education includes the investigation of epidemics of infectious diseases affecting school children; the inspection of school buildings; courses of lectures at the

Teachers' College; lectures to senior girls in metropolitan schools on the care of babies, personal cleanliness, home hygiene, sick nursing, etc.; and lectures to parents. Special investigations are carried out into problems affecting the welfare of children, such as tuberculosis, goitre, crippling, and mental deficiency.

The expenditure on the Medical Officer's Branch in 1926, exclusive of administration, was £34,219.

#### CHARITABLE RELIEF.

In addition to hospitals for the treatment of sickness or disease, there exist both in the metropolis and in the country other institutions, such as homes for the aged and for children, also societies for granting casual aid to indigent persons, and for the help of discharged prisoners.

The State maintains five asylums, others are maintained partly by State aid and partly by private contributions, and a few are wholly dependent on private aid.

Four of the State asylums are for men and one is for women. These institutions were established as asylums for aged and destitute persons, but since the introduction of the old-age pension system the character of the work of three of the institutions has changed considerably, and they are used to a large extent for the treatment of chronic ailments. They contain special wards for persons suffering from cancer, tuberculosis, and venereal diseases.

The average number resident in the State asylums during the year 1926 was 3,224 as compared with 3,231 during the previous year. The average cost per inmate was £47 7s. 9d. In the hospitals attached to the three institutions, 6,476 cases of illness were treated during 1926—males, 5,302, and females, 1,174—and at the end of the year 1,422 cases remained under treatment.

The total number of inmates in the charitable institutions during the year 1926 was 29,184 persons, including 12,275 children. The discharges numbered 18,789, and the deaths 1,167. The number remaining at the end of the year was 9,228, viz., 3,130 men, 1,407 women, and 4,691 children. A classification of the institutions in which the children were resident is shown on page 144. The receipts of the charitable institutions amounted to £1,007,574, including State aid, £741,674, and the expenditure to £1,034,773. The value of the outdoor relief afforded by the institutions was estimated at £15,934.

A number of societies are active in the matter of charitable relief, *e.g.*, nursing, ambulance, and shipwreck relief; and in many suburbs and country towns benevolent societies have been formed for the relief of local distress.

For the purpose of organising and controlling the ambulance and transport services a board has been incorporated under an Act passed in 1919 and amended in 1924. The board delimits certain districts for administrative purposes, and in each district a committee is elected annually by the contributors to its funds.

The District Nursing Association and the Bush Nursing Association engage nurses to visit the sick, gratuitously if needed, the former in the metropolitan and the latter in the country districts. Public charitable collections are made periodically for the relief of distress or with the object of increasing the revenue of hospitals and charitable agencies. In the Metropolitan district during 1926-27 the Hospital Saturday Fund collected voluntary subscriptions and donations amounting to £44,725 and the United Charities Fund, £9,298.

The following is a comparative statement of the receipts and expenditure of the charitable institutions and societies:—

Particulars.	1901.	1911.	1921.	1925.	1926. <sup>1</sup>
<b>Receipts—</b>	£	£	£	£	£
State Aid ... ..	153,752	192,941	668,044	819,636	877,399
Subscriptions, Fees, etc. ...	34,906	78,786	229,547	280,335	331,499
Other ... ..	44,999	67,519	68,363	116,799	102,200
<b>Total ... ..</b>	<b>233,657</b>	<b>339,246</b>	<b>965,954</b>	<b>1,216,770</b>	<b>1,311,098</b>
<b>Expenditure—</b>					
Buildings and Repairs ... ..	40,247	21,063	41,771	82,897	79,207
Maintenance, Salaries, Wages ...	174,679	293,460	871,475	1,082,821	1,131,646
Other ... ..	39,008	11,142	39,371	80,416	96,763
<b>Total ... ..</b>	<b>253,934</b>	<b>325,665</b>	<b>952,617</b>	<b>1,246,134</b>	<b>1,307,616</b>

Financial aid from the State in 1926 amounted to £877,399, or 67 per cent. of the total revenue. It included expenditure by the State in respect of Governmental charitable institutions, baby health centres, the Aborigines Protection Board, and the boarding out of children.

#### PROTECTION OF THE ABORIGINALS.

At a census taken by the Aborigines Protection Board on 1st June, 1927, there were enumerated 964 full bloods and 5,829 half-castes, as well as a number of quadroons and octoroons.

The protection of the aboriginal natives of New South Wales is the function of a Board consisting of the Inspector-General of Police and other members, up to ten in number, appointed by the Governor.

On a number of reserves set apart for aboriginals in various localities, dwellings have been erected, and assistance in the form of food and clothing is supplied when necessary. The number of aboriginals receiving aid in June, 1927, was 1,688.

Aboriginal children are required to attend school until the age of 14 years, and schools have been established for their exclusive use. The Board may assume control of the children and apprentice them, or place them in a training home. There is a training home for girls at Cootamundra, and a home for boys at Kinchela, on the Macleay River.

The expenditure by the Aborigines Protection Board during the year ended 30th June, 1927, amounted to £40,624; including £22,584 for general maintenance, £4,898 for the purchase of stores, £8,721 for educational purposes, and £880 for medical attention and other services. An amount of £3,541 was expended in connection with products raised on the reserves, and £3,270 were received as revenue from sales. The net expenditure during the year was £37,354.

#### PENSIONS.

In New South Wales pensions are provided for the aged, for the permanently invalided, for persons incapacitated during war service, for the dependents of deceased soldiers and sailors, and since March, 1926, for widows with dependent children. Provision is made also for superannuation in some sections of the Government services. An Act to provide a scheme of superannuation for certain employees of local governing bodies was passed in March, 1927, the cost to be borne partly by the councils and partly by the employees. The Act was proclaimed on 1st October, 1927. Several of the banking companies and other firms have made arrangements for the superannuation of employees, but particulars are not available.

*Old Age and Invalid Pensions.*

The payment of old-age pensions in New South Wales was commenced by the State Government on 1st August, 1901, and pensions to persons over the age of 16 years permanently incapacitated for any work became payable under the Invalidity and Accidents Pensions Act passed by the State Parliament in 1907. Both systems were transferred subsequently to Federal control, and the Government of the Commonwealth commenced, on 1st July, 1909, to pay old-age pensions to men and women over 65 years of age, and on 15th December, 1910, old-age pensions to women on attaining the age of 60 years, and pensions to invalids.

Naturalised persons are eligible for pensions, but aliens, Asiatics (except those born in Australia and Indians born in British India), and aboriginal natives of Australia, Africa, the islands of the Pacific, and of New Zealand, are disqualified. A pension is not payable to any person if the net capital of his property, exclusive of the value of his home, exceeds £400.

For old-age pensions the age qualification is 60 years for women and 65 years for men, with a reduction to 60 years in the case of men permanently incapacitated. The prescribed period of residence in Australia is twenty years continuously, but absences amounting in the aggregate to one-tenth of the total period of residence do not involve disqualification.

Invalid pensions are payable to persons over the age of 16 years who have resided continuously for at least five years, and have become incapacitated or blind, in Australia, also to persons permanently incapacitated or blind by reason of congenital defect if they were brought to Australia before the age of 3 years or have resided in Australia continuously for twenty years. Invalid pensions are not payable to persons whose relatives, i.e., father, mother, husband, wife, adequately maintain them.

The maximum old-age or invalid pension was £26 per annum until 12th October, 1916, when it was raised to £32 10s. Subsequently it was increased to £39 as from 15th January, 1920, to £45 10s. as from 13th September, 1923, and to £52 from 8th October, 1925. The maximum rate is reduced proportionately in respect of any income or property of the claimant, so that the pensioner's income will not exceed the statutory limit, which was fixed at £78 per annum in September, 1923, and at £84 10s. in October, 1925. The pension payable to a permanently blind person, however, may be at such a rate up to the maximum as will make his income equal to an amount not exceeding the living wage. In computing income, benefits accruing from friendly societies, trade unions, etc., are not included; nor gifts and allowances from children or grandchildren, war pensions paid to dependents of soldiers, etc., war gratuities, allowances under the Miners' Accident Relief Act of New South Wales, nor compensation under the Seamen's Compensation Act. Where claimants receive board and lodgings the value thereof up to 12s. 6d. per week is included as income, also, in the case of blind men under 65 years of age and of blind women under 60, an amount equivalent to the wages they could earn by reasonable effort.

If a pensioner becomes an inmate of a public hospital his pension is suspended, but when he is discharged therefrom payment is resumed and he is entitled to the pension for the period of suspension up to a maximum of four weeks' instalment. If a pensioner remains in hospital for twenty-eight days, or if he is an inmate of a public benevolent asylum, he receives while in the institution an allowance instead of a full pension. The amount of such allowances was fixed at 3s. per week in September, 1923, and at 4s. in October, 1925. In the case of these pensioners it is the practice of the Federal Government to pay to the institutions for their maintenance allowances at the rate of 10s. 6d. per week.

The following statement shows, in respect of old-age and invalid pensions, the applications received in New South Wales, the number of pensions current, and the average rate and total liability in recent years in comparison with similar information for 1911-12, the first year of Commonwealth control:—

Year ended 30th June.	New Claims.	Pensions current in New South Wales at 30th June.			Weekly Rate of Pension, as at 30th June.		Estimated Annual Liability, as at 30th June.	Estimated Annual Liability per head of Population, as at 30th June.
		Males.	Females.	Total.	Max.	Average.		
Old-age Pensions.								
					s. d.	s. d.	£	s. d.
1912	4,763	13,639	16,029	29,668	10 0	9 7	734,526	8 7
1921	5,727	16,033	23,004	39,027	15 0	14 1	1,428,253	13 8
1922	5,280	16,498	23,567	40,065	15 0	14 3	1,481,678	13 11
1923	5,851	17,016	24,201	41,220	15 0	14 2	1,521,078	13 11
1924	7,341	18,179	25,564	43,743	17 6	16 9	1,900,730	17 1
1925	6,883	19,024	26,563	45,592	17 6	16 9	1,981,772	17 5
1926	9,336	20,969	28,419	49,338	20 0	19 2	2,460,718	21 3
1927	8,140	21,930	29,540	51,530	20 0	19 1	2,563,023	21 7
Invalid Pensions.								
					s. d.	s. d.	£	s. d.
1912	1,784	2,549	2,278	4,827	10 0	9 9	121,836	1 5
1921	3,278	7,016	8,371	15,387	15 0	14 9	588,533	5 8
1922	2,924	7,166	8,731	15,897	15 0	14 8	606,788	5 8
1923	2,529	7,357	8,995	16,352	15 0	14 8	623,298	5 8
1924	3,118	7,763	9,751	17,514	17 6	17 2	782,470	7 0
1925	3,071	8,073	10,302	18,375	17 6	17 3	822,146	7 3
1926	4,453	8,896	11,297	20,193	20 0	19 7	1,033,552	8 11
1927	4,434	9,576	12,069	21,643	20 0	19 2	1,103,624	9 4

At 30th June, 1927, the number of pensioners in public benevolent asylums in New South Wales was 1,439, and the annual liability for their pensions at the rate of 4s. per week was £14,966.

The old-age and the invalid pensioners in New South Wales as at 30th June, 1927, represented respectively 21.9 and 9.2 per 1,000 of population, as compared with 21.8 per 1,000 and 8.6 per 1,000 in the Commonwealth. The number and proportion of pensioners have increased appreciably with each increase in the maximum rate and in the value of property which a pensioner may hold without disqualification.

The total expenditure by the Commonwealth on invalid and old-age pensions during the year ended 30th June, 1927, was £9,144,589, of which an amount of £9,034,938 was paid as pensions, including payments to pensioners in benevolent asylums and hospitals, and £109,651 to public benevolent asylums and hospitals for the maintenance of pensioners. In addition, the cost of administration amounted to £116,008.

The amount of pensions, etc., paid in New South Wales during 1926-27 was £3,565,179, including £37,505 to asylums and hospitals.

#### Widows' Pensions.

The Widows' Pensions Act, 1925, provides for the payment of pensions to widows with dependent children. A widow is not qualified to receive a pension under the Act unless she was domiciled in New South Wales at the date of her husband's death, is residing in the State at the date of her application for a pension, and has been so residing continuously for a period of three years, and has wholly or mainly dependent upon her for support a child, stepchild, or child legally adopted before her widowhood, who is under the age of 14 years. Continuous residence is not deemed to

have been interrupted by occasional absences not exceeding one-tenth of the total period of residence, nor by absences during which the widow's children or her home were in New South Wales. A pension may not be paid to any widow if she is receiving any other pension or allowance exceeding the amount of pension which, if otherwise qualified, she would receive under this Act; nor if she is an alien, or an Asiatic born out of Australia, or an aboriginal native of Africa, the islands of the Pacific, or New Zealand.

The maximum rate of pension is £1 per week in respect of the widow, and an additional amount of 10s. per week in respect of each dependent child under 14 years of age. The amount payable in each case is ascertained by deducting from the maximum annual amount £1 for each £1 by which the net income of the widow exceeds £78 per annum. For this purpose a widow's income is deemed to include any pension or allowance under any other Act; the earnings of the widow or her children under 14 years of age from personal effort; 5 per cent. of any real or personal property of the widow or her children which produces less than 5 per cent. per annum, except the house in which they reside and the furniture and personal effects therein; 25 per cent. of the earnings of children over 14 years of age residing with the widow; and any payment for the children's maintenance or education from any estate, etc. Her income is not deemed to include sick allowance or funeral benefit from any society, nor money received under an assurance policy on the destruction or damage of property; and, if the widow is paying rent for her home, the amount of the rent up to a maximum of £78 per annum is deducted from her income.

Every claim for a pension is investigated by a police or stipendiary magistrate, and the claimant has the right of appeal to the Minister, whose decision is final. The payment of each pension is authorised by a pension certificate, which is issued for a term not exceeding one year, and must be renewed upon the expiration of the period. Pensions are not payable during any period while the pensioner resides out of New South Wales, except during occasional absence during which her family or home is in the State. Pensions are terminated on the marriage of a pensioner or on the date she becomes qualified to receive an old-age or invalid pension under Federal legislation. On the death of a widow the guardian of her children is entitled, with the Minister's approval, to receive the pension payable in respect of them.

The pensions became payable on 10th March, 1926. On 30th June, 1927, pensions were being paid to 5,449 widows with 11,654 children. The pensions paid during the year ended June, 1927, amounted to £553,707, and the cost of administration was £7,489.

#### *War Pensions.*

The Commonwealth Government organised the Department of Repatriation, which commenced operations in April, 1918, to undertake the re-establishment in civil life of the soldiers and sailors who were enlisted for service during the European war. The assistance afforded by the Department includes the payment of sustenance allowances, the provision of employment, vocational training, medical treatment, and general assistance in matters of business and social welfare. In July, 1920, the war pensions system previously under the control of the Treasury was transferred to the Repatriation Department. The general administration of the Repatriation Department, in terms of the Australian Soldiers' Repatriation Act, 1920-22, is entrusted to three commissioners appointed by the Governor-General, and a Board of three members in each State. The work of assisting returned soldiers and sailors to acquire houses is undertaken by a separate organisation, the War Service Homes Commission.

War pensions are granted upon the death or incapacitation, as the result of warlike operations, of members of the naval or military forces. The rates of pension payable on total incapacity range from £4 4s. to £6 per fortnight, according to rank. A special rate of pension amounting to £8 per fortnight is payable to members of the forces who have been blinded, or incapacitated for life to such an extent as to be precluded from earning more than a negligible percentage of a living wage. The special rate may be granted also to tubercular cases. In cases of partial incapacity the rates are assessed by the Commissioners. The wife of a totally incapacitated member receives a pension ranging from £1 16s. per fortnight to £3 per fortnight. Widows receive from £2 7s. to £6 per fortnight. Widowed mothers receive pensions ranging from £2 to £6 per fortnight, and a pension is payable on account of each child under 16 years of age.

The number of pensioners under the War Pensions Act as at 30th June, 1927, was as follows:—

Pensioners.	New South Wales.		Commonwealth.	
	Number of Pensioners.	Average Fortnightly Rate.	Number of Pensioners.	Average Fortnightly Rate.
Incapacitated Soldiers ... ..	24,576	£ s. d. 2 0 5	72,398	£ s. d. 1 16 7
Dependents of Deceased Soldiers ... ..	10,939	} 0 16 5.	39,865	} 0 16 1
Dependents of Incapacitated Soldiers ... ..	46,890		127,563	
Total ... ..	82,345	1 3 7	259,821	1 1 10

At 30th June, 1927, there were 82,345 war pensions current in New South Wales, and the annual liability was estimated to be £2,526,420. The actual expenditure on account of pensions in New South Wales during the year ended 30th June, 1927, was £2,596,130; the total expenditure by the Commonwealth being £7,558,559. The cost of administration was £180,610.

#### Government Service Pensions.

The existing pension funds for employees of the State Government of New South Wales are the Public Service Superannuation Fund, the Police Superannuation and Reward Fund, and the Government Railways Superannuation Fund. An Act which provides for the superannuation of employees of the Commonwealth Government came into operation on 22nd November, 1922. These funds are maintained partly by deductions from officers' salaries and partly by grants from the public revenue.

Special provision is made by the State Government for pensions to judges, the amount paid from Consolidated Revenue during the year ended 30th June, 1927, being £7,624.

The first Public Service Superannuation Fund in New South Wales was established by the Civil Service Act, 1864, but in 1895 the admission of new contributors was discontinued and the existing contributors were given the option of withdrawing from the fund. The officers who elected to discontinue their contributions became entitled under prescribed conditions to receive refunds and gratuities on retirement. Officers who have continued to contribute are entitled to an annual pension equal to one-sixtieth of the average annual salary for the last three years' service, multiplied by the years of service, not exceeding forty, the pensions being payable on retirement through incapacity or at age 60, or on abolition of office. The amounts payable from the fund in excess of contributions are paid out of

Consolidated Revenue. Contributors under this scheme were authorised to exchange their rights for new rights under the Superannuation Act of 1916, as described below.

During the year 1926-27 the expenditure in connection with the fund established under the Act of 1884 was £195,450, consisting of pensions, £188,468, and refunds of contributions, £11,982. Contributions by public servants amounted to £4,558. On 30th June, 1927, there were 692 officers in receipt of pensions amounting to £163,463; and 5 pensions amounting, in the aggregate, to £554, were being paid in respect of deceased officers who had commuted their pensions rights in terms of the Superannuation Act of 1916. In addition, 168 officers, who had been transferred to the Commonwealth Service, were receiving pensions amounting to £40,375; a portion, £13,757, being payable by the State and the balance by the Commonwealth Government.

The existing Public Service Superannuation Fund was constituted by the provisions of the Superannuation Acts, 1916 and 1918, which provide a scheme of pensions and other benefits for employees of the New South Wales Government and other public bodies, except those subject to the Railway Service and Police Superannuation Acts. One-half of the cost of the scheme is borne by the employees, except where otherwise provided, and the balance by the employers. The age of retirement is 60 years, but women may elect to contribute for retirement at age 55. Upon the death of a contributor or pensioner his widow receives one-half of the amount of pension for which he has contributed, and £13 per annum for each child under 16 years of age. Contributions by employees are compulsory and vary in accordance with the age and salary of the contributor. Employees who were over the age of 30 years when the Act was commenced were allowed the concession of contributing in respect of not more than four units of pensions, *i.e.*, £104, as though they were only 30 years of age. Tables showing the rates of contributions and of pensions were published in the 1919 edition of this Year Book.

Certain sections of the Superannuation Act, which conferred pension rights without contributions on employees who had reached the age of 60 years, came into force in 1916, and the other provisions on 1st July, 1919.

At 30th June, 1927, the number of employees contributing to the fund was 19,157, *viz.*, 12,661 men and 6,496 women. The pensions in force in respect of contributors numbered 1,681, amounting to £124,861 annually, and 1,634 pensions were payable in respect of persons who had not contributed to the fund, the annual amount being £115,272. During the year ended 30th June, 1927, the income of the fund amounted to £1,141,987, including contributions due by employees, £273,155 and £472,721 due by employers.

The funds of the Board at 30th June, 1927, amounted to £8,716,389, including £5,673,262 invested in securities and £3,019,835 due for employers' contributions. An agreement has been made between the Superannuation Board and the State Treasury for the payment of the Crown contributions in respect of employees who were over the age of 30 at the commencement of the Act by equated payments of £233,253 per annum for a period of forty years.

A pension fund for the police was established in 1899, amending legislation being passed in 1906 and 1925. Annual contributions by members of the service are at the rate of 4 per cent. of salary. Other sources of revenue are penalties imposed on members of the police force, penalties and damages awarded to the police as prosecutors, and the proceeds of the sale of unclaimed goods in possession of the police. The amount of pension payable to members who entered the police service prior to 1906 is graduated in



accordance with length of service. The retiring age is 60 years, except in cases of incapacitation, but under prescribed conditions the services of any member of the force may be retained until he reaches the age of 65 years. During the year ended 30th June, 1927, the receipts of the Police Superannuation and Reward Fund amounted to £231,607, including deductions from salaries, £61,007, and special appropriation from Consolidated Revenue, £170,600. The disbursements, £231,642, included pensions, £215,291; gratuities, £16,087; and miscellaneous, £264.

The Railway Service Superannuation Fund was established in October, 1910. The contributions from employees of the railway and tramway services are at the rate of  $1\frac{1}{2}$  per cent. of salary, and the State provides all that is necessary beyond such contributions. The amount of pension payable is one-sixtieth of the average annual salary during term of service, multiplied by the number of years of service, the maximum pension being two-thirds of the average salary. At 30th June, 1927, there were 49,684 contributors. The number of pensions in force was 2,877, amounting in the aggregate to £229,573 per annum. Since the inception of the fund 4,545 pensions have been granted, and 1,472 pensioners have died; 176 officers under 60 have been re-employed, and 20 pensions have been written off the books. During the year 1926-27 the receipts of the fund amounted to £252,039, including contributions by employees, £204,282, and an amount of £46,200 from the Consolidated Revenue. The disbursements, representing pensions, gratuities, refunds, etc., amounted to £250,020. The total amount paid in pensions since the inception of the fund on 1st October, 1910, was £2,020,766, and the total subsidy from the Consolidated Revenue Fund amounted to £352,650.

In the Superannuation Fund for the Commonwealth Public Service as at 30th June, 1927, there were 29,843 contributors, of whom 10,237 were in the State of New South Wales.

#### FAMILY ALLOWANCES.

The introduction of family allowances in New South Wales in terms of the Family Endowment Act, 1927, was an outcome of the system of wage regulation which is described in the chapter relating to wages. Endowment is not restricted to the children of wage and salary earners, and it is payable in respect of all families with dependent children where the income is below the limit prescribed by the Family Endowment Act and its amendments.

The maximum rate of endowment is 5s. per week in respect of each dependent child under 14 years of age, and payments may be continued to age 16 years if the child is incapacitated. Children in charitable institutions are included within the scope of the system. Illegitimate children are excluded generally, but the Commissioner of Family Endowment has discretionary power to pay endowment in respect of such children under special circumstances. Other exemptions are children of fathers who are aliens, Asiatics, or aboriginal natives of Africa, the Pacific Islands, or New Zealand, unless born in Australia; children for whom pension is payable under the Widows' Pensions Act or any other State or Federal Act except the War Pensions Act; children for whom family allowance is paid in the Commonwealth Public Service.

Where practicable, the endowment is paid to the mothers, and for them there is a residence qualification of two years in New South Wales immediately preceding the date of claim. There is a similar qualification in respect of the children except those under 2 years of age who were born in the State. The maximum rate of endowment is 5s. per week in respect of

each child, and the amount is reduced where necessary so that it will not raise the family income beyond the prescribed limit, no endowment being payable where the family income in the twelve months preceding the date of claim exceeded the amount of the current living wage, based on the requirements of a man and his wife without children, and £13 for each dependent child.

The family income is defined as the combined income of the claimant, his spouse, and children under 14 years, including weekly payments as workers' compensation, and 5 per cent. of real or personal property (except their residence, and the furniture and personal effects therein), which produces less than 5 per cent. per annum. In assessing the income the following amounts are excluded, viz., sick pay and funeral benefits from any society; money received under fire insurance policy; lump sum payments as workers' compensation or superannuation or gratuity; earnings of children under 14 years; earnings of mother from casual employment; war pension for a member of the Forces or his wife or widow or his children; earnings from overtime up to £26; and where income is derived otherwise than from wages, the amount expended in the production of that income.

The number of claims for endowment received up to 31st March, 1928, was 40,567; of this number 23,310 had been granted, 5,245 refused and 371 withdrawn. Endowment amounting to £513,347 had been paid in respect of 53,375 children and the fortnightly liability for endowment at 31st March, 1928, was £29,869. The cost of administration, including a large sum to cover initial expenses, amounted to £42,148.

The moneys for endowment are payable from the Family Endowment Fund, to which employers, including the Crown or statutory authority, were required to pay a contribution equal to 3 per cent. of the total payments to employees in the form of wages, salaries, bonuses, commission, or remuneration for piece-work; and for each employee for whom board and lodging are provided £1 per week is added to the wages for the purpose of assessing the tax. In respect of wages, etc., paid to an employee working under Federal award the amount of tax is reduced by 10 per cent. The tax is not levied on wages paid to domestic servants employed otherwise than in the employer's trade or business, or to members of a family employed by a parent, nor in cases where the employer's annual wages bill does not exceed £150, nor where the employer is a public hospital or public benevolent or charitable institution.

The tax was imposed on wages, etc., paid on and after 23rd July, 1927, the day on which the Act came into operation. The amount of tax assessed on wages paid between that date and 31st October following yielded sufficient funds to meet the claims for endowment which had been lodged and to defray costs of administration. Therefore the Government decided to suspend the collection of the tax and in terms of an amending Act contributions by employers were discontinued in respect of wages paid during November and December, 1927. The suspension was still in operation in June, 1928. The amount of tax collected up to 31st March, 1928, was £965,042.

Officers of the Public Service of the Commonwealth, of whom a large number are employed in New South Wales, have received child endowment since November, 1920. The payments are at the rate of 5s. per week for each dependent child under the age of 14 years, provided that it does not bring the remuneration of the officer above £500 per annum. In effect the cost is borne by the employees in the service, because in assessing the basic wage upon which he determines their salaries and wages, the Public Service Arbitrator deducts from the rate, which otherwise would be awarded, a sum to cover the cost of endowment.

Employees of the banks in New South Wales also receive child endowment in terms of an award for bank officers made by the Industrial Commission of New South Wales in June, 1927. The banks are required to pay allowances to officers covered by the award, at the rate of £35 per annum for each child under the age of 14 years, or, if at school, under the age of 16 years, provided that the amount of these allowances, together with salary, apart from other allowances, does not exceed £750 per annum.

#### THRIFT.

Evidence that thrift is practised extensively in New South Wales is found in the strong position of friendly societies—both in membership and finances; in the increasing proportion of savings bank depositors and larger average amounts at credit; in the flourishing condition of life assurance institutions; and in the growth of Starr-Bowkett Building Societies and co-operative trading societies. For particulars of the savings banks, and other financial institutions, reference should be made to the chapter of this volume relating to private finance.

#### FRIENDLY SOCIETIES.

Friendly Societies for many years have exercised a strong influence for good among the industrial classes by inculcating habits of thrift, and by preventing and relieving distress.

The earliest societies were founded by former members of English orders who had emigrated to Australia before the business of friendly societies in Great Britain was placed on a scientific basis, and subjected to legal regulation. The first bodies, therefore, performed their functions with little supervision until 1899, when an Act of Parliament conferred on the Registrar authority to enforce the adoption of an adequate scale of contributions. As a result of this Act and subsequent legislation extending the Registrar's powers of inspection and supervision the friendly societies have been placed on a sound basis.

The legislation affecting friendly societies was consolidated in the Act of 1912, but two amendments were made in 1913 and further amendments in 1916, 1920, and 1922. The more important provisions of the various Acts were outlined in the 1921 issue of this Year Book at page 483.

The benefits assured are fairly uniform in all societies, and consist usually of medical attendance and medicine for a member and his family, with sick pay for the member, and funeral allowances for the member and his wife. The usual sickness benefit is 21s. per week during the first six months of illness, 15s. during the next six months, and 5s. per week during the remainder of illness, this last provision being rendered possible by the system of State subvention, of which details are given later.

There was a tendency in recent years to increase the sickness benefit, and in several societies members were permitted to contribute for additional benefits up to 42s. per week. Some of the societies, however, which adopted increased benefits, have not found the experiment entirely successful, as the amount of sickness amongst members who elected to contribute for the increased benefits has been much greater than amongst other members. Two societies have closed the scale to new entrants and one of them is making arrangements for the refund of contributions already paid for the additional benefits.

The funeral benefits range usually from £10 to £40 at death of the member, according to the period of membership, and a contingent benefit of £10 or £15 is payable on death of his wife. In several societies members may assure for sums up to £100, and in two of them it is possible to assure

for £200, the maximum allowed by law. A separate benefit for widows of members—usually £10—may be assured in most of the societies for a stated contribution.

The societies may be divided into two classes, viz., Friendly Societies proper, and Miscellaneous Societies, whose objects bring them within the scope of friendly societies legislation, but whose benefits differ somewhat from those of ordinary friendly societies.

At 30th June, 1927, there were 56 societies, including 20 miscellaneous; 15 possessed branches, and 41 including one with a juvenile branch, were classed as Single Societies.

The following summary shows the branches, membership, and funds as at 30th June, 1927:—

Classification.	Societies and Branches.	Members.	Funds.
<b>Friendly Societies Proper—</b>	No.	No.	£
Affiliated ... ..	2,354	237,459	3,366,852
Single ... ..	22	3,043	51,947
	2,376	240,502	3,418,799
Miscellaneous Societies ... ..	20	...	61,968
<b>Total ... ..</b>	<b>2,396</b>	<b>240,502</b>	<b>3,480,767</b>

The number of members has grown rapidly since 1899, when societies were first subjected to supervision by the Registrar. In that year there were 78,245 members, equal to 5·9 per cent. of the population. Thereafter a continuous development proceeded until the outbreak of war, when the number declined owing to enlistments, and, subsequently, through deaths on active service. Each year since the termination of the war has shown an increase. The membership at intervals since 1899 is shown in the following table:—

At 30th June.	Aggregate Membership.		At 30th June.	Aggregate Membership.	
	Members.	Percentage of Population.		Members.	Percentage of Population.
1899*	78,245	5·9	1923	214,663	9·8
1901*	89,684	6·5	1924	219,026	9·8
1911*	164,910	9·7	1925	226,523	10·0
1921	199,688	9·5	1926	234,699	10·1
1922	209,133	9·7	1927	240,502	10·1

\*At 31st December.

The number of members entitled to benefits at 30th June, 1927, was 221,803, the remainder being ineligible generally on account of arrears of contributions. The benefits of medical attendance and medicine accrue also to the member's family, but such persons are not included in the membership.

The membership at 30th June, 1927, included 200,086 men, 19,400 women, and 21,016 juveniles. As compared with the membership at 30th June, 1926, there were increases of 2,377 men, 841 women, and 2,585 juveniles, the total increase being 5,803.

Information regarding receipts and expenditure of Friendly Societies, and the accumulated assets, may be found upon reference to the chapter of this Year Book entitled Private Finance.

#### *Miscellaneous Friendly Societies.*

In addition to the Friendly Societies proper there were at 30th June, 1927, twenty miscellaneous societies registered under the Friendly Societies Act. These organisations were medical institutions or dispensaries for the

supply of medicine to all members whose names have been placed on their lists of contributing branches. In some cases the societies arrange for medical attendance.

The receipts of the dispensaries during the twelve months ended 30th June, 1927, were £51,325, and the expenditure was £45,951, so that there was an excess of receipts amounting to £5,374. Many of these bodies received liberal grants from the Government, and with this assistance were able to purchase land and to erect buildings, the shares of the subscribing branches being covered by the issue of interest-bearing debentures. In addition to making the necessary payments, most of the dispensaries have been enabled to make substantial reductions in the principal. The funds at 30th June, 1927, amounted to £61,968.

#### *State Subvention of Friendly Societies.*

To enlarge the sphere of usefulness of the friendly societies the Subvention to Friendly Societies Act, 1908, now consolidated with the Friendly Societies Act, assured to the societies, which might elect to be bound by its provisions, the following monetary benefits payable from the Consolidated Revenue of the State:—

##### 1. Sickness pay—

- (a) One-half of the cost in each year in respect of continuous sickness after twelve months from the commencement of such sickness, for male members less than 65, and for females less than 60 years of age—provided that the maximum cost to the State must not exceed 5s. per week for each case.
- (b) The whole cost of sickness pay in respect of male members aged 65 years and over, and of female members aged 60 years and over—subject to the same proviso as above.

##### 2. Amount equal to contributions payable—

- (a) on account of all male members 65 years and over, and of female members 60 years and over, for medicine and medical attendance, provided that such contributions shall not be more than those payable by members of the same society under the ages stated.
- (b) under the rules of a society in respect of the aged members above mentioned, to assure payment of funeral allowance—not exceeding £50—at their death.

With the exception of the Irish National Foresters, all the affiliated societies have become applicants for subvention.

The following is a summary of the claims during the five years ended 30th June, 1927:—

Year ended 30th June.	Applicant Societies.	Sickness Pay.				Contributions.				Total Amount of Claims.
		Continuous Sickness.		Sickness of Aged Members.		Medical.		Funeral.		
		Claimant Members.	Amount.	Claimant Members.	Amount.	Claimants.	Amount.	Claimants.	Amount.	
1923	27	1,276	6,739	2,818	19,232	9,124	16,016	9,852	5,142	47,129
1924	27	1,407	7,489	3,229	20,067	9,913	17,540	10,644	5,570	51,566
1925	27	1,477	7,775	3,239	22,008	10,703	19,068	11,405	6,029	54,880
1926	26	1,565	8,368	3,576	23,589	11,604	20,654	12,283	6,469	59,080
1927	25	1,603	8,526	3,847	25,508	12,359	11,959	13,099	6,730	62,723

The total amount paid to the societies in respect of subvention claims to 30th June, 1927, was £626,983.

The system has been beneficial to all the societies, but more particularly to those in which the proportion of aged members is large.

## COMMUNITY ADVANCEMENT AND SETTLEMENT SOCIETIES.

The Co-operation, Community Settlement, and Credit Societies Act passed in December, 1923, provides, *inter alia*, for the formation of community advancement societies and community settlement societies. Community advancement societies may be formed to provide any community service or benefit, *e.g.*, to transport and supply water, gas, and electricity, to establish factories and workshops, to undertake farming operations and the purchase of machinery for its members, to erect dwellings, to maintain buildings, etc., for education, recreation, or other community purpose, to promote charitable undertakings, and to do anything calculated to improve the conditions of urban or rural life in relation to the objects specified.

Community settlement societies may be formed for the purpose of acquiring land in order to settle or retain people thereon, and of providing any community service, and with these objects they may do anything calculated to promote the economic interests of their members.

Up to the end of March, 1928, fourteen community advancement societies had been registered under the Act. Two are moribund and of those in operation nine were formed for the object of erecting and maintaining public halls, two for establishing recreation clubs, and one to provide a convalescent fund. One community settlement society has been registered but active operations have not been commenced.

## HOUSING.

A classification of the occupied dwellings in New South Wales, as disclosed by the Census of 1921, is shown in the following statement in comparison with similar particulars, as at the previous Census. A room or a suite of rooms occupied as a tenement or flat is classified as a separate dwelling:—

Nature of Dwelling.	Number of Dwellings.				Per cent. of Total.	
	Census. 1911.	Census, 1921.			1911.	1921.
		Metro- politan.	Country.	Total.		
Private house ... ..	317,462	160,562	236,057	396,619	95·38	91·21
Tenement or flat in private house...	2,304	12,760	5,089	17,849	·69	4·10
Caretaker's quarters in store, office, etc. ... ..	237	390	237	627	·07	·14
Hotel ... ..	2,795	659	1,981	2,640	·84	·61
Boarding house, lodging house, coffee palace ... ..	5,936	8,693	3,812	12,538	1·79	2·88
Educational institution ... ..	229	156	307	463	·07	·11
Religious institution (non-educational) ... ..	135	32	57	89	·04	·03
Hospital ... ..	479	226	509	735	·14	·17
Charitable institution (other than hospital) ... ..	159	49	50	99	·05	·02
Military or naval establishment...	112	16	15	31	·03	·01
Penal establishment ... ..	132	11	28	39	·04	·01
Police barracks ... ..	28	5	29	34	·01	·01
Police station or quarters ... ..	534	38	488	526	·16	·12
Fire station ... ..	65	62	47	109	·02	·03
Other and unspecified ... ..	68	56	522	578	·02	·13
Wagon, van, camp ... ..	2,115	22	1,846	1,868	·64	·43
Aboriginal camp in which whites or half-castes were living ...	21	...	18	18	·01	·00
<b>Total dwellings ...</b>	<b>332,841</b>	<b>183,740</b>	<b>251,122</b>	<b>434,862</b>	<b>100</b>	<b>100</b>

The most striking feature of the comparison is the increase in house-sharing, which is a result of a shortage of houses, of high rents and building costs, and a scarcity of domestic labour. The number of tenements and flats increased from 2,304, or '69 per cent. in 1911, to 17,849, or 4·1 per cent., in 1921, and the number of boarding and lodging houses from 5,966, or 1·8 per cent., to 12,538, or 2·9 per cent. The proportion of private houses declined from 95·38 per cent. to 91·21 per cent.

In addition to the occupied dwellings there were 18,619 unoccupied dwellings, and 2,724 in course of construction in New South Wales in April, 1921.

The total number of inmates of private dwellings, i.e., private houses, tenements and flats, in 1921 was 1,872,456 or 89·6 per cent. of the total population, the corresponding figures in 1911 being 1,494,504 inmates, or 91·2 per cent.

The average number of inmates per private dwelling in 1921, viz., 4·52, was lower than the average 4·67 in 1911, and the decrease was accompanied by a decrease in the average size of the private dwellings from 5·04 rooms to 4·97 rooms. Since 1911 many large private houses have been converted into flats or have become occupied as boarding-houses, while, on account of the high cost of building and a scarcity of domestic labour, there has been a tendency to restrict the size of new buildings.

The number of private dwellings in 1921 in which there was one room or more per inmate was 280,689, or 68·4 per cent., and in 129,894 dwellings there was less than one room per inmate. Nearly two-thirds of the dwellings with less than three rooms were in the country districts, which contained only one-third of the total private dwellings. The following statement shows the number of inmates and the number of rooms in private dwellings:—

Inmates.	Number of Rooms.								Total Private Dwellings.
	1	2	3	4	5	6-10	Over 10.	Unspecified.	
1 .. .. .	9,993	4,697	3,464	5,781	4,144	3,128	381	1,408	32,019
2 .. .. .	2,245	3,425	6,085	15,915	14,420	10,305	217	628	53,840
3 .. .. .	700	2,873	6,533	20,606	20,882	16,550	372	576	68,592
4 .. .. .	223	1,602	5,360	20,622	23,417	20,529	465	472	72,750
5 .. .. .	138	999	3,709	16,073	20,803	20,232	537	301	62,882
6 .. .. .	70	503	2,194	10,557	15,721	17,161	561	213	46,980
7 .. .. .	42	257	1,152	6,215	10,742	12,644	459	123	31,634
8 .. .. .	19	113	579	3,630	6,807	8,876	431	77	20,432
9 .. .. .	10	54	294	1,644	3,727	5,933	292	41	11,995
10 .. .. .	7	36	97	741	1,943	2,578	224	19	6,645
11-15 .. .. .	6	18	65	453	1,503	4,015	383	19	6,492
Over 15 .. .. .	1	..	..	8	17	104	89	8	227
Total .. .. .	12,727	14,072	30,132	102,175	124,131	123,105	4,181	3,885	414,468

The principal materials used in the construction of private dwellings are wood and bricks, wooden buildings being more numerous in the country districts. In 1921 the number of private dwellings with outer walls built of brick represented 40·2 per cent. of the total, and 48·9 per cent. had wooden walls.

The majority of private dwellings are roofed with iron, which is used for the bulk of the rural dwellings. In the urban areas slate is used more extensively than in the country districts; roofs of tiles are numerous in the metropolitan district, but are rare in the country.

In the metropolitan district the majority of the private dwellings are occupied by tenants, but owing to a great preponderance of owner-occupiers in the country districts approximately one-half of the private dwellings in the State are occupied by owners or by prospective owners purchasing by instalments.

Occupied by—	Private Dwellings.				Per cent. of Total.	
	1911.	1921.			1911.	1921.
		Metro- politan.	Country.	Total.		
Owner ... ..	129,423	43,451	104,032	147,483	49.5	35.6
Purchaser by instalments ...	11,322	25,394	21,559	46,953	3.5	11.3
Tenant ... ..	160,314	99,949	92,525	192,474	50.1	46.4
Other and unspecified ...	18,707	4,528	23,030	27,558	5.9	6.7
Total ... ..	319,766	173,322	241,146	414,468	100	100

The increase in the number of dwellings occupied by persons who are purchasing them by instalments is due to some extent to measures taken by the State and Federal Governments to assist people to acquire homes.

#### *Construction of Dwellings.*

The Local Government Act confers extensive powers on municipal and shire councils for supervising and regulating the construction of buildings, and for promoting schemes of town-planning on modern lines. To assist the councils a Town Planning Advisory Board was appointed by proclamation of the Governor in October, 1918. The Board is engaged with the problems of metropolitan and country urban settlement. A Town Planning Association was formed in 1913 with the object of promoting legislation for the better laying-out of towns and of propagating knowledge of the advantages accruing from and the need for town-planning.

A Board of Architects has been established, in terms of the Architects Act, 1921, for the purpose of regulating the practice of architecture. The Board consists of eight members, including the head of the faculty of architecture in the University of Sydney, the president of the Institute of Architects and of the Architects' Association of New South Wales, and the lecturer in charge of the Department of Architecture at the Sydney Technical College. Persons using the name "architect" are required to be registered, registration being granted to persons over 21 years of age who possess the requisite qualifications. The Act does not apply to naval architects. In January, 1928, there were 674 registered architects.

Brick buildings predominate in the city and suburbs, and local sandstone, and, in recent years, concrete are used to a great extent in the construction of the larger buildings. For suburban dwellings the cottage plan is favoured. The maximum height of buildings in the metropolitan district is limited by law to 150 feet, except in the case of those erected for the purposes of public worship. Outside the city proper, permission must be obtained from the Chief Secretary for the erection of buildings over 100 feet high. The skyline must be approved by him and adequate provision must be made for protection against fire.

In the city of Sydney improvements in regard to housing have been continuous during recent years. In addition to the operations undertaken by private enterprise the City Council has been active in resuming and re-modelling insanitary and congested areas.



The number of new buildings for which permission to erect was granted by the councils in the metropolitan district during the last seven years is shown below; also the estimated cost of the buildings and similar data regarding permits for alterations and additions to new buildings. The particulars relate to business premises, factories, etc., as well as to dwellings:—

Year.	Permits for New Buildings.			Permits for Alterations and Additions.	Estimated Cost.		
	Sydney.	Suburbs.	Total—Metropolis.		New Buildings.	Alterations and additions	Total.
					£000	£000	£000
1921	92	5,475	5,567	4,812	6,405	1,100	7,505
1922	139	8,445	8,584	6,001	8,250	1,051	9,310
1923	186	10,825	11,011	5,895	9,845	1,038	10,883
1924	146	9,873	10,019	6,917	8,742	1,170	9,912
1925	129	10,673	10,802	6,638	9,088	1,079	10,167
1926	169	10,504	10,673	7,621	10,512	1,586	12,098
1927	147	8,891	9,038	10,559	11,278	1,794	13,072

In 1923 there was extraordinary activity in building in the metropolitan area, and the number of new premises for which permits were obtained was nearly double the number in 1921. In the following years also the number of permits was high, though less than in 1923.

The number of permits for new buildings during the year 1927 was lower than in 1926, while permits for additions and alterations show a notable increase. This is due partly to the fact that all garages to be built as annexes to existing premises were classified as additions in 1927, whereas it is probable that a number of such permits were included formerly with those for new buildings.

In the City of Sydney many very large buildings have been erected in recent years on sites where old structures have been demolished, but information is not available as to the cost of buildings for which permits have been granted, the amounts included in the foregoing table having been estimated. In 1927 it was probably over £1,400,000.

If the figures for the various suburbs be given due consideration should be given to such factors as differences in area and in the extent of land available for new buildings, etc. In the populous suburbs adjoining the city there is less scope for expansion than in the larger and less densely populated suburbs in the outer zones. In 1927 the estimated cost of new buildings was greatest in Randwick, viz., 890 permits, estimated cost £1,422,000; and in Canterbury 1,478 permits, cost £1,028,720—these are the largest suburbs and the density in each is less than 8 persons per acre. Next in order were Waverley, 468 permits, £887,600; Woollahra, 186 permits, £663,190; and Ku-ring-gai Shire, 297 permits, £420,000.

The number of permits granted for the erection of new buildings in country municipalities in each year since 1921 is shown below, with the estimated cost of the buildings:—

Year.	New Buildings.		Year.	New Buildings.	
	Permits.	Estimated Cost.		Permits.	Estimated Cost.
		£			£
1921	3,131	1,979,109	1925	7,338	4,312,921
1922	4,629	2,678,399	1926	7,818	4,438,697
1923	6,026	3,759,126	1927	6,463	4,647,941
1924	6,008	3,747,801			

The extent of building operations in various municipalities outside the metropolitan district is indicated by the following statement of the number and value of buildings for which permission to erect was granted during the last three years. Only those municipalities are specified where the estimated cost exceeded £45,000 in any of these years, and the other municipalities are grouped:—

Country Municipalities	Estimated Population 31st Dec., 1924.	1925.		1926.		1927.	
		No.	Value.	No.	Value.	No.	Value.
			£		£		£
Auburn ... ..	17,710	264	149,999	259	141,196	267	156,299
Bankstown ... ..	17,270	446	253,509	522	256,467	756	362,485
Dundas ... ..	4,890	110	50,970	97	64,498	62	66,581
Granville ... ..	16,800	252	171,108	230	154,206	299	278,431
Lidcombe ... ..	13,540	172	114,395	222	117,099	260	157,212
Parramatta ... ..	16,400	112	123,095	122	136,088	109	113,945
Fairfield ... ..	6,970	125	45,465	126	40,321	93	45,050
Holroyd ... ..	12,340	203	117,529	206	173,086	290	190,679
Grafton ... ..	4,750	55	56,650	84	64,360	26	19,924
Lismore ... ..	9,280	56	35,287	59	56,905	74	87,482
Newcastle and suburbs ...	99,850	1,537	989,886	1,520	839,489	1,025	828,660
Cessnock ... ..	13,840	*	*	*	*	157	74,123
Taree ... ..	2,270	37	24,110	53	26,608	43	45,315
Wollongong ... ..	7,580	173	128,812	109	93,630	128	107,211
Katoomba ... ..	10,020	90	67,085	65	44,695	33	36,255
Lithgow ... ..	16,350	80	64,358	124	99,103	96	61,223
Orange ... ..	7,960	85	94,517	65	68,616	91	91,013
Goulburn ... ..	11,940	77	65,420	84	95,454	110	92,516
Queanbeyan ... ..	4,090	292	128,254	328	203,420	138	84,326
Tamworth ... ..	6,960	83	36,851	127	72,466	77	64,525
Dubbo ... ..	5,130	61	41,455	106	87,863	144	125,184
Forbes ... ..	4,680	79	33,752	75	48,496	69	47,190
Parkes ... ..	4,260	44	45,970	31	40,632	45	42,406
Albury ... ..	8,210	102	136,861	117	163,816	146	152,083
Cootamundra ... ..	3,750	59	42,645	90	69,115	62	67,280
Wagga ... ..	8,410	190	94,888	194	129,921	172	140,271
Condobolin ... ..	1,510	21	13,530	39	19,830	51	47,217
Narrandera ... ..	3,370	76	45,242	83	66,752	81	60,901
Other Municipalities ...	251,340	2,457	1,136,278	2,681	1,034,565	1,559	1,002,154
Total ... ..	591,500	7,338	4,312,921	7,818	4,438,697	6,463	4,647,941

\* Not available.

There has been a fairly steady expansion in building in the extra metropolitan areas such as Bankstown and Granville, also in the Newcastle district where there has been marked development in industrial enterprise. In Queanbeyan a notable increase has taken place as a result of the building of the Federal capital city at Canberra, a few miles distant. Particulars relating to the buildings erected within the boundaries of the Federal Capital territory are not included in the foregoing figures.

Particulars are not available regarding the extent of building operations outside the metropolitan area and the country municipalities.

#### ASSISTANCE TO HOME BUILDERS.

##### State Operations.

In view of a shortage of small dwelling-houses in Sydney, the Government took steps in 1912 to supplement the operations of private builders by undertaking the construction in the South Randwick district of a model suburb, which was named Daceyville. The Housing Act was passed to

make provision for the appointment of a Housing Board, and for the purchase and subdivision of land, and the erection of residences. In 1919 the Housing Board was authorised also to assist persons owning land to erect dwellings thereon, and to make advances for the purchase of dwellings already erected.

After the extension of its operations consequent upon this amending legislation, the work of the Housing Board was conducted at a loss, and in 1924 arrangements were made to dissolve the Board, and its powers were vested in the Minister for Local Government with the object of terminating its activities. The business of collecting instalments of purchase money and advances was transferred to the Government Savings Bank. Control of the Dacey Garden Suburb was vested in the Public Trustee, and the lands acquired by the Housing Board and not used for housing purposes were disposed of—the Crown lands by transfer to the Department of Lands and the other allotments by sale.

During the period of its administration the Housing Board erected 818 dwellings and made advances in respect of 516 properties. On 1st April, 1925, the Commissioners of the Government Savings Bank took over 426 accounts representing advances made by the Housing Board, the amount owing thereon being £265,244. During the year ending 30th June, 1926, additional loans numbering 530 were transferred to the Bank, and at the end of the financial year the number of such loans current was 954 for an aggregate amount of £616,717. In the following year the number of loans current was reduced to 927 and the principal outstanding to £587,518.

In addition to the areas acquired in terms of the Housing Act, there is an area in the city, known as the Observatory Hill Resumed Area, which was resumed by the Government in 1900 with a view to reconstruction. It consists of about 30 acres in the oldest settled portion of Sydney, adjoining the wharfs, and contains a number of business premises and residences, including tenements built for waterside workers. Extensive improvements have been made in regard to buildings, streets, etc. The capital expenditure to 30th June, 1927, amounted to £1,374,755. The revenue during the year 1926-27 was £81,540, and the expenditure was £23,666, excluding interest on loan capital, £69,773.

The Municipal Council of the City of Sydney controls three blocks of workmen's dwellings. The Strickland Buildings were opened in April, 1914. They consist of eight shops and 71 self-contained flats of two, four, or six rooms. The rents range from 15s. 6d. to 35s. per week. The Dowling Street Dwellings, opened on 29th June, 1925, consist of 30 flats of four or five rooms, for which the rentals are 26s. and 29s. per week. The Pymont Dwellings were opened on 2nd November, 1925. They contain 41 flats of four or five rooms, and the weekly rentals range from 25s. 6d. to 29s. The total cost of these blocks, including the land, was Strickland £49,814, Dowling Street, £23,000, and Pymont, £33,500.

#### *State Savings Bank—Advances for Homes.*

The Commissioners of the Government Savings Bank may make advances to enable persons to erect or enlarge their homes or to purchase dwellings already constructed. The Bank may advance three-fourths of the value of the property to a maximum of £750, and the repayments in the case of new stone, concrete, or brick buildings are to be made within thirty years, and in the case of wooden structures within twenty years. No advance is made to any person who at the time of the application is the owner of another dwelling in the State.

Owing to the fact that the demand for loans is in excess of the available funds, advances are made only for the purpose of erecting or purchasing new houses. As a general rule, applications for advances must be lodged prior to the commencement of construction so that the work may be supervised by the bank's inspectors throughout its progress.

The system came into operation on the 1st July, 1914, and up to 30th June, 1927, the amount of £12,481,245 had been advanced to 23,954 borrowers, and the amount outstanding at the latter date was £9,244,999, owing by 18,383 persons.

The transactions during each year were as follow:—

Year ended 30th June.	Advances made.		Year ended 30th June.	Advances made.	
	No.	Amount.		No.	Amount.
		£			£
1915	575	221,900	1922	2,377	1,326,270
1916	794	298,375	1923	2,174	1,218,711
1917	783	274,785	1924	2,289	1,335,919
1918	875	311,710	1925	2,673	1,531,775
1919	1,373	530,680	1926	2,724	1,619,650
1920	2,250	1,009,500	1927	2,578	1,519,610
1921	2,489	1,282,360			

The average amount per advance made in 1926-27 was £589. The rate of interest charged for advances was raised from 5½ to 6 per cent. on 1st July, 1917, to 6½ per cent. from 1st July, 1920, and to 7 per cent. from 1st July, 1921. It was reduced to 6½ per cent. on 1st July, 1923, and to 6 per cent. on 1st July, 1926. For current loans at higher interest, the rate was reduced to 6½ per cent. from 1st July, 1925, and to 6¼ per cent. from 1st July, 1928.

#### *Commonwealth Housing Operations.*

The Commonwealth Government assists Australian sailors and soldiers and their female dependants to acquire homes, the operations being conducted under the Commonwealth War Service Homes Act, 1918-27.

The Commissioner charged with the administration of the Act is authorised to acquire land and dwellings, and to erect dwellings, etc. He may make advances on mortgage to eligible persons to enable them to acquire or erect homes, or may sell homes to them on the rent-purchase system. An advance may not exceed 90 per cent. of the value of the property, including the land, in respect of which the loan is made. From 1918 to 1920 the maximum amount of an advance to any one person was £700; in 1920 the Commissioner was authorised to advance up to £800 in special cases, and in 1927 the limit was raised to £950, where necessary in order to accommodate the family or dependents of the person to whom the advance was made. The maximum rate of interest for repayments is 5 per cent.

A summary of the activities of the Commission in New South Wales up to 30th, June, 1927, shows that the Commission had decided to grant 11,090 applications for homes. The number of homes provided at that date was 9,895, viz., 4,903 by the construction of new houses, 4,053 by the purchase of existing dwellings, and 939 by the discharge of mortgages. There were 148 houses under construction at 30th June, 1927, and arrangements were in progress for the erection of 216 houses.

The average cost of construction was £799, excluding the cost of the land, for which the average was £70. The sums paid as instalments of principal and interest to 30th June, 1927, amounted to £2,718,948, and arrears of instalments amounted to £33,395.

The Commonwealth Government acquired a site adjacent to the Small Arms Factory at Lithgow, and erected thereon 100 cottages for housing employees engaged in the factory, to whom they were let at rentals ranging from 14s. 6d to 23s. 3d. per week. In 1927 these houses were transferred to the War Service Homes Commission for sale.

In December, 1927, the Commonwealth Parliament passed legislation—to commence on a date to be proclaimed—to authorise the Commonwealth Savings Bank to advance moneys, through the agency of a federal, territorial, State or municipal authority, for the purchase or erection of dwellings, and for the discharge of mortgages on houses. The maximum advance to any one person is fixed by the Commonwealth Housing Act at £1,800, or 90 per cent. of the valuation of the property in respect of which the advance is to be made. Persons in receipt of an income exceeding £12 per week may not obtain an advance under this Act.

#### PARKS, RECREATION RESERVES, AND COMMONS.

Under the Public Parks Act the Governor may appoint trustees of any lands proclaimed for the purposes of public recreation, convenience, health, or enjoyment. The trustees are empowered to frame by-laws for the protection of shrubs, trees, etc., upon the land vested in them, and to regulate the use and enjoyment of such land by the public.

The public parks and recreation reserves which are not committed to special trustees are placed by the Local Government Act, 1919, under the control of municipal and shire councils, whose authority extends over parks, children's playgrounds, drill grounds, sports grounds, and public gardens within their boundaries. The councils are empowered to preserve places of historical and scientific interest and natural scenery, and to provide buildings for public entertainments and refreshment-rooms, boats and boat-sheds, pavilions, etc., public baths, gymnasias, and musical entertainments. All the towns of importance possess extensive parks and recreation reserves.

The city of Sydney contains within its boundaries 647 acres of parks, squares, and public gardens. The most important are Moore Park, where about 354 acres are available for public recreation, including the Sydney Cricket Ground and the Royal Agricultural Society's Ground; the Botanic Gardens and Garden Palace Grounds, 65 acres, with the adjoining Domain of 86 acres, ideally situated on the shores of the Harbour; and Hyde Park, 37 acres, in the centre of the city. In addition, the Centennial Park, 552 acres in extent, is situated on the outskirts of the city. It was reserved formerly for the water supply, but now it is used for recreation, the ground having been cleared, planted, and laid out with walks and drives.

It has been ascertained that there are over 6,000 acres of public parks and reserves in suburban municipalities. This figure representing about 6 per cent. of their aggregate area is exclusive of some parks and reserves which the municipalities have acquired by gift or by purchase from private owners.

The Zoological Gardens at Taronga Park, on the northern side of the Harbour, were opened in 1916. The area is nearly 51 acres. In their preparation the natural formation has been retained as far as practicable, with the object of displaying the animals in natural surroundings. An aquarium has been built within the gardens.

Outside the metropolitan area the National Park, situated about 16 miles south of Sydney, was dedicated in December, 1879. The total area, with the additions made in 1880 and 1883, is 33,800 acres. The park surrounds the picturesque bay of Port Hacking, and extends in a southerly direction towards the mountainous district of Illawarra. It contains fine virgin forests with attractive scenery.

Another large tract of land, the Kuring-gai Chase, was dedicated in December, 1894, for public use. The area of the Chase is 35,300 acres, and contains portions of the parishes of Broken Bay, Cowan, Gordon, and South Colah. This park lies about 15 miles north of Sydney, and is accessible by railway at various points, or by water, *via* the Hawkesbury River. Several creeks, notably Cowan Creek, intersect it.

In 1905 an area of 248 acres was proclaimed as a recreation ground at Kurnell, on the southern headland of Botany Bay, a spot famous as the landing-place of Captain Cook. Parramatta Park (252 acres) is of historic interest.

Surrounding many country towns there exist considerable areas of land reserved as commons, on which stock owned by the townsfolk may be depastured. The use of these lands is regulated by local authorities. Nominal fees are usually charged to defray the cost of supervision and maintenance. Many of these commons are reserved permanently, but a large number are only temporary.

The available particulars as to the areas reserved for parks and recreation reserves and for temporary commons at 30th June, 1911, and in the last seven years, are shown below:—

As at 30th June.	Commons.		Parks and Recreation Reserves. †
	Permanent.	Temporary.	
	acres.	acres.	acres.
1911	*	573,183	218,839
1921	*	467,554	228,169
1922	37,445	455,221	229,416
1923	37,485	442,177	231,950
1924	33,040	426,761	237,934
1925	36,031	412,052	235,911
1926	35,891	404,730	240,229
1927	37,641	394,675	247,315

\* Information not available.

† Excluding alienated lands acquired by Councils or donated by private persons.

The area of permanent commons at 30th June, 1927, was 37,641 acres, including 4,259 acres in the Western Division.

#### PUBLIC ENTERTAINMENTS.

##### *Theatres and Public Halls, etc.*

Buildings in which public meetings (excluding meetings for religious worship) or public entertainments are held, must be licensed under the Theatres and Public Halls Act, 1908. A license may be refused if proper provision is not made for public safety, health, and convenience, or if the site or building is unsuitable for the purpose of public meeting or entertainment. Plans of buildings intended to be used for theatres and public halls must be approved by the Chief Secretary before erection is begun. Licenses are granted for a period of one year, and premises

are subjected to inspection before renewal. A license or renewal of a license may be withheld until such alterations or improvements as may be deemed necessary are effected.

As at 31st December, 1927, there were 2,462 buildings to which the provisions of the Act applied, and they contained seating accommodation for approximately 1,112,000 persons. The total amount of fees received for licenses during 1927 was £4,281.

Cinematograph films are subject to censorship prior to exhibition in New South Wales, those imported from oversea countries being reviewed by the Commonwealth customs authorities, and those made in Australia by a State board.

#### *Horse-racing.*

Horse racing, which includes pony racing and trotting races, is a popular form of sport in New South Wales, and with it is associated a large amount of betting.

The conduct of race meetings is regulated mainly by district associations, with which most of the racing clubs are affiliated, and a certain amount of Government control is exercised through the Gaming and Betting Act, 1912. Racecourses must be licensed annually, the minimum circumference of running grounds being fixed at 6 furlongs. The days on which races may be held are limited, and the maximum number of licenses which may be issued in respect of racecourses, within 40 miles of the General Post Office, Sydney, is thirteen, and within 40 miles of the principal post office, Newcastle, nine.

If a racecourse is used for more than one class of racing—horse racing, pony racing, or trotting—a separate license must be obtained for each class. In 1927 the licensed racecourses numbered 407, and the licenses issued in respect thereto numbered 470. The maximum number of days on which it was permissible to hold race meetings in the metropolitan district during 1927 was 196, and in the district of Newcastle 90 days.

Betting or wagering is prohibited in connection with any sports except horse, pony, and trotting races on licensed racecourses, and coursing on grounds approved by the Chief Secretary, and betting or wagering after sunset on licensed racecourses or coursing grounds is illegal. Racing clubs may be required by the Colonial Treasurer to instal totalisators on their racecourses and to use them at every race meeting.

To facilitate the collection of betting taxes, bookmakers are required to use stamped tickets and to keep a record of credit bets. During the year ended 30th June, 1927, the number of betting tickets issued to bookmakers was 15,690,000, and approximately 900,000 credit bets were recorded. The investments on totalisators during the same period amounted to £2,667,698. In the previous year 14,736,000 betting tickets were issued, approximately 900,000 credit bets were recorded, and the totalisator investments amounted to £2,700,844. The amount of totalisator investments has decreased by 19.3 per cent. since the year 1920-21. Particulars relating to taxes in connection with racing are shown in the chapter relating to Public Finance.

#### *Taxation of Public Entertainments.*

A tax on public entertainments has been imposed by the Commonwealth Government since 1st January, 1917, the rate of tax being based upon the amount paid for admission.

From 1st December, 1919, to 1st October, 1922, the tax was charged on the payments for admission at the rate of  $\frac{1}{4}$ d. for each 6d. or fraction thereof; but it was not charged on payments not exceeding 5d. for the admission of children under 16 years of age to places of continuous enter-

tainment, *i.e.*, those open for more than four hours on three or more days in the week, nor for admission to entertainments intended only for children if the charge was under 6d. As from 2nd October, 1922, payments lower than 1s. were exempted from the tax, and since 15th October, 1925, tax has not been payable where the price of admission is less than 2s. 6d.

Where payment for admission is made in the form of a lump sum as a subscription to a club or association, or for a season ticket, the tax is collected on the amount of the lump sum. Certain entertainments are exempt from the tax, *e.g.*, if the proceeds are devoted wholly to philanthropic, religious, charitable, or educational purposes.

The number of taxable entertainments held in New South Wales during each of the last three years is shown below:—

Year ended June.	Racing.	Theatrical.	Picture Shows.	Dancing and Skating.	Concerts.	Miscellaneous.	Total.
1924	1,663	7,744	65,288	20,046	1,350	10,389	106,490
1925	1,530	7,700	71,726	21,430	1,157	8,339	111,882
1926	1,395	6,401	27,538	9,687	783	4,930	50,734

The decrease in 1925-26 was due to the exemption from taxation of payments between 1s. and 2s. 6d., which were taxable in the preceding years. The amount of tax collected in respect of entertainments in the State was £274,791 during 1924-25, £181,735 in 1925-26, and £146,464 in 1926-27.

#### REGULATION OF LIQUOR TRADE.

The sale of intoxicating liquor is subject to regulation by the State Government in terms of the Liquor Act of 1912 and subsequent amendments. The sale of intoxicating liquor except by persons holding a license is prohibited. Several kinds of licenses are granted, *viz.*, publican's, packet, Australian wine, club, booth or stand, and railway refreshment room, all of which authorise the sale of liquor in small quantities; and spirit merchant's and brewer's for the sale in larger quantities.

A publican's license authorises the licensee to sell liquor between the hours 6 a.m. and 6 p.m. on the premises named in the license.

Packet licenses authorise the master of the vessel named in the license to sell liquor to passengers during the voyage. Packet licenses are not available on any vessel plying between places within the harbour of Port Jackson.

Australian wine licenses authorise the licensee to sell on the premises specified between the hours 7 a.m. and 6 p.m. wine, cider, or perry, the produce of fruit grown in Australasia, in quantities not exceeding 2 gallons and not containing a greater proportion than 35 per cent. of proof spirit. In granting an Australian wine license, the Court may impose the condition that the liquor shall not be consumed on the premises.

Booth or stand licenses authorise the licensee to sell liquor at sports or any lawful place of public amusement on a particular day or days specified in the license.

A spirit merchant's license authorises the holder to sell liquor in quantities of not less than 2 gallons of the same kind. A brewer's license authorises the licensee to carry on the trade of a brewer, and to sell the



liquor he is authorised to make, in quantities of not less than two gallons of the same kind. If a person wishes to carry on the business of a brewer in addition to that of a spirit merchant he must take out both kinds of license.

The licenses in respect of railway refreshment rooms are issued under Executive authority, and the other licenses by Licensing Courts constituted for the purpose.

Three police or stipendiary magistrates appointed as licensing magistrates constitute the licensing court in each district throughout the State, and they discharge the functions of the Licenses Reduction Board, which are described later. One of the magistrates is chairman of the courts and of the board. The chairman and one other licensing magistrate form a quorum for the constitution of the Licensing Court, and any two members may exercise all powers of the board. The licensing magistrates, with the approval of the Minister of Justice, may delegate power in respect of granting a license to any two of their number and a stipendiary or police magistrate, and may delegate minor functions to one or more of their number or to a stipendiary or police magistrate.

Objections to the granting, renewal, transfer, or removal of licenses may be made to a licensing court by three or more residents of the district or by the police. Licenses may not be held by unmarried women. They may be granted to widows, and, under certain conditions, to married women, but an Australian wine license may not be issued to a woman other than the widow of a licensee.

The hours of liquor trading in hotels, which since 1881 had been from 6 a.m. to 11 p.m., were reduced in 1916, when the closing hour was fixed at 6 p.m. In March, 1927, amending legislation authorised the sale of liquor to be consumed with meals in hotels between 6 p.m. and 9 p.m. For this purpose the licensee is required to obtain a special permit. On any special occasion the Court may extend the permit to an hour and a room specified in the permit as extended. Under similar conditions liquor may be sold on the premises of registered clubs.

In recent years restrictions have been placed upon the number of licenses. In 1905 it was enacted that the number of publicans' and wine licenses should not exceed the number existing in each electorate as at 1st January, 1906, and the number of licensed clubs was limited to the number formed before 1st November, 1905, of which the licenses were in force on 1st March, 1906.

Under the Liquor Amendment Act of 1919 and subsequent amendments, it is provided that no new publican's or Australian wine license may be granted, except on the grounds of a permanent increase of population and insufficiency of existing licensed premises to meet public requirements in the district, and then only on a petition signed by a majority of adult residents living within the radius of a mile from the premises for which a license is sought.

If a petition for a new license has been rejected by the licensing court, no petition for a license for any premises within a radius of a mile may be referred to the court until the expiration of three years unless there has been an abnormal increase in population in the area.

A publican's or Australian wine, or a spirit merchant's license, may not be removed from one licensing district to another. The licensing court may allow such a license to be removed to other premises within a radius of one mile in the same licensing district, but in the Metropolitan and Newcastle licensing districts a license may not be removed from one electorate to another.

A Licenses Reduction Board, appointed under the Act of 1919, may reduce the number of publicans' licenses in any electorate where the existing licenses exceed the "statutory number," which is proportionate to the number of electors. For the purposes of the liquor licensing laws, the electorates are those which existed before they were rearranged in 1927 on the basis of single-member districts, and the statutory number of publicans' licenses is as follows:—In the nine electorates for which five members were returned to the Legislative Assembly, one license for each 250 of the first thousand electors on the electoral roll, and a further three for each subsequent two thousand; and in the fifteen electorates for which three members were returned, one license for each 250 of the first thousand electors, and a further one for each subsequent five hundred.

The Board may not reduce the publicans' licenses in an electorate below the statutory number nor by more than one-fourth of the number in force on 1st January, 1920. The term of the Board's operations was fixed in 1919 at three years; in December, 1922, it was extended for a further period of three years, and in 1923, until the taking of a referendum on the question of prohibition on 1st September, 1928.

The Board is charged also with the duty of reducing the Australian wine licenses. The number of such reductions in an electorate may not exceed one-fourth of the number of wine licenses in force on 1st January, 1923, unless the Board considers that a greater reduction is necessary in the public interest.

In determining the licenses which shall cease, the Board takes into consideration the convenience of the public, the requirements of the several localities in the electorate, the class of accommodation provided, and the manner in which the business has been conducted.

When deprived of their hotel licenses the holders, owners, lessees, etc., of the premises are entitled to compensation as assessed by the Board. In the case of wine licenses, the licensees are only entitled to compensation. The funds for compensation and the costs of administration were obtained by a levy on the amount spent by the licensees in purchasing supplies of liquor. For hotel licenses the levy was at the rate of 3 per cent., of which the licensee paid one-third and the owner two-thirds. For Australian wine licenses the rate was 1 per cent. In cases where the owner's share of the compensation levy exceeded one-third of the rent the Board was empowered to refund to him the amount of the excess. Payments to the compensation fund were discontinued as from 31st December, 1926, because the credit balance of the fund at that date exceeded the amount required to meet all claims in respect of reductions and the cost of administration for a number of years.

A licensee deprived of his license by the Board is paid as compensation for each year of the unexpired term of his tenancy (up to three years), the average annual net profit during the preceding period of three years. Owners, lessees, etc., of hotel premises receive compensation based on the amount by which the net return from the premises over a period of three years is diminished by being deprived of a license. Appeals against the determinations of the Board in respect of the compensation awarded may be made to the Land and Valuation Court.

On 1st January, 1920, the number of publicans' licenses in existence was 2,539, of which 2,085 were in fourteen electorates with more than the statutory number, and the maximum reduction which the Act authorised the Board to make was 483. During 1923 the number of electors so increased in two of the electorates, viz., Byron and Oxley, that the number of licenses was no longer in excess of the statutory number. A decrease in population

placed the Balmain electorate within the jurisdiction of the Licenses Reduction Board in 1925, and for a similar reason the Oxley electorate was restored to its jurisdiction in 1926.

During the period of eight years ended December, 1927, the Board deprived 288 hotels of licenses and accepted the surrender of 74 licenses. Seventy-one of the hotels were situated in the Sydney electoral district, 23 in the electoral district of Newcastle, and 268 in other country districts. The compensation awarded in respect of 361 publicans' licenses amounted to £604,055, distributed as follows:—Licensees, £210,420; owners, £362,457; lessees, £10,778; and sub-lessees, £400. Compensation has not been determined in respect of one hotel. The compensation fees collected by the Board up to 31st December, 1926, when contributions ceased, amounted to approximately £1,500,000.

In addition to the hotel licenses terminated or ordered to close by the action of the Licenses Reduction Board, 63 licenses were terminated during the eight years 1920-1927 by reason of expiration, cancellation, surrender to the Licensing Courts, etc., and 26 new licenses were granted during the period. The number of hotel licenses in existence at 31st December, 1927, was 2,140, of which 531 were in the Metropolitan Licensing district, 51 in the Parramatta district, 116 in Newcastle, 60 in Maitland, and 53 in Broken Hill district.

On 1st January, 1923, there were 441 Australian wine licenses, of which 220 were in the metropolitan electoral districts. During the five years, 1923-27, the Board deprived 61 licensees of wine licenses, and accepted the surrender of five licenses. Compensation in respect of 65 licenses amounted to £53,130, and compensation was not claimed in respect of one license.

Eight wine licenses terminated by reason of expiration, cancellation, etc., and 2 new licenses have been granted since 1st January, 1923. The number in existence at the end of 1927 was 369.

The number of licenses for the sale of intoxicating liquor issued during various years since 1901 is shown below:—

Licenses.	1901.	1911.	1921.	1925.	1926.
Publicans' ... ..	3,151	2,775	2,488	2,226	2,191
Additional Bar ... ..	...	118	153	194	205
Club ... ..	...	76	78	79	79
Railway Refreshment ... ..	22	24	29	30	31
Booth or Stand ... ..	1,787	1,829	2,337	2,442	2,481
Packet ... ..	20	24	13	10	10
Australian Wine, Cider, Perry ...	675	532	450	387	397
Spirit Merchants' ... ..	225	198	244	248	253
Brewers' ... ..	53	39	17	12	10

The annual fees payable for new licenses in respect of hotels, packets, and Australian wine are assessed by the Licensing Court, the maximum fees being £500, £20, and £50 respectively. Clubs pay £5 per annum for the first 40 members, and £1 for each additional forty. Spirit merchants pay £30 in the metropolitan district and £20 elsewhere. For renewals of these licenses the annual fees have been assessed by the Licenses Reduction Board at the rate of 2 per cent. of the amount spent by the licensees in the purchase of liquor during the preceding calendar year, except that spirit merchants do not pay on the liquor sold by them to persons licensed to sell liquor, and they pay a minimum fee of £30 in the metropolitan district and £20 else-

where. By an amending Act passed in June, 1928, the fee for the renewal of publicans' licenses has been increased to 5 per cent. of the amount spent in the purchase of liquor. The owner of the premises is liable for two-fifths of the fee, but if his share exceeds one-third of the rent he may obtain a refund of part or the whole of the excess as determined by the Board.

The fees for licenses in respect of railway refreshment rooms are charged at the same rates as those for publicans' licenses.

The fees assessed for the various classes of licenses, for which fees are based on the purchases by the licensees during the preceding year, amounted to £184,564 in 1926, and to £194,748 in 1927:—

Licenses.	License fees assessed.	
	1926.	1927.
	£	£
Publicans' ... ..	163,173	172,313
Club ... ..	3,457	3,604
Railway Refreshment ... ..	1,250	1,371
Packet ... ..	50	54
Australian Wine ... ..	6,950	7,178
Spirit Merchants' ... ..	9,684	10,228

In addition to the annual license fees, compensation fees, as shown on page 171, were payable by holders of publicans' and Australian wine licenses during the years 1920 to 1926, inclusive.

Brewers pay £50 per annum in the metropolitan district and £25 in other districts. For booth and stand licenses, which are temporary permits granted to licensed publicans for the sale of liquor at places of public amusement, fees have been charged at the rate of £2 for each period up to seven days. This fee was altered in June, 1928, to £2 per day.

The fees for brewers' licenses amounted to £325 in 1926, and for booth and stand licenses £4,960.

The Liquor Act of 1922 prescribes that all licenses, except booth and stand, must be renewed on 1st July of each year. Previously they were current for the term of one year from the date on which they were granted.

#### *Prohibition Referendum.*

On Saturday, 1st September, 1928, a vote of the electors is to be taken upon the question whether prohibition with compensation shall come into force throughout New South Wales. At the referendum all persons qualified to vote at the elections of members of the Legislative Assembly will be required to record their votes, subject to a penalty of £2 for failure to do so without reasonable excuse.

If an absolute majority of the votes be recorded in favour of the continuance of licenses the trade in alcoholic liquors will continue to be regulated under the Liquor Act and its amendments.

If an absolute majority be in favour of prohibition with compensation the determination will come into force on 1st July, 1930, or upon such earlier date as is fixed by the Governor, and as far as practicable compensation will be paid before the commencement of prohibition. All licenses will lapse, and while prohibition is in force it shall not be lawful to grant or renew a liquor license of any description.

It will be an offence to manufacture or sell or have possession of any alcoholic liquor, or to import it into New South Wales, except for medicinal, scientific, sacramental, or industrial purposes in accordance with regulations

made by the Governor. The maximum penalty for a breach of this section of the Act is a fine of £100 for a first offence, and a fine of £200 or imprisonment up to three months for any subsequent offence. In the case of a body corporate the maximum penalty is fixed at £200 for a first, and £1,000 for a subsequent offence.

In the event of prohibition coming into force compensation will be provided out of moneys appropriated by Parliament, the responsible Minister of the Crown being authorised to borrow for the purpose. Particulars regarding the persons who will be entitled to compensation and the grounds on which it will be assessed are summarized briefly in the following statement:—

**Brewers, Distillers.**—Depreciation of the value of lands and buildings occupied and plant and machinery used; termination of trade.

**Maltsters.**—Depreciation of the value of lands, buildings, plant and machinery owned by them and used for the manufacture of malt for mercantile purposes within a period of two years preceding the referendum; termination of trade.

**Winemakers.**—Depreciation of the value of land and buildings; depreciation of the value of plant and machinery used for winemaking within one year preceding the referendum; termination of trade if the winemaker has manufactured wine for sale within one year preceding the referendum; depreciation (if any) of the value of stocks of wine.

**Owners, lessees and sublessees of hotel premises.**—Depreciation of the value of the estate or interest in the premises, and depreciation of the value of plant, etc., according to the interest of the claimant.

**Owners, lessees, or sublessees of vineyards.**—Depreciation of the value of the freehold where the output of grapes has been used principally for wine-making within the period of two years preceding the referendum.

**Licensed publicans.**—Termination of trade.

**Holders of Australian wine, packet, and spirit merchants' licenses.**—Termination of trade, and depreciation in value of machinery and plant.

The compensation for depreciation of the value of land and buildings may not exceed half the capital value, and the maximum for termination of trade is three times the average annual net profit received by the claimant for the period (not exceeding three years) during which he was licensee before the commencement of prohibition.

In the event of prohibition compensation may be claimed also in respect of loss of opportunity of occupation by persons engaged regularly for a period of at least eighteen months before the referendum, in connection with the manufacture of or trade in alcoholic liquors as employees of brewers, distillers, wine-makers, maltsters, owners, or of lessees of vineyards, licensed publicans, or holders of Australian wine, packet, or spirit merchants' licenses. Compensation to an employee may not exceed half his salary or wage for the year before the referendum, or if he had board and lodging from his employer in addition to salary or wage, the whole year's remuneration actually received in money.

For the determination of claims for compensation other than claims by employees the Governor may establish a number of courts, each consisting of a stipendiary or police magistrate as president, and two assessors. The determination of any two members will decide a claim, but if no two members agree, the president will decide it. A stipendiary or police magistrate sitting alone will hear employees' claims for compensation.

A Board was appointed in 1920 to assess the amount required for compensation in the event of prohibition, and in a report dated 16th December, 1920, the following estimate was made:—

Compensation to—	Amount.
	£
Brewers and maltsters .. .. .	2,845,617
Winemakers (including distillers) and vigneron	1,104,207
Owners and lessees of hotel premises .. .. .	5,416,657
Licensed publicans .. .. .	2,385,557
Holder of Australian wine licenses and spirit merchants	858,441
	£12,610,479

The estimate did not include any amount for the compensation of employees, which the Board did not assess owing to lack of data. It should be noted that the assessment was based on values and profits of the years immediately preceding June, 1920, eight years ago.

A referendum on the question of prohibition throughout the State has not yet been taken in New South Wales, but local option votes were taken at three general elections of the Legislative Assembly between 1907 and 1913. The proposals submitted to the electors in each electoral district were as follows:—

- (a) that the number of existing licenses be continued;
- (b) that the number of existing licenses be reduced;
- (c) that no licenses be granted in the electorate.

To carry resolution (c) it was required that the votes in favour must represent three-fifths of the total number polled, and where this resolution was not carried the votes recorded for it were added to those given for resolution (b). In electorates where the majority of votes was in favour of reduction the licenses might be reduced by one-fourth, and if the "no license" resolution had been carried the licenses in the electorate would have been terminated within three years.

A summary of the results of the voting is shown below:—

Year.	Electorates where result was in favour of—		Votes recorded for—			Proportion of total votes for—		
	Continuance.	Reduction.	Continuance.	Reduction.	No-license.	Continuance.	Reduction.	No-license.
1907	25	65	209,384	75,706	178,580	per cent. 45.16	per cent. 16.33	per cent. 38.51
1910	76	14	324,973	38,856	212,889	56.35	6.74	36.91
1913	75	15	380,707	44,453	245,202	56.79	6.63	36.58

The resolution that no licenses be granted was not carried in any electorate. The valid votes recorded represented 62 per cent. of the electors on the roll in 1907, 66 per cent. in 1910, and 65 per cent. in 1913.

#### *Consumption of Intoxicants.*

It is estimated that the consumption of intoxicating liquors in New South Wales during the year ended June, 1927, was as follows:—Spirits, 1,132,600 proof gallons; beer, 27,841,000 gallons; and wine, 1,689,000 gallons. The quantity of spirits was less by 27,300 gallons than in the previous year; the quantity of beer was greater by 1,751,000 gallons, and of wine by 192,000 gallons.

The figures show the proof alcoholic contents of the beverages sold as spirits, and the actual quantities would be at least 25 per cent. greater. Proof spirit means spirit of a strength equal to that of pure ethyl alcohol compounded with distilled water so that the resultant mixture at a temperature of 60 deg. Fahrenheit has a specific gravity of 0.91976 as compared with that of distilled water at the same temperature. Whisky and brandy of the best quality are retailed usually at about 23.5 per cent. under proof, and gin and rum at about 30 per cent. under proof. The standards under the Pure Food Act are whisky and brandy 25 per cent. under proof, gin and rum 35 per cent. under proof.

The natural strength of Australian wines is from 26 per cent. to 28 per cent. of proof spirit. The strength of wines offered for sale is 35 per cent. of proof spirit in the case of fortified wines, e.g., port, claret, sherry; and from 20 to 24 per cent. in the case of dry wines, such as hock, chablis.

The consumption of spirits, Australian and imported, in various years since 1901 is estimated to have been as follows:—

Year.	Aggregate Consumption of Spirits.			Per Head of Population.		
	Australian.	Foreign.	Total.	Australian.	Foreign.	Total.
	proof gallons.	proof gallons.	proof gallons.	proof gallons.	proof gallons.	proof gallons.
1901	12,400	1,233,300	1,245,700	.01	.89	.90
1911	194,300	1,337,800	1,532,100	.12	.80	.92
1920-21	451,100	456,500	907,600	.22	.21	.43
1921-22	391,600	513,400	905,000	.19	.24	.43
1922-23	407,500	558,800	966,300	.19	.25	.44
1923-24	456,800	616,100	1,072,900	.21	.28	.49
1924-25	447,700	678,100	1,125,800	.20	.30	.50
1925-26	489,800	670,100	1,159,900	.21	.29	.50
1926-27	493,500	639,100	1,132,600	.21	.27	.48

The consumption of spirits per head in 1920-21 was 53 per cent. lower than in 1911. The decline has been in the quantity of foreign spirits, as more Australian spirits are consumed now than formerly. The recent figures indicate only a slight variation in consumption and the average remains much lower than in the earlier years.

The consumption of beer as estimated for 1901 and subsequent years is shown below:—

Year.	Quantity of Beer consumed.			Per Head of Population.		
	Australian.	Imported.	Total.	Australian.	Imported.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1901	13,118,300	1,757,900	14,876,200	9.60	1.28	10.88
1911	18,332,900	1,200,100	19,533,000	11.01	.72	11.73
1920-21	25,163,500	129,800	25,293,300	12.04	.06	12.10
1921-22	24,412,000	54,000	24,466,000	11.47	.03	11.50
1922-23	24,192,600	108,800	24,301,400	11.13	.05	11.18
1923-24	23,758,500	115,100	23,873,600	10.75	.05	10.80
1924-25	23,973,300	129,100	24,102,400	10.64	.06	10.70
1925-26	25,946,000	144,000	26,090,000	11.29	.06	11.35
1926-27	27,698,000	143,000	27,841,000	11.79	.06	11.85

The consumption of beer per head decreased by nearly 12 per cent. during the five years ended June, 1925, but it rose by 6 per cent. in 1925-26, and by 4 per cent. in 1926-27. Nearly all the beer consumed is brewed in Australia.

The wine entering into consumption in New South Wales is chiefly the produce of Australian vineyards, less than 3 per cent. being imported.

Year.	Consumption of Wine.					
	Aggregate.			Per Inhabitant.		
	Australian.	Foreign.	Total.	Australian.	Foreign.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1901	706,000	94,000	794,000	·51	·07	·58
1911	908,700	57,900	966,600	·55	·03	·58
1920-21	1,480,100	21,500	1,501,600	·71	·01	·72
1921-22	1,312,500	22,600	1,335,100	·62	·01	·63
1922-23	1,358,600	24,000	1,382,600	·63	·01	·64
1923-24	1,335,700	27,000	1,362,700	·61	·01	·62
1924-25	1,408,600	29,900	1,438,500	·63	·01	·64
1925-26	1,466,000	31,000	1,497,000	·64	·01	·65
1926-27	1,641,000	48,000	1,689,000	·70	·02	·72

The consumption of wine per head of population is nearly 25 per cent. greater now than in 1911.

The following statement shows the consumption per head of intoxicating liquors in Australia and New Zealand at the latest date for which the information is available:—

Country.	Spirits.	Wine.	Beer.
	gallons.	gallons.	gallons.
New South Wales ... 1926-27	·48	·72	11·85
South Australia ... 1926-27	·32	·75	11·27
Western Australia ... 1926-27	·43	·96	14·23
Tasmania ... 1926-27	·25	·20	6·74
Australia ... 1925-26	·44	·50	11·34
New Zealand ... 1926	·47	·17	9·16

#### *Expenditure on Intoxicants.*

The amount of money expended by the public on intoxicating liquors in New South Wales in the year ended 30th June, 1927, is estimated to have been £13,220,000, or £5 12s. 7d. per head. The expenditure, as estimated for various years since 1901, is shown below:—

Year.	Expenditure on Intoxicants.		Year.	Expenditure on Intoxicants.	
	Total.	Per Head of Population.		Total.	Per Head of Population.
	£	£ s. d.		£	£ s. d.
1901	5,000,000	3 13 2	1923-24	11,349,000	5 2 8
1911	5,962,000	3 11 7	1924-25	11,670,000	5 3 7
1920-21	11,034,000	5 5 7	1925-26	12,633,000	5 9 11
1921-22	10,671,000	5 0 2	1926-27	13,220,000	5 12 7
1922-23	11,054,000	5 1 9			



The increase in the expenditure between 1911 and 1920-21 was due mainly to higher prices, though there was also an increase in consumption of beer and of wine. A decline in 1921-22 reflects diminished consumption. In the following year the consumption of spirits began to increase and the expenditure rose steadily, but the average expenditure per head did not reach the former level until 1925-26, when there was a general increase in the quantity consumed, and a rise in the price of imported whisky in consequence of an addition of 5s. per gallon to the rate of Customs duty. The increase in 1926-27 was due to the larger quantities of beer and wine consumed rather than to higher prices.

### *Drunkeness.*

Persons apprehended by the police for drunkenness in public places may be charged in the Courts of Petty Sessions. Since September, 1916, it has been the practice in the metropolitan police district to release such persons before trial if they deposit as bail an amount equal to the usual penalty imposed. If they do not appear for trial the deposits are forfeited, and further action is not taken.

During the year 1927 the number of persons charged with drunkenness was 33,011, of which 2,206 were females. In the cases of 331 males and 31 females the charges were withdrawn or dismissed, 19,013 males and 1,035 females were convicted after trial by the Courts, and 11,461 males and 1,140 females, who did not appear for trial, forfeited their bail. The following statement shows the number of convictions for drunkenness, including the cases in which bail was forfeited during each of the seven years, 1921-1927:—

Year.	Convictions.		Bail Forfeited.		Total Cases.			Cases per 1,000 of mean population.
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	
1921	18,525	1,172	8,233	772	26,758	1,944	28,702	13.61
1922	19,384	1,327	9,050	962	28,434	2,289	30,723	14.23
1923	20,351	1,625	10,093	869	30,444	2,494	32,938	15.02
1924	20,897	1,542	7,990	831	28,887	2,373	31,260	14.02
1925	18,795	1,416	8,928	1,021	27,723	2,437	30,160	13.25
1926	18,736	1,202	10,238	1,185	28,974	2,387	31,361	13.51
1927	19,013	1,035	11,461	1,140	30,474	2,175	32,649	13.75

Relatively to the population, the number of convictions for drunkenness increased between 1921 and 1923 and decreased in later years, though the proportion in 1926 and 1927 was slightly higher than in 1925.

### *The Treatment of Inebriates.*

The Inebriates Act was designed to provide treatment for two classes of inebriates—those who have been convicted of an offence, and those who have not in this way come under the cognisance of the law.

For the care and treatment of the latter class, the Act authorises the establishment of State institutions under the control of the Inspector-General of Insane. Judges, police magistrates, and the Master-in-Lunacy may order that an inebriate be bound over to abstain, or that he be placed in a State or licensed institution, or under the care of an attendant controlled by the Master-in-Lunacy, or of a guardian, for a period not exceeding twelve months. Provision is made also to enable an inebriate to enter voluntarily into recognisances to abstain.

An inebriate convicted of an offence of which drunkenness is a factor, or, in certain cases, a contributing cause, may be required to enter into recognisances for a period of not less than twelve months, during which he must report periodically to the police; or he may be placed in a State institution under the direction of the Comptroller-General of Prisons.

Special provision has been made, at the State Penitentiary, for men, and, at the State Reformatory, for women detained under the Inebriates Act, who have been convicted previously for other offences. Since March, 1915, those of the non-criminal class have been treated at a separate establishment, the Shaftesbury Inebriate Institution, which is also under the control of the prison authorities.

The majority of persons admitted to the institutions have been chronic offenders over 40 years of age. During the period dating from the first reception in August, 1907, to 30th June, 1927, the total number of original receptions amounted to 1,642—737 men and 905 women. Licenses for release numbered 2,132, viz.:—856 men, and 1,276 women; 277 issued to men and 512 to women were cancelled, and the licenses recommitted to institutions.

The number of persons admitted to the inebriate institutions from the courts during the year ended 30th June, 1927, was 105, viz., 67 men and 38 women, and 15 men and 8 women who had been released on license were re-admitted. Including those in custody at the beginning of the year, 106 males and 71 females were under treatment. Fifty men and 31 women were released on license, 15 men and 15 women were discharged on expiration or rescission of orders and 37 men and 23 women remained in the institutions at 30th June, 1927.

In 1917 arrangements were made for the admission of voluntary paying patients to the Shaftesbury Institution. These patients may, under certain conditions, leave the institution daily to follow their usual occupation. During the year ended 30th June, 1927, 31 men and 31 women were admitted as voluntary patients, and 5 men and 10 women remained in the institution at 30th June, 1927.

The total expenditure on inebriate institutions during the year 1926-27 amounted to £4,707.

#### CONSUMPTION OF TOBACCO.

Under an Act passed in 1884 in connection with the imposition of an excise tax, of which most of the provisions have been superseded by Federal legislation, persons who sell tobacco in New South Wales are required to obtain a license, for which an annual fee of 5s. is charged. The number of licenses issued in 1926 was 20,023. The sale of tobacco to juveniles under the age of 16 years is prohibited.

The quantity of tobacco consumed in New South Wales, as estimated at intervals since 1901, is shown in the following statement:—

Year.	Total Consumption (000 omitted).				Per Head of Population.			
	Tobacco.	Cigars.	Cigarettes.	Total.	Tobacco.	Cigars.	Cigarettes.	Total.
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1901	2,977	215	368	3,560	2·18	·15	·27	2·60
1911	3,827	271	1,076	5,174	2·30	·16	·65	3·11
1920-21	4,370	273	1,958	6,601	2·09	·13	·94	3·16
1921-22	5,039	252	1,855	7,146	2·37	·12	·87	3·36
1922-23	4,950	234	1,713	6,897	2·28	·10	·79	3·17
1923-24	5,036	205	1,820	7,061	2·28	·09	·82	3·19
1924-25	5,187	238	1,822	7,247	2·30	·10	·81	3·21
1925-26	5,263	224	2,011	7,498	2·29	·10	·87	3·26
1926-27	5,387	223	2,188	7,798	2·29	·10	·93	3·32

The quantity of tobacco (including cigars and cigarettes) consumed in 1926-27 was 7,798,000 lb., which represents an average of 3.32 lb. per head of population. The annual consumption per head has been increasing slowly and in 1926-27 it was 8½ per cent. higher than in 1913. It is estimated that the expenditure on tobacco in 1926-27 amounted to £6,072,000, or £2 11s. 9d. per head of population, as compared with £2,858,000, or £1 11s. 5d. per head in 1913.

As regards the description of tobacco used, the proportion of cigarettes advanced during the period under review from 10 to 28 per cent., and the proportion of ordinary tobacco declined from 84 to 69 per cent.

Of the total tobacco consumed in 1926-27, about 95 per cent. was manufactured in Australia, principally from imported leaf, viz., ordinary tobacco 98 per cent. made in Australia, cigarettes 88 per cent., and cigars 78 per cent. The proportions made in Australia in 1911 were 85 per cent., 94 per cent., and 46 per cent. respectively.

#### LICENSES FOR VARIOUS OCCUPATIONS.

Partly as a means of raising revenue and partly as a means of ensuring a certain amount of supervision over persons who follow callings which bring them into contact with the general public, or which are carried on under special conditions, licenses must be obtained by auctioneers, pawnbrokers, hawkers, pedlars, collectors, second-hand dealers, fishermen, and persons who sell tobacco, conduct billiard and bagatelle tables, or engage in Sunday trading. In accordance with the Gun License Act passed at the end of the year 1920, gun dealers and persons having possession of guns and firearms were required to take out a license in respect of each weapon. Special gun licenses were issued to those desiring to use guns for the sole purpose of destroying noxious animals. Gun licenses were not issued to a person under 16 years of age. The Gun License Act was repealed by the Pistol License Act, 1927, which prescribes the licensing of pistols only. Pistol licenses may not be issued to persons under 18 years of age.

Auctioneers' licenses are divided into two classes, viz., General and District, the annual fee for a general license being £15, and for each district license £2. General licenses are available for all parts of the State. District licenses only cover the police district for which they are issued, and they are not issued for the Metropolitan district. Auctioneers' licenses may not be granted to licensed pawnbrokers. Sales by auction are illegal after sunset or before sunrise, except in the Municipality of Albury, where, under the

Auctioneers' Licensing (Amendment) Act, 1915, permits may be granted to allow wool to be put up to sale or sold after sunset. Where provision has been made for reciprocity with New South Wales auctioneers resident and licensed in other Australian States may obtain general licenses in New South Wales.

For pawnbrokers' licenses an annual fee of £10 is payable. The hours for receiving pledges are limited, with certain exceptions, to those between 8 a.m. and 6 p.m., but a restriction is not placed on the rate of interest charged.

The following table shows the principal licenses issued in the five years 1922-1926:—

Occupation.	1922.	1923.	1924.	1925.	1926.
Auctioneers—General ... ..	340	457	383	326	335
District ... ..	1,995	2,258	1,880	1,824	1,678
Billiard ... ..	796	881	793	801	800
Tobacco ... ..	18,378	19,891	19,736	20,054	20,023
Pawnbrokers ... ..	105	99	106	101	99
Hawkers and Pedlars ... ..	2,610	2,779	2,927	2,959	2,675
Collectors ... ..	1,801	1,798	1,760	1,614	1,094
Second-hand Dealers ... ..	1,336	1,297	1,213	1,176	1,573
Sunday Trading ... ..	7,582	8,621	9,158	9,244	9,609
Fishermen ... ..	3,385	3,077	3,155	2,998	2,930
Fishing Boats ... ..	1,761	1,652	1,686	1,711	1,663
Oyster Vendors ... ..	252	290	314	343	341
Gun Licenses (ordinary) ... ..	57,613	40,399	45,816	46,776	40,924
"    "    (special) ... ..	34,650	29,785	29,404	29,164	25,677
Gun Dealers ... ..	604	542	561	527	532

A law was enacted in 1927 with the object of preventing the improper use of such drugs as opium, morphine, and cocaine. Registered medical practitioners, pharmacists, dentists, etc., are authorised generally to use the drugs in the conduct of their profession or business, but other persons must obtain a license to manufacture, distribute, or have possession of them. At the end of the year 1927 the licenses to manufacture numbered six, and there were eleven licenses to distribute the drugs.

#### STATUS OF WOMEN.

In New South Wales women have the right to exercise the franchise and sex does not disqualify any person from acting as member of the Legislative Assembly, as member of a council of any shire or municipality, as judge, magistrate, barrister, solicitor, or conveyancer, or as member of the Legislative Council. Women have contested Parliamentary elections, and one was elected in 1925. Many women have been appointed justices of the peace, and some have been admitted to the practice of the legal profession. They are eligible for all degrees at the University of Sydney, but are not ordained as ministers of religion. Women may not act on juries.

The employment of women in factories and shops is regulated specially by the Factories and Shops Act, 1912, and its amendments, which limit the continuous employment of women to five hours, restrict the time they may be employed in excess of forty-eight hours per week and between 6 p.m. and 6 a.m., also the weight they may be allowed or required to lift, and prohibit the employment of girls under 18 years of age in certain dangerous occupations. The minimum wage for any employee in a factory or shop is fixed at 4s. per week. Many trade unions have women members. A separate living wage for women employees is determined after special

inquiry by an industrial tribunal, but a definite principle of equality or difference between the pay of women and men is not observed in the industrial awards and agreements. In accordance with a recent amendment of the Industrial Arbitration Act, the list of matters which may be determined by the industrial tribunals includes claims that the same wage to be paid to men and women performing the same work, or producing the same return of profit or value to their employer.

A legal age of marriage has not been defined, but the average age at which women marry is about 25 years. The consent of a parent or guardian is necessary to validate the marriage of minors. The wife of a British subject is deemed to be a British subject throughout Australia. Under the Married Women's Property Act, 1901, a married woman is capable of holding, acquiring, or disposing of any real or personal property as her separate property in the same manner as if she were a *femme sole*. Her property is not liable for her husband's debts, and her earnings in any occupation apart from her husband's are her own. A wife, however, has no legal share of her husband's income, nor in any property acquired by their joint efforts after marriage, but a husband is liable for all necessary expenses of his wife and children.

### RELIGIONS.

In New South Wales there is no established church, and freedom of worship is accorded to all religious denominations.

The number of adherents of the principal religions, as disclosed by the census records, is shown in the following statement:—

Religion.	Number of Persons.			Proportion per cent.		
	1901.	1911.	1921.	1901.	1911.	1921.
Christian—						
Church of England ...	623,131	734,000	1,027,410	46·58	45·46	49·60
Roman Catholic ...	347,236	412,013	502,815	25·96	25·54	24·27
Methodist ...	137,638	151,274	181,977	10·29	9·37	8·79
Presbyterian ...	132,617	182,911	219,932	9·91	11·33	10·62
Congregational ...	24,834	22,655	22,235	1·86	1·40	1·07
Baptist ...	15,441	20,679	24,722	1·15	1·28	1·19
Lutheran ...	7,337	7,087	5,031	·55	·44	·24
Unitarian ...	770	844	622	·06	·05	·03
Salvation Army ...	9,535	7,413	9,490	·72	·46	·46
Other Christians ...	14,812	55,453	48,963	1·10	3·44	2·37
Total Christians ...	1,313,501	1,594,329	2,043,197	98·18	98·77	98·64
Others—						
Jews, Hebrew ...	6,447	7,660	10,150	·48	·47	·49
Buddhist, Confucian, Mohammedan, etc. ...	8,035	5,113	4,472	·60	·32	·22
Indefinite—No Religion ...	9,829	7,163	13,572	·74	·44	·65
Object to state ...	13,068	21,986	12,946	...	...	...
Unspecified ...	3,966	10,433	16,034	...	...	...
Total, New South Wales	1,354,846	1,646,734	2,100,371	100	100	100

In the table the persons returned as Catholic (undefined) have been included with "Roman Catholic," the number in 1921 being 20,240, and in 1911, 36,622.

## EDUCATION.

IN New South Wales there is a State system of national education which embraces primary, secondary, and technical education, and there are numerous private educational institutions, of which the majority are conducted under the auspices of the religious denominations. The University of Sydney is maintained partly by State endowment and partly by moneys derived from private sources.

The Public Instruction Act of 1880, as amended by the Free Education Act, 1906, the Bursary Endowment Act, 1912, and the Public Instruction (Amendment) Acts of 1916 and 1917, is the statutory basis of the State system. This system aims at making education secular, free and compulsory, each of these principles being enjoined by statute. The Act of 1880 provides that "the teaching shall be strictly non-sectarian, but the words 'secular instruction' shall be held to include general religious teaching as distinguished from dogmatical or polemical theology." General religious instruction is given by teachers, and special religious instruction for limited periods, with the consent of parents, by ministers of religion. The Free Education Act, 1906, provides that education in State primary schools must be free. Fees in secondary schools were abolished by regulation at the beginning of 1911, but were reimposed from 1st January, 1923, to 30th June, 1925. The Act of 1880 prescribed that children between the ages of 6 and 14 years must attend school, and the amending Act of 1916 raised the compulsory age at beginning to 7 years and made provision for more stringent enforcement of attendance.

The State system is subject to central guidance and control, being administered by a responsible Minister of the Crown, through a permanent Director of Education. Practically the whole of the State expenditure on education is provided by appropriation from the Consolidated Revenue Fund, but part of the expenditure on buildings, additions, and renewals, is defrayed from the Public Works Fund. From time to time also special votes are made available from loan funds for constructing school buildings.

The private schools are not endowed by the State, but, with few exceptions, they are subject to State inspection. If children of statutory school age are enrolled at a private school it must be certified as efficient in terms of the Public Instruction (Amendment) Act of 1916, and private schools supplying education for State bursars must be registered under the Bursary Endowment Act of 1912. The fact that the school examinations, which mark the various stages of primary and secondary education, are based on the curricula of the State system tends towards uniformity in the teaching of the subjects covered by the examinations.

The school medical service organised by the State for the benefit of children attending both State and private schools, and the school for backward children at Glenfield have been described in the preceding chapter of this volume.

The complete scheme of education provides a direct avenue from Kindergarten to University. In the State schools kindergarten classes are conducted under the Montessori method. Many private schools make provision for kindergarten, and an organisation known as the Kindergarten Union of New South Wales conducts a school for training in Froebelian methods, and maintains free kindergarten schools and playgrounds in the more congested parts of the metropolitan area.

The course in the primary schools supplies education of a general character in such subjects as English, mathematics, nature knowledge, civics and morals, art and manual work. Beyond the primary stage, the courses assume a vocational bias. The pupil may continue his general education and at the same time enter upon a course of training to fit him for the occupation he intends to follow after leaving school. In the selection of the super-primary course an important consideration is the probable length of the school life of the individual pupil. At high schools the full course leading to professional occupations or to tertiary education at the University and elsewhere, extends over a period of five years. Shorter courses are provided for those who will probably leave school at an earlier stage. A vocational guidance bureau has been organised for the purpose of assisting boys leaving State schools to obtain employment in occupations for which they are best fitted.

Preparatory education for commercial pursuits is provided at commercial schools and at high schools where economics, shorthand, business principles and practice are included in the curriculum. At the University there is a degree course in economics and commerce and a diploma course in commerce. A lectureship in Japanese language has been established by means of a special grant to the University from public revenue of the Commonwealth to assist in the teaching of languages serviceable to the development of commercial relations between Australia and other countries.

Industrial training, commenced in the form of manual training in the primary course, may be continued at continuation schools, and at the trades schools and technical colleges. Training in domestic subjects is a feature of the schools for girls, advanced courses being provided at the schools under the technical system. At the University there is a school of domestic science.

Special attention is directed towards education in subjects pertaining to rural industries and a supervisor of agricultural education has been appointed to develop the system in State schools. At district rural schools boys may acquire basic knowledge of agricultural science, rural economics, etc., and there are two high schools—at Glenfield and Yanco—where the studies are arranged for boys who intend to become farmers. The school at Glenfield is known as the Hurlstone Agricultural High School. The grounds cover 100 acres and at Yanco there are 620 acres. The course includes general education as well as scientific training with laboratory practice and field work, and it leads to higher courses at the Hawkesbury Agricultural College.

Advanced training in agriculture, dairying, etc., is provided for farmers and students at the Hawkesbury Agricultural College and at experiment farms in various districts. Particulars of these institutions are published in the chapter relating to agriculture.

The final stages of education for rural pursuits are reached at the University, where there is a degree course in agriculture, and in veterinary science.

#### CENSUS RECORDS.

Particulars of the numbers of persons receiving education and of those who had acquired the rudiments of education (reading and writing) as recorded as at the censuses of 1901, 1911, and 1921 are shown in the Year Book for 1922 at pages 148-150.

An indication that illiteracy is unusual in New South Wales may be deduced from the fact that there are few mark signatures in the marriage registers. The number in 1926 represented only two per 1,000 of the persons married.

SCHOOLS AND TEACHING STAFFS.

The following table shows the total number of public and private schools in operation at the end of 1901, 1911, and of each of the past six years, and the aggregate teaching staff in each group. The figures in this table, and in the subsequent tables relating to public and private schools, include secondary schools, but are exclusive of evening continuation schools, technical colleges and trade schools, free kindergarten and other schools maintained by charitable organisations, shorthand and business colleges, etc.

Year.	Schools.			Teaching Staffs.						
	Public.*	Private.	Total.	In Public Schools.*			In Private Schools.			Grand Total.
				Men.	Women.	Total.	Men.	Women.	Total.	
1901	2,741	.890	3,631	2,829	2,318	5,147	337	2,303	2,640	7,787
1911	3,107	757	3,864	3,165	3,034	6,199	366	2,262	2,628	8,827
1921	3,170	677	3,847	3,554	5,118	8,672	465	2,463	2,928	11,600
1922	3,166	678	3,844	3,696	5,310	9,006	461	2,485	2,946	11,952
1923	3,194	681	3,875	3,843	5,381	9,224	476	2,562	3,038	12,262
1924	3,207	693	3,900	3,959	5,550	9,509	469	2,544	3,013	12,522
1925	3,162	696	3,858	4,087	5,648	9,735	490	2,616	3,106	12,841
1926	3,125	704	3,829	4,256	5,801	10,057	517	2,647	3,164	13,221

\* Including subsidised schools.

The number of teachers shown above excludes, in the case of public schools, students in training, who numbered 1,256 in 1926, and in the case of private schools, visiting or part-time teachers, viz., 304 men and 852 women, some of whom attended more than one school and were included in more than one return.

In the State schools the men employed as teachers outnumbered the women until 1912, but the proportion of men in 1926 was only 42 per cent. of the total. In the private schools the proportion of men teachers has been small always, and in 1926 it was only 16 per cent. of the full-time teaching staffs of private schools.

SCHOOL PUPILS.

A comparative review of the enrolment of children at public and private schools is restricted to the last quarter in each year, as the figures in regard to private schools in the earlier years are available for that period only. The following statement shows the enrolment during the December quarter at all schools and colleges in the State, primary and secondary, other than evening continuation, charitable, and free kindergarten schools and technical, trade, and business schools and colleges\* :—

Year.	Public Schools.†			Private Schools.			Total Enrolment.	Proportion of Scholars Enrolled.	
	Boys.	Girls.	Total.	Boys.	Girls.	Total.		Public Schools.	Private Schools.
1901	110,971	99,617	210,588	27,463	33,674	60,837	271,425	per cent.	per cent.
1911	116,317	105,493	221,810	26,962	34,588	61,550	283,360	77.6	22.4
1921	163,699	151,529	315,228	35,903	42,557	78,460	393,688	78.3	21.7
1922	167,503	154,028	321,531	36,525	43,722	80,247	401,778	80.1	19.9
1923	170,616	157,632	328,248	36,632	44,691	80,723	408,971	80.3	19.7
1924	173,048	160,026	333,074	37,532	45,013	82,545	415,619	80.1	19.9
1925	175,292	161,518	336,810	37,214	44,974	82,188	418,998	80.4	19.6
1926	178,939	164,248	343,187	37,739	46,045	83,784	426,971	80.4	19.6

\* The numbers of pupils so excluded were as follows in 1926 :—Evening continuation, about 4,400; schools for deaf mutes, etc., 233; private charitable, 1,413; free kindergarten, 804; technical colleges and trade schools, 12,089; business colleges and shorthand schools, 7,967.

† Including Subsidised Schools.



Since 1901 the enrolment in public schools has increased by 63 per cent., while in the private schools it has risen by less than 38 per cent., so that the proportion of children in public schools has advanced from 77·6 per cent. to 80·4 per cent. In the public schools there are more boys than girls, the proportion being boys 52 per cent. and girls 48 per cent. In the private schools girls are in the majority, representing 55 per cent. of the enrolment.

Considering only children for whom education is compulsory, viz., between 7 and 14 years, the following table shows the numbers and proportions taught in public and private schools, based on the enrolment in December quarter, omitting private institutional schools and free kindergartens:—

Year.	Public Schools.	Private Schools.	Total.	Proportion per cent.	
				Public Schools.	Private Schools.
1917	218,995	45,628	264,623	82·7	17·3
1921	246,136	53,664	299,800	82·1	17·9
1922	253,073	55,361	308,434	82·1	17·9
1923	253,846	55,860	314,706	82·3	17·7
1924	263,442	57,405	320,847	82·1	17·9
1925	265,988	57,071	323,059	82·3	17·7
1926	267,407	56,931	324,341	82·4	17·6

Apparently the proportion of children attending private schools is greater in respect of those below and above statutory school age than in respect of children in the age group 7 and under 14 years.

#### CHILDREN RECEIVING EDUCATION.

It is probable that a considerable number of children between the ages of 7 and 14 years, when education is compulsory, are not enrolled in schools for the whole of those years, although they may attend school for most of the statutory period. The children not enrolled in schools include those receiving instruction at home (numbering 13,181 at the Census of 1921), those exempt from further attendance for special reasons on attaining the age of 13 years, and those who are inaccessible to schools or who are mentally or physically deficient. The institution of a system of teaching isolated pupils by correspondence, the provision of facilities for conveyance, and of subsidies for private teachers of small rural schools, tend to reduce the number of children not reached by the education system.

In the following table the estimated number of children "requiring education" during the last six years is compared with the number enrolled at State and private schools:—

Year.	Estimated Number of Children of School Age in December.	Children of Other Ages Enrolled (December Quarter).	Estimated Number of Children requiring Education.	Average Weekly Enrolment during December Quarter.	Proportional Effective Enrolment (Approximate).
1921	311,800	93,888	405,688	371,952	per cent. 91·7
1922	320,900	93,344	414,244	375,930	90·8
1923	328,500	94,265	422,765	384,064	90·8
1924	334,400	94,772	429,172	392,735	91·5
1925	337,600	95,939	433,539	399,192	92·1
1926	336,700	102,630	439,330	403,285	91·8

These figures indicate that the average weekly enrolment in schools exceeds 90 per cent. of the number of children "requiring education." The result of the comparison, however, is only an approximation, because the number of "children of other ages" included in the figures is a gross enrolment, and therefore is in excess of the number of children of those ages requiring education.

The following comparison indicates the degree of regularity of attendance among children enrolled at State and private schools:—

Year.	Public Schools.			Private Schools.		
	Average Weekly Enrolment.	Average Daily Attendance.	Ratio of Attendance to Enrolment.	Average Weekly Enrolment.	Average Daily Attendance.	Ratio of Attendance to Enrolment.
1911	203,335	160,776	per cent. 79·0	*	52,122	*
1916	246,572	200,695	81·3	*	56,880	*
1921	292,264	248,605	85·1	74,206	64,172	86·4
1922	300,827	254,382	84·5	76,328	66,340	86·4
1923	304,287	254,633	83·7	76,414	66,450	86·9
1924	312,352	265,481	85·0	77,839	67,724	87·0
1925	315,924	269,302	85·2	77,545	68,342	88·1
1926	319,835	272,237	85·1	79,363	69,112	87·1

\* Not available.

The proportion of attendance to enrolment signifies that on the average children attend less than four and a half days in a school week of five days. The improvement in attendance in public schools since 1916 is due to the operation of the amended law relating to school attendance. The particulars relating to private schools in 1916 are not available, but the ratio of attendance has increased slowly since 1921.

The attendance of children at school is affected adversely by infectious and contagious diseases, and—particularly in country districts where transport facilities are lacking—by inclement weather. The attendance of boys is slightly more regular than that of girls.

#### Age Distribution of Pupils.

The following table shows the age distribution of pupils enrolled at schools during the last six years. The figures represent the gross enrolment during December quarter at primary and secondary schools omitting those enumerated at the foot of page 185:—

Year.	Public Schools.				Private Schools.			
	Under 7 years.	7 years and under 14.	14 years and over.	Total.	Under 7 years.	7 years and under 14.	14 years and over.	Total.
1921	41,938	246,136	27,154	315,228	12,622	53,664	12,174	78,460
1922	41,572	253,073	26,886	321,531	13,092	55,361	11,794	80,247
1923	42,723	258,846	26,674	328,248	13,066	55,860	11,797	80,723
1924	41,837	263,442	27,745	333,074	13,072	57,405	12,068	82,545
1925	42,152	265,938	28,670	336,810	12,965	57,071	12,152	82,188
1926	46,707	267,407	29,073	343,187	14,079	56,934	12,771	83,784

In 1926 there were enrolled 60,786 children below the statutory school age—31,040 boys and 29,746 girls; and 41,844 pupils were over 14 years of age—20,997 boys and 20,847 girls.

More details as to the ages of children attending public primary schools may be obtained from a table published annually in the report of the Minister for Education, which shows the ages of children in the various school classes.

#### RELIGIONS.

Particulars of the religion of each child attending a State school are obtained upon enrolment, but such information is not available regarding pupils of private schools. Any analysis of the religions of school pupils is

restricted, therefore, to a comparison of the number of children of each denomination enrolled at public schools, and the number of children (irrespective of religion) attending schools conducted under the auspices of the various religious denominations.

Such a comparative review of the aggregate enrolment in primary and secondary schools (omitting those enumerated at the foot of page 185) during the December quarter of various years is given below. The figures, being on the same plane of comparison for each year, illustrate the progress of each main type of denominational school during the period:—

Year.	Public Schools— Denomination of Children Enrolled.					Private Schools— Denomination of Schools.			
	Church of England.	Roman Catholic.	Presby- terian.	Methodist.	Other.	Church of England.	Roman Catholic.	Undenom- inational.	Other.
1901	709,876	31,054	23,511	24,971	21,176	3,966	41,486	13,546	1,839
1911	118,794	31,044	26,347	30,595	15,030	3,297	46,097	10,141	2,015
1921	176,998	35,532	37,497	44,210	20,991	5,265	63,060	8,131	2,004
1922	180,888	35,458	38,829	45,104	21,252	5,288	64,693	8,255	2,011
1923	185,140	35,549	39,828	45,816	21,915	5,128	65,222	8,371	2,002
1924	188,532	35,287	40,708	46,362	22,185	5,233	66,789	8,401	2,122
1925	190,536	36,086	41,074	46,909	22,205	5,237	66,486	8,050	2,415
1926	194,313	36,251	42,712	47,273	22,638	5,776	67,573	7,889	2,546

*Proportion Per Cent. of Total Number of Pupils Enrolled.*

1901	40·5	11·4	8·7	9·2	7·8	1·5	15·3	5·0	0·6
1911	41·9	10·9	9·3	10·8	5·3	1·2	16·3	3·6	0·7
1921	45·0	9·0	9·5	11·2	5·3	1·4	16·0	2·1	0·5
1922	45·0	8·8	9·7	11·2	5·3	1·3	16·1	2·1	0·5
1923	45·3	8·7	9·7	11·2	5·4	1·3	15·9	2·0	0·5
1924	45·4	8·5	9·8	11·2	5·3	1·2	16·1	2·0	0·5
1925	45·5	8·6	9·3	11·2	5·3	1·2	15·9	1·9	0·6
1926	45·5	8·5	10·0	11·1	5·3	1·4	15·8	1·8	0·6

In 1926 the number of children enrolled at schools of "other" religious denominations as shown in the last column, were as follow:—Presbyterian 1,168, Methodist 982, Seventh Day Adventist 308, Lutheran 88.

The pupils attending Roman Catholic schools constitute approximately 81 per cent. of the pupils attending private schools and 16 per cent. of the total pupils at all schools. The proportion of children of each denomination, except Roman Catholic, attending public schools has tended to increase or has remained constant. Although the proportion per cent. of Roman Catholic children enrolled in State schools declined from 10·9 to 9·0 per cent. between 1911 and 1921, the proportion of children enrolled in Roman Catholic schools also declined from 16·3 to 16·0 per cent. of the total. This decline is coincident with a decrease in the proportion of persons of the Roman Catholic faith in the population. The increase in the proportion of children belonging to the Church of England is coincident with an increase in the proportion of persons of that faith.

The enrolment at undenominational private schools has diminished considerably since 1901.

*Religious Instruction in State Schools.*

The Public Instruction Act, 1880, provides that religious instruction may be given in State schools by visiting ministers and teachers of religious bodies for a maximum period of one hour in each school day, and the following table indicates the number of lessons in special religious instruc-

tion given in primary schools during the past five years by representatives of the various denominations:—

Denomination.	Number of Lessons.				
	1922.	1923.	1924.	1925.	1926.
Church of England ... ..	40,517	41,910	44,449	46,182	46,476
Roman Catholic ... ..	2,034	2,163	2,427	2,771	2,778
Presbyterian ... ..	12,769	14,291	15,924	16,746	16,789
Methodist ... ..	17,834	19,701	20,859	21,447	21,567
Other Denominations ... ..	10,341	9,870	11,448	11,716	11,791
<b>Total ... ..</b>	<b>83,495</b>	<b>87,935</b>	<b>95,107</b>	<b>98,862</b>	<b>99,401</b>

Since 1922 there has been a marked increase in the number of lessons.

SCHOOL SAVINGS BANKS.

A system of school savings banks in connection with State schools was commenced in the year 1887 with the object of inculcating principles of thrift amongst the children. Deposits are received by the teachers, and an account for each depositor is opened at the local branch or agency of the Government Savings Bank of New South Wales. Interest is paid on each complete pound at the rate of 4 per cent. per annum.

At 30th June, 1927, there were 829 school banks with 78,205 depositors and the amount at the credit of their accounts was £100,987. At 30th June, 1926, there were 62,449 depositors with £64,538 on deposit.

STATE SCHOOLS.

The following table affords a comparison between the numbers of the various types of State schools in operation at the end of 1881, the first full year in which the Department of Education was under ministerial control, and the numbers open at later periods:—

Type of School.	Schools at end of year.					
	1881.	1891.	1901.	1911.	1921.	1926.
<b>Primary Schools—</b>						
Public ... ..	1,007	1,686	1,874	1,915	2,020	1,950
Provisional ... ..	227	320	398	475	477	570
Half-time ... ..	83*	280	414	271	90	70
House-to-house and Travel- ling ... ..	...	83	17	6	3	1
Correspondence ... ..	...	...	...	...	4	1
Subsidised ... ..	...	...	...	414	546	498
Evening ... ..	33	13	34	16	...	...
Industrial and Reformatory	2	3	4	2	3	3
<b>Total—Primary ... ..</b>	<b>1,352</b>	<b>2,385</b>	<b>2,741</b>	<b>3,099</b>	<b>3,143</b>	<b>3,093</b>
<b>Secondary Schools—</b>						
High ... ..	...	5	4	8	27	30
Intermediate High... ..	...	...	...	...	25	38
District ... ..	...	...	...	...	13	14
<b>Continuation Schools—</b>						
Commercial... ..	...	...	...	...	15	18
Junior Technical ... ..	...	...	...	...	26	30
Domestic ... ..	...	...	...	...	46	57
Evening ... ..	...	...	...	18	46	54
Central Junior Technical ... ..	...	...	...	...	...	2
Rural Schools ... ..	...	...	...	...	...	15
Composite† ... ..	58	78	113	145	57	682
<b>Total—Secondary and Con- tinuation Schools ... ..</b>	<b>58</b>	<b>83</b>	<b>117</b>	<b>171</b>	<b>255</b>	<b>940</b>

\* Including Third-time Schools.

† Superior Public Schools.

The number of individual schools at the end of 1926 was 3,179, which is less than the foregoing figures indicate, owing to the fact that with the exception of high schools the majority of secondary schools are conducted in conjunction with primary schools.

A number of small primary schools have been replaced in recent years by correspondence classes which are organised as one school with headquarters in Sydney.

It is the policy of the State educational authorities to supply as far as practicable the demand for post primary education. As a result there has been a rapid increase in the number of country schools where composite courses are provided to enable pupils to progress beyond the primary stage. The figures in the table are exclusive of a number of small country schools where, by means of lesson sheets and with the assistance of the teacher, pupils may secure a year's course of super-primary instruction.

#### PRIMARY SCHOOLS.

Primary work in its various stages is undertaken in State schools classified broadly into three groups,—(a) Primary and superior schools in more or less populous centres; (b) schools in isolated and sparsely settled districts, viz., provisional, half-time, and subsidised schools; and (c) a correspondence school instructing children so isolated as to be unable to attend school.

The schools are classified according to the average attendance into six classes. The number in each group at 31st December, 1926, is shown in the following statement; each pair of half-time schools is counted as two schools:—

Class of School.	Average Attendance.	Schools in Operation.	Class of School.	Schools in Operation.
I.	Over 1,000	53*	Travelling ... ..	1
II.	751-1,000	34	Correspondence ... ..	1
III.	541-750	48	Central Junior Tech-	
IV.	201-540	151	nical... ..	2
V.	41-200	520	Infants ... ..	22
VI.	40 and under	1,122	Subsidised ... ..	498
Provisional ... ..	10 at least	570	Reformatory ... ..	3
Half-time ... ..	10 at least in two groups.	70	Evening Continuation	54

\* Including 3 Practice Schools with less than 1,000 pupils.

A public school may be established in any locality where the attendance of twenty children is assured. In most schools boys and girls are taught together, but schools with an average attendance of 360 pupils are divided into two departments, and those with an attendance exceeding 600 into three departments, viz., boys, girls, and infants.

The infants' course extends over a period of two years. The primary course for older children is completed generally between the ages of 13 and 14 years.

Small schools are not established where it is convenient to arrange for the daily conveyance to a central school of the pupils from the surrounding neighbourhood. In such cases local committees consisting of parents, the teacher of the central school, and other persons of repute, are required to assume responsibility for arranging and supervising the carriage of the children, and the cost of conveyance is defrayed by the Department according to fixed rates. Attendance at central schools is encouraged also by means of subsidies which may be paid under certain conditions as an aid towards boarding children with relations or friends in a township for the purpose of attending school. At 30th June, 1927, arrangements were in operation for the conveyance of 15,231 pupils to 1,180 central schools. The amount expended for conveyance during the year ended 30th June, 1927, was £43,653.

Provisional schools are maintained where there is an attendance of at least ten pupils, and where doubt exists as to the permanence of the settlement. At the end of 1926 there were 570 such schools in operation with an enrolment of 11,437 pupils, representing 3 per cent. of all pupils enrolled in December quarter.

Half-time schools are established where a number of children sufficient to maintain a minimum attendance of ten pupils can be collected in two groups, not more than 10 miles apart. One teacher divides his time between the two groups, so arranging that home-work and preparatory study shall occupy the time of each pupil in his absence from either school. The number of half-time schools at the end of 1926 was 70, and the number of pupils enrolled was 662 or less than 2 per thousand of all pupils enrolled at schools in New South Wales in December quarter. The course of instruction in provisional and half-time schools follows the course of full-time schools.

There is one travelling school which visits localities where families are so isolated that two cannot combine readily for the education of the children. The teacher is provided with a vehicle to carry school requisites, and a tent for use as a schoolroom, in which to teach for a week at a time at each centre in his circuit. Formerly there were a number of travelling schools, but in recent years teaching by correspondence has been developed as a more satisfactory method of educating children in isolated localities. The pupils who are being taught by correspondence are organised as one school, and the course of instruction is the ordinary primary course. A pupil is not admitted before he reaches the age of 7 years and the young children are taught by kindergarten teachers. The effective enrolment at the end of the year 1926 was 3,018.

Another type of school for the benefit of families in remote districts is the subsidised school, which may be formed where there is a single family with at least four children of school age or where two or more families combine to engage a teacher. The teacher, if approved by the Department of Education, is paid an annual subsidy at a rate based on the average attendance, viz., in the eastern portion of the State £5 per pupil up to a maximum of £70, and in the western division £6 per pupil up to £80. The course is as far as practicable the same as in primary schools, and the subsidised schools are subject to inspection by the State school inspectors. A subsidised school may be established by a single family with at least four children of school age. The number of subsidised schools at the close of 1926 was 498 and the enrolment was 3,650.

*Secondary Education in State Schools.*

The number of pupils receiving secondary education at State schools in 1926, is shown in the following statement, in comparison with the number in 1916. The particulars relating to evening continuation schools are not included, but are shown later:—

Schools.	1916.			1926.		
	Number of Schools.	Gross Enrolment.	Average Daily Attendance.	Number of Schools.	Gross Enrolment.	Average Daily Attendance.
High and District ... ..	42	8,181	6,451	82	20,463	16,526
Superior Public (Day Continuation)—						
Commercial ... ..	27	2,620	1,146†	18	2,341	1,541
Junior Technical ... ..	22	1,379	789	30	8,481	5,503
Domestic ... ..	42	2,381	1,346	57	12,506	8,012
Total, Superior... ..	91	5,780	3,281	105	23,328	15,056
Rural ... ..	...	...	...	15	1,346	923
Composite ... ..	*	*	*	682	4,178†	8,583
Total, Secondary and Super Primary ... ..	133	13,961	9,732	884	49,215	36,088

\* Not available.

† Net enrolment.

The average daily attendance of secondary pupils attending high, district and day continuation schools has increased more than threefold since 1916.

Composite courses are provided at primary schools in country districts where secondary schools are not readily accessible. The courses lead to the intermediate certificate, the commercial superior public school certificate and the Public Service entrance examinations.

Admission to State High Schools is gained by competitive examination, and only properly qualified pupils are allowed to enter. The courses of instruction cover five years, leading to the Leaving Certificate Examination, at which candidates may matriculate. The courses of instruction at intermediate High and district schools cover the first three years of that course, leading to the Intermediate Certificate Examination. The courses are for the most part educational only, but the Intermediate and Leaving Certificates are generally accepted as proof of sufficient educational qualification for admission to the Public Service, the teaching profession, banks, and kindred bodies.

At the end of 1926 there were eleven High Schools in the metropolitan area (including a Technical High School) and nineteen in the country districts providing a full course of instruction. There were thirty-eight Intermediate High Schools, twenty-three being in the country, and fourteen District Schools.

The following particulars relate to High Schools and Intermediate High Schools maintained by the State. In addition to the holders of bursaries as shown in the table there were 250 holders of scholarships in 1911. In recent years scholarships have not been awarded, all pupils being supplied with text-books free of cost.

Year.	High Schools.	Inter- mediate High Schools.	Teachers.			Pupils.			Bur- saries.
			M.	F.	Total.	Enrollment.		Average Attend- ance.	
						Total.	Average Weekly.		
1901	4	...	16	11	27	676	526	489	†
1911	8	...	59	38	97	2,293	1,804	1,786	201
1921	27	25	349	290	648	14,247	12,490	11,253	1,005
1922	28	26	371	313	689	15,537	13,151	12,166	923
1923	28	29	396	307	703	15,089	12,883	11,832	830
1924	28	32	417	318	735	15,696	13,692	12,633	780
1925	30	32	428	320	748	17,086	15,016	13,927	783
1926	30	38	434	365	799	18,460	16,867	15,576	805

† Not available.

The rapid expansion in secondary schools affords evidence of a widespread desire for education among the people. There was a decline in enrolment during 1923, when fees were charged in high schools, but a marked increase occurred in 1925, when the schools became free again.

Training in commercial subjects is provided in Commercial Continuation Schools and a preparatory course leading to the trade courses under the technical system is given in Junior Technical Continuation Schools. At these schools boys may continue for a period of three years elementary courses commenced in primary schools in commercial subjects and in manual training respectively. In the Junior Technical Schools the subjects are essentially of a practical nature, viz.:—practical drawing and workshop practice, English, practical mathematics, history and civics, industries and elementary science. The courses in English, mathematics, and history are on the same standard as in high schools.

With a view to placing in suitable employment boys who have satisfactorily completed the course in the Junior Technical Schools, an Employment Bureau has been established by the Department of Education. Details are kept of each pupil's mental and physical capacity, character, and educational proficiency, as well as of the nature of employment he desires. Endeavour is being made to establish co-operation between employers and the schools.

The Continuation schools for girls are known as Domestic Continuation Schools. The syllabus provides for a course commencing at the end of the primary school stage and extending over three years. The course during the first two years is of a domestic and general educational character, embracing English, arithmetic, history, civics, and morals, art and home decoration, botany and practical gardening, needlework, cookery, laundry, home management, hygiene, care of infants and care of the sick. The third year course is of a commercial character and provides for further studies in English and arithmetic to which is added elementary training in business principles, shorthand and typewriting. This course has gained the recognition of commercial houses.

Candidates successful in the annual domestic science examination may enter upon the home economics course at the Technical College.

Since 1920 there has been a rapid growth in the attendance at superior schools of the domestic type. In that year forty-seven such schools were in operation with a gross enrolment of 4,920 super-primary pupils and an



average attendance of 2,829. In 1926 the corresponding numbers were fifty-seven schools, gross enrolment 12,506, and average daily attendance 8,012.

Rural Schools are conducted in conjunction with the primary schools in country centres. At each of these schools super-primary courses are provided extending over a period of three years in general subjects and in elementary agriculture, agricultural nature study, applied farm mechanics, rural economics and horticulture.

The following table provides a comparison of the number of continuation schools and the gross enrolment during each of the last six years:—

Year.	Day Continuation Schools.							
	Commercial.		Junior Technical.		Domestic Type.		Rural.	
	No.	Gross Enrolment.	No.	Gross Enrolment.	No.	Gross Enrolment.	No.	Gross Enrolment.
1921	15	1,162	26	3,853	46	6,337	...	...
1922	16	1,213	25	4,544	48	7,041	...	...
1923	16	1,641	24	5,311	46	8,373	12	584
1924	16	2,092	24	6,634	50	10,018	12	1,008
1925	15	1,941	29	7,699	57	11,896	15	1,280
1926	18	2,341	30	8,481	57	12,506	15	1,346

The enrolment at junior technical and at domestic schools has almost doubled since 1921, and the rural schools have shown even greater expansion since they were established in 1923.

#### *Evening Continuation Schools.*

Evening Continuation Schools for the benefit of pupils who leave school to engage in occupations at the termination of the primary course are organised on the same lines as the Day Continuation Schools. The courses, which extend over a period of two years, are similar, though they are modified for pupils who work during the day, and attend the classes for only a few hours per week. An Evening Continuation School may be established in any centre where the number of students who will guarantee to attend for two years is sufficient. A fee of 6d. per week is charged, but it is refunded at the end of each year to the students whose conduct and attendance have been satisfactory. The average age of the pupils attending the Evening Continuation Schools is 18 years.

The following is the record of the Evening Continuation Schools for the years 1925 and 1926:—

Classification.	1925.			1926.		
	Number of Schools.	Average Weekly Enrolment.	Average Attendance.	Number of Schools.	Average Weekly Enrolment.	Average Attendance.
Junior Technical (Boys)...	19	1,651	1,286	19	1,741	1,363
Commercial (Boys) ...	21	1,769	1,368	21	1,753	1,329
Domestic (Girls) ...	14	1,056	678	14	874	564
Total ...	54	4,476	3,332	54	4,368	3,256

Included in the average weekly enrolment shown above for 1926 are 813 pupils attending preparatory schools, distributed as follows:—Commercial 417, Junior Technical 302, and Domestic 94.

## PRIVATE SCHOOLS.

The position of private schools in the education system of the State is discussed on a previous page.

By virtue of the Public Instruction (Amendment) Act of 1916, children between the ages of 7 and 14 years must be provided with efficient education, and a school is not recognised as efficient unless it is certified by the Minister of Education, who takes into account the standard of instruction, the qualifications of the teachers, the suitability of the school premises, and the general conduct of the school. This provision applies to both primary and secondary schools where children of statutory ages are educated. The conditions upon which benefits under the Bursary Endowment Act are extended to private secondary schools involve a similar inspection and certification, and nearly all of them have been registered by the Department of Education. The standards of instruction required of private schools under both Acts are the same as those of public schools of similar grade and situation.

The total number of private schools certified by the Minister for Education in April, 1928, was 748. Of these, 586 were certified under the Public Instruction (Amendment) Act of 1916, including 59 which were certified for the instruction of children up to a specified age only; 97 secondary schools were registered under the Bursary Endowment as efficient to provide the full secondary course; and 65 were recognised officially as qualified for the education of pupils to the Intermediate Certificate stage of the secondary course.

The following table affords a comparison of schools of each denomination over an interval of ten years:—

Classification.	1916.				1926.			
	Schools.	Teachers.	Enrolment December Quarter.	Average Daily At- tendance.	Schools.	Teachers.	Enrolment December Quarter.	Average Daily At- tendance.
Undenominational ...	217	601	9,236	7,819	140	458	7,889	6,765
Roman Catholic ...	420	1,871	51,124	44,809	484	2,212	67,573	54,995
Church of England ...	51	208	3,638	3,081	59	351	5,776	5,154
Presbyterian ...	5	32	529	472	6	67	1,168	1,066
Methodist ...	2	21	430	393	5	54	982	919
Lutheran ...	3	3	72	55	3	3	88	76
Seventh Day Adventist	4	18	271	251	7	19	308	230
Total ...	702	2,754	68,300	56,850	704	3,164	83,784	69,205

Between 1916 and 1926 the enrolment in private schools increased by 15,484 or 23 per cent. Undenominational schools declined in number and in enrolment, but all groups of denominational schools have expanded. Roman Catholic schools, which constitute the great majority of the private establishments, increased in number by 15 per cent., and in enrolment by nearly 25 per cent.

The number of teachers, as shown in the table, does not include those who visit schools to give tuition in special subjects only. It is not possible to ascertain the number of individuals represented by these figures, because the number of teachers who give instruction in more than one school is not recorded.

Fees are usually charged at private schools, but they vary considerably in amount. In some denominational schools the payment of fees is to some extent voluntary, and a number of scholarships and bursaries have been provided by private subscriptions for the assistance of deserving students.

Some of the private schools are residential, and in 1926 there were 75,535 day scholars and 8,249 boarders.

The following statement shows the number of secondary pupils enrolled during the December quarter in each of the last four years:—

Year.	Schools.	Secondary Pupils Enrolled.		
		Boys.	Girls.	Total.
1923	241	4,949	5,965	10,914
1924	248	5,357	6,187	11,544
1925	264	5,480	6,799	12,279
1926	264	5,809	6,979	12,788

The number of secondary pupils in private secondary schools has shown a considerable increase since 1923. The pupils so enumerated are defined as those who follow a course of instruction similar to that laid down in the syllabus for secondary schools by the Department of Education. There are, however, in private schools a considerable number of pupils over 14 years of age not recorded as secondary pupils in the returns supplied. Some of these attend business colleges for commercial education while others follow super-primary courses.

#### PRIVATE CHARITABLE SCHOOLS.

In addition to the private schools to which the foregoing tables relate, there are schools connected with charitable institutions or organisations, which are certified under the Public Instruction (Amendment) Act of 1916 for the education of children of statutory school age. There were 15 such schools in 1926. Eleven were under the auspices of the Roman Catholic Church, 3 Church of England, 1 Salvation Army. The gross enrolment at these institutional schools during 1926 was 1,697.

The Kindergarten Union maintains in the city and suburbs thirteen free kindergarten schools and playgrounds for children under statutory school age. In 1926 there were enrolled 1,270 scholars, and the average daily attendance was 714. The organisation receives a State subsidy of £1,000 per annum.

The education of deaf and dumb and blind children is undertaken at two schools in connection with the Institution for the Deaf and Dumb and the Blind, which is endowed by the State. At the end of 1926 there were 157 children in the institution. Deaf mutes are trained also at two Roman Catholic institutions, one at Waratah for girls, with 40 inmates at the end of 1926, and the other, established at Castle Hill, where 36 boys were enrolled.

The total number of private charitable schools in 1926 was 32, and there were 152 teachers. The gross enrolment during the year was 3,192, and the average daily attendance 2,189. In December quarter there were 2,510 scholars on roll, of whom 1,105 were under 7 years of age, 1,250 between 7 and 14 years, and 155 over 14 years.

SCHOOL EXAMINATIONS.

To test the proficiency of students who have completed the primary course and those who are attending higher courses, a system of public examinations has been organised by the Department of Education with the concurrence of the University authorities, who accept as evidence of satisfactory educational qualification appropriate certificates issued by the Department. The University also holds an annual matriculation examination, on the results of which a number of University scholarships and prizes are awarded.

The regulations of the Department of Education provide for the issue of certificates which mark definite stages in the progress of school pupils. The Qualifying Certificate indicates that the holder has completed the primary course satisfactorily, and is fitted to enter upon a secondary course of instruction. Prior to 1922, every pupil was required to pass a written examination in order to obtain a Qualifying Certificate. Since that year the certificates are awarded to pupils of the sixth class who, in the judgment of the local inspector, have attained satisfactory results at school tests applied at intervals during each year by the principal of the school. The written test is applied only to pupils who desire to compete for admission to High Schools or for bursaries tenable at Secondary Schools.

The Superior Public School Certificate is issued to successful candidates at a written examination terminating the continuation course of instruction of either two or three years, the certificate for the three years course being the equivalent of the Intermediate Certificate.

The Intermediate Certificate marks the satisfactory completion of the first three years of the secondary course. The Leaving Certificate is obtainable on graduation from the full five-years' secondary course, and is accepted as indicative of adequate preparation for the University, if it shows a pass in matriculation subjects.

The Board of Examiners in connection with the Intermediate and Leaving Certificates consists of four officials of the Department of Education, viz.: The Director of Education, the Chief Inspector, the Principal of the Teachers' College, the Inspector of Secondary Schools, and four delegates appointed by the University.

Certificates of proficiency are awarded to pupils of Evening Continuation Schools whose attendance and work have been satisfactory throughout the course.

The number of candidates and of passes at each of the examinations during 1925 and 1926 are shown below:—

Examinations.	1925.			1926.		
	Candidates.	Passes.		Candidates.	Passes.	
		Number.	Per cent.		Number.	Per cent.
High School Entrance and Bursary ...	11,798	9,331	79·1	13,371	8,475	63·4
Evening Continuation ...	524	337	64·3	642	424	66·0
Superior.—Day Continuation—						
Junior Technical (2nd year) ...	1,273	428	33·6	1,116	744	66·6
Junior Technical (3rd year) ...	443	238	53·7	529	358	67·7
Domestic (2nd year) ...	1,957	1,755	89·7	3,226	2,991	92·7
Commercial (boys 3rd year) ...	134	60	44·8	62	31	50·0
" (girls 3rd year) ...	727	582	80·1	832	635	76·3
Intermediate Certificate ...	5,562	4,144	74·5	6,372	4,669	73·3
Leaving Certificate (5th year) ...	1,468	1,049	71·5	1,611	1,177	71·7

In 1926 the number of candidates at the high school entrance and bursary examination was greater than in the previous year, but there were not so many passes.

## TECHNICAL EDUCATION.

Technical education is under the direct control of the Department of Education, and is administered by a Superintendent, with financial and general procedure independent of other branches of the education system. The courses of instruction are co-ordinated, however, with those of the ordinary schools.

The Central Technical College is in Sydney, and there is a branch at East Sydney, Darlinghurst. Branch Colleges have been established also at Newcastle and Broken Hill and there are seventeen trade schools, viz., nine in the suburbs and eight in country towns. In addition, elementary instruction is provided in special subjects at forty-seven country centres where there is a demand for it and correspondence courses are provided in a number of subjects.

Specialised instruction in the practice of a wide range of callings is provided for the apprentice, improver, and journeyman, while higher courses, embracing the technology of the various trades and technical professions, may be followed by more advanced students.

The lower trade courses cover a period of three years in the Trade Schools, but sometimes they are extended to five years. Comprehensive courses covering five years and higher courses of two years' duration are given in the Technical Colleges. The subjects are grouped to form trade classes, instruction being given in all branches of mechanical and electrical engineering, building, sanitation, applied art, domestic science, commercial subjects, agriculture, sheep and wool classing and in manufacturing trades.

Some of the higher courses of evening instruction are co-ordinated with first-year courses at the University, and the satisfactory completion of any course of instruction is marked by the award of certificates, viz., the Certificate of Trade Competency in trade courses and the College Diploma in the higher courses. These certificates are recognised by employers.

The fees payable for instruction are very low, being usually at the rate of 4s. per term of thirteen weeks for juniors, and 8s. for seniors.

Intending students are required to furnish evidence that they possess sufficient preparatory knowledge to take profitable advantage of the training, and a student is not admitted to a course unless actually engaged in the specific trade to which the course relates. Special provision is made for the admission of journeymen, without preliminary test, to any part of the courses relating to their trades. Young students are admitted if they furnish a guarantee to become apprenticed before reaching the limit of the age of apprenticeship.

A noteworthy feature of the system is the existence of advisory committees in connection with each course of instruction. These committees are composed of representatives of employers and employees, who visit the classes regularly and discuss with the Superintendent and heads of departments matters relating to the maintenance of standards of efficiency in equipment and teaching, and by this means the courses are made to meet practical needs.

The following table shows the number of classes and teachers and the enrolments at the Technical College and Trade Schools during the last five years, together with the amount of fees received and of money expended.

Year.	Number of Classes.	Lecturers and Teachers.	Total Enrolments.*	Individual Students.	Fees Received.	Net Expenditure. †
					£	£
1922	646	470	21,328	9,806	13,627	127,638
1923	664	478	23,496	10,234	14,880	142,169
1924	674	499	25,462	11,386	16,644	159,723
1925	679	519	26,796	11,787	17,832	189,103
1926	688	527	28,764	12,039	18,938	175,832

† After deducting fees received.

\* Students being counted in each class joined.

The net expenditure shown above includes interest at  $3\frac{1}{2}$  per cent. on capital value of land, buildings, and equipment. The sum so included in 1926, was £12,055. The average net cost per student in 1926 was £14 10s. 11d.

The ages and sexes of the individual students attending technical classes in 1926 were as follows—

Age last Birthday.	Males.	Females.	Total.
14	194	385	579
15	585	493	1,078
16	1,388	525	1,913
17	1,484	456	1,940
18	1,291	324	1,615
19	855	255	1,110
20	592	173	765
21 and over	2,071	1,018	3,089
Total ... ..	8,460	3,629	12,089

Diploma courses were followed by 343 males and 5 females, trade courses by 5,444 males and 4 females, women's handicrafts and art classes by 229 males and 3,197 females, and miscellaneous courses by 2,444 males and 423 females.

#### *Technical Education Examinations.*

The following are particulars of examinations conducted under the technical education system during the last five years:—

Particulars.	1922.	1923.	1924.	1925.	1926.
Number Examined ... ..	13,269	15,543	15,352	21,799	22,722
Number of Passes ... ..	11,046	12,018	12,785	18,734	19,160
Percentage of Passes ... ..	83·2	77·3	83·2	85·9	84·7

These figures afford evidence of a very encouraging growth in this important branch of education, and a larger increase would have occurred if accommodation had been available for all applicants. The accommodation in the metropolitan centres is not sufficient for all the apprentices who desire to gain admission to the classes, particularly those relating to the building industry.

#### *Railway and Tramway Institute.*

Classes for the technical, commercial and general education of railway employees are conducted by the Railway and Tramway Institute, which is under the control of a director and advisory council.

The headquarters of the institute are in Sydney, and there are 49 country branches. The total membership is 28,497, or about one half of the railway employees. The number of students in 1927 was 6,308, and the courses ranged from elementary railway principles to the university matriculation standard. Correspondence courses are provided.

A scholarship of the value of £150 per annum, tenable for four years, in engineering at Sydney University is awarded annually to the most proficient student in the Engineering Matriculation Class.

## UNIVERSITY OF SYDNEY.

The University of Sydney was incorporated by Act of Parliament on 1st October, 1850, and it was granted a Royal Charter on 27th February, 1858, when its graduates were accorded the same status in the British Empire as that of graduates of the Universities of the United Kingdom. Since 1884 women have been eligible for all University privileges.

The "University and University Colleges Act, 1900," as amended in 1902, 1912, and 1916, constitutes its present statutory basis. The University is incorporated as a body politic, consisting of a Senate comprising twenty-six fellows, of whom one is a life member, four are appointed by the Governor, two are elected by Parliament (one by each House), five represent the teaching staff of the University, ten are elected by the graduates, three are elected by the aforesaid fellows, and one is the Vice-Chancellor appointed by the Senate. The Senate manages the affairs of the University, and provides such instruction and grants such degrees as it thinks fit, except in Theology and Divinity, from which it is precluded by statute. The Vice-Chancellor is the chief administrative officer, and an ex-officio member of every board, faculty, and committee of the University. He exercises a general supervision over discipline, and is Chairman of the Proctorial Board.

Within the University there are ten faculties, viz., Arts, Law, Medicine, Science, Engineering, Dentistry, Veterinary Science, Agriculture, Architecture, and Economics, besides a School of Domestic Science. Degrees are awarded in each of these faculties in addition to diplomas in Commerce, Education, Public Health, Tropical Medicine and Psychiatry. There is also a course of study for pharmacy students proceeding to the final examination of the Pharmacy Board of New South Wales. In 1926 a course leading to the diploma in journalism was established provisionally.

University lectures (except lectures in Law) are delivered in buildings within the University which extend over 126 acres, and are vested in the Senate.

In 1854 an Act was passed to provide for the establishment within the University grounds of residential colleges in connection with the religious denominations. These colleges and the year in which each college was incorporated by Act of Parliament are as follows:—The Church of England (St. Paul's) 1854, Roman Catholic (St. John's) 1857, Presbyterian (St. Andrew's), 1867, Methodist (Wesley) 1910. There is also the Women's College (1889), which is conducted on an undenominational basis. The Teachers' College, which is non-residential and is not affiliated with the University, is maintained by the State for the training of teachers, and is situated in the University grounds. In the grounds of St. John's College a building for the accommodation of Catholic women students—Sancta Sophia Hall—was opened in 1926.

Many benefactions have been bestowed on the University by private persons. These endowments include the Challis Fund, of which the original amount, £276,856, has been increased by investment to £326,342, the P. N. Russell Funds, £100,000; and the Fisher Estate, £30,000. In addition, the University receives a large annual revenue from the trustees of the McCaughey bequest the amount so received in 1926 being £21,814. Excluding the principal of the McCaughey bequest, the credit balances of the private foundations amounted to £735,362 on the 31st December, 1926.

*University Finances.*

The University is supported chiefly by Government aid and the fees paid by students, but it benefits also to a considerable extent from income derived from the private foundations.

The following statement shows the amounts derived from the principal sources of revenue, and the total expenditure during each of the last five years. Under the items are included sums received for capital expenditure on buildings, etc., and amounts from benefactors to establish new benefactions:—

Year.	Receipts.					Disbursements.	Private Endowment Funds Credit Balance at end of Year.
	Government Aid.	Fees.	Private Foundations.	Other Sources.	Total.		
	£	£	£	£	£	£	£
1922	118,870	43,330	59,350	6,854	228,404	199,074	632,390
1923	119,370	44,563	63,869	4,363	232,165	229,228	639,867
1924	125,753	41,631	83,928	4,576	255,888	277,167	668,737
1925	122,870	40,731	101,963	6,872	272,436	245,850	706,821
1926	102,168	43,371	92,003	5,008	242,550	213,808	735,362

\* Includes Retiring Allowances Fund, but excludes the capital of McCaughey bequest.

The amount of Government aid as stated includes special appropriations paid from the Consolidated Revenue Fund to the Senate of the University to be expended in the erection of buildings for or in connection with the University under the University (Building) Act, 1919. The total amount of the appropriation was £300,000 payable in six annual instalments of £50,000 each, the last in the financial year ended 30th June, 1926.

Salaries comprise the principal item of disbursements in each year. The total expenditure inclusive of capital expenditure in the last four years was distributed as follows:—

Classification.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Salaries ... ..	120,836	128,269	130,276	135,293
Maintenance, Apparatus, etc.	30,736	36,549	41,379	42,587
Buildings and Grounds ...	63,976	105,909	65,358	17,657
Scholarships and Bursaries ...	13,074	5,966	6,332	6,587
Other ... ..	606	474	2,505	11,684
Total ... ..	229,228	277,167	245,850	213,808

*Lectures, Staff, and Students.*

Before admission to courses of study leading to degrees, students must afford proof of educational qualifications by matriculation. Non-matriculated students are admitted to lectures and to laboratory practice,



but are not eligible for degrees. On the satisfactory completion of any course, however, they may be awarded a certificate. Lectures are delivered during the daytime in all subjects necessary for degrees and diplomas, and evening lectures are provided in the Faculties of Arts and Economics, in certain science subjects, and in Japanese. Students are required to attend at least ninety per cent. of the lectures in each course of study leading to a degree.

Lectures are delivered during three terms of ten weeks in each year. The period of study and total cost of graduation in each faculty are as follow:— Arts, 3 years, £81; Economics, 4 years, £102; Law, 4 years, £103; Medicine, 6 years, £284; Dentistry, 4 years, £208; Agriculture, 4 years, £125; Veterinary Science, 4 years, £120; Science, 3 years, £105; Engineering, 4 years—Civil, £167; Mechanical and Electrical, £167; Mining and Metallurgy, £181; and Architecture, 4 years, £184.

Public exhibitions or exemptions from the payment of fees are granted annually on the results of the Leaving Certificate examination to 200 students entering the University, and fees are remitted in the case of teachers or students in training for the teaching profession attending University lectures. More than forty scholarships are awarded from private foundations, and twenty-three bursaries may be awarded by the Senate. In 1926 fees were remitted in respect of 1,084 students, including exhibitors, State and University bursars and students in training as teachers. During 1926 a general service fee of 10s. per term was imposed upon all students in attendance at lectures, including students exempt from payment of ordinary fees, and it was increased to £1 1s. as from the beginning of 1927.

The number of degrees conferred by the University from the foundation to the end of 1926 was 9,731, made up as follows:—

Degree.	Number Conferred.		Degree.	Number Conferred.		Degree.	Number Conferred.	
	During 1926.	To end of 1926.		During 1926.	To end of 1926.		During 1926.	To end of 1926.
M.A. ...	10	582	B.D.S. ...	18	169	D.Sc.Eng. ...	...	1
B.A. ...	142	3,170	L.D.S. ...	...	30	M.E. ...	...	14
LL.D. ...	1	30	D.Sc....	2	33	B.E. ...	...	584
LL.B. ...	41	488	M.Sc. ...	1	7	M.Ec. ...	...	3
M.D. ...	6	81	B.Sc. ...	41	617	B.Ec. ...	...	163
M.B. ...	152	2,006	B.Sc.Agr. ...	8	45	B. Arch. ...	...	38
Ch. M. ...	148	1,630	B.V.Sc. ...	5	40			
						Total ...	632	9,731

In 1926 the teaching staff of the University included 49 professors and 159 lecturers and demonstrators. Professors and most of the lecturers are paid fixed salaries, and the remainder receive fees. Provision is made for a pension scheme for professors appointed since 1898, the benefit to accrue after twenty years' service, and after attaining the age of 50 years.

The University has not the power to confer honorary degrees, but may admit *ad eundem gradum* graduates of approved Universities, viz., Oxford, Cambridge, London, Durham, Victoria, St. Andrew's, Edinburgh, Glasgow, Aberdeen, Dublin, Queen's of Ireland, Royal of Ireland, Melbourne, New Zealand, Adelaide, and of such other Universities as the Senate may determine.

The following statement shows the number of students attending the various courses in 1921, and in each of the four years 1923 to 1926:—

Course.	1921.	1923.	1924.	1925.	1926.		
					Men.	Women.	Total.
<b>Degree and Special Courses—</b>							
Arts ... ..	856	692	710	811	381	424	805
Law ... ..	328	356	349	322	279	9	288
Medicine ... ..	985	748	626	508	360	43	403
Science ... ..	220	210	195	196	119	98	217
Engineering ... ..	224	175	135	121	124	...	124
Dentistry ... ..	82	76	74	69	53	6	59
Veterinary Science ... ..	16	16	16	14	10	...	10
Agriculture ... ..	28	27	33	31	25	...	25
Architecture ... ..	55	45	50	51	31	10	41
Economics ... ..	138	113	112	107	89	29	118
Japanese ... ..	12	9	12	7	5	3	8
<b>Diploma Courses—</b>							
Commerce* ... ..	148	95	98	107	88	7	95
Pharmacy Students ... ..	204	217	293	289	224	19	243
Massage Students ... ..	21	6	10	8	1	10	11
	<b>3,317</b>	<b>2,785</b>	<b>2,713</b>	<b>2,641</b>	<b>1,789</b>	<b>658</b>	<b>2,447</b>
Less Students enrolled twice ...	42	30	25	30	23	2	25
<b>Total, Individual Students ...</b>	<b>3,275</b>	<b>2,755</b>	<b>2,688</b>	<b>2,611</b>	<b>1,766</b>	<b>656</b>	<b>2,422</b>

\* Economics and Commerce prior to 1924.

There were 49 post-graduate students and research scholars in 1926, viz., 22 in the Faculty of Arts, 9 in Medicine, 14 in Science, 2 in Engineering, 1 in Veterinary Science, and 1 in Agriculture.

The decline of 853 students between 1921 and 1926 may be attributed partly to the completion of courses delayed by the war and partly to an increase in fees in 1921. The decrease in the number of paying students was 492 and of non-paying students 361. The decline has been general in all courses except pharmacy, being greatest in respect of medical and engineering students. The number of students admitted to matriculation in 1926 was 477, as compared with 575 in 1921.

*University Clinics.*

Three metropolitan hospitals, viz., Royal Prince Alfred, Sydney, and St. Vincent's, provide clinical schools for students in Medicine.

Such students must pass through the hospital curriculum of study and practice in order to obtain the certificate of hospital practice necessary to qualify for admission to the final degree examination in medicine and surgery.

The Royal Prince Alfred Hospital is a General Hospital and Medical School for the instruction of University students and for the training of nurses. Appointments to the medical and surgical staff of the hospital are made conjointly by the Senate of the University and the directors of the hospital.

At Sydney Hospital, founded in 1811, the clinical school is under the direction of a Board of Medical Studies, and all appointments of clinical lecturers and tutors are subject to the approval of the Senate. St. Vincent's Hospital is conducted by the Sisters of Charity, and appointments to the staff are made on the recommendation of an Advisory Board, consisting of members of the Senate and of the teaching staff in the Faculty of Medicine.

Other hospitals where studies may be undertaken in connection with the Faculty of Medicine are:—The Royal Hospital for Women, Royal Alexandra Hospital for Children, the Gladesville and Callan Park Mental Hospitals, the Women's Hospital, the Renwick Hospital for Infants, and the South Sydney Hospital for Women.

In connection with the Department of Dental Studies, the United Dental Hospital of Sydney provides facilities for the instruction of students. The University lecturers in surgical and mechanical dentistry are, *ex officio*, honorary dental surgeons of the hospital.

#### *Student Adviser and Appointments Board.*

In 1922 the Senate appointed a student adviser to acquaint himself with every phase of University life and to hold his knowledge at the disposal of individual students and of students' clubs and societies. This officer is also secretary of the Appointments Board created for the purpose of assisting students in obtaining positions. To this end the Board endeavours to supply employers with accurate reports concerning graduates, who are required to register with the Board while attending the courses at the University.

#### *Extension Lectures.*

University Extension Lectures are conducted under the direction of a University Extension Board of from twelve to eighteen members appointed annually by the senate. Courses of lectures upon topics of literary, historical, and scientific interest are given in various centres at a charge of £2 per lecture. At the conclusion of a systematic course of ten lectures, an examination may be held and certificates awarded to successful candidates. In 1926 the Board provided twelve courses of lectures, of which four were in country centres. The total number of lectures delivered was 101.

#### *Tutorial Classes.*

In accordance with the provisions of the University Amendment Act of 1912, the Senate has established regular evening Tutorial Classes, and the Government contributes annually a sum of £6,370 for the maintenance of Tutorial Classes and Extension Lectures. Tutorial Classes are open to unmatriculated as well as to matriculated students, and diplomas are issued to persons who have studied in these classes for at least one year in any one subject. Tutorial Classes, which may be established in particular branches of study upon specific requisition by intending students, have been formed in conjunction with the Workers' Educational Association in suburban and country centres as well as at the University. A resident tutor is stationed at Newcastle. Particulars of the classes are shown on a later page with other information relating to the Workers' Educational Association.

#### SCHOLARSHIPS AND BURSARIES.

It is the policy of the State to assist promising students to obtain secondary and tertiary education by granting scholarships and bursaries and a number are provided by private endowment.

Scholarships tenable at State secondary schools are not awarded as fees are not charged, and school material is supplied to all pupils. A few scholarships—six in 1926—are provided by the State to enable boys to attend the Sydney Grammar School.

At the Intermediate Certificate examination candidates may gain scholarships entitling them to technical instruction for three years at Lower Trades Courses or Women's Industries Courses of the Technical College. Students of the Hurlstone and Yanco Agricultural High Schools may gain scholarships tenable for two years at the Hawkesbury Agricultural College. Such

scholars receive free board and residence and a monetary allowance for text-books. In addition holders of bursaries in secondary schools may, after obtaining the intermediate certificate, proceed to Hawkesbury Agricultural College to follow the three year course leading to the Diploma. Such bursars receive an allowance of £50 per annum besides text-books, but they are required to pay all fees and other charges imposed by the College. These amount to £33 per annum with certain extras.

Boys who intend to become teachers may gain at the Intermediate Certificate examination two-year scholarships tenable at District or High Schools. Text-books are supplied, and an allowance is granted.

Scholarships, admitting to courses of technical instruction, are provided to assist students to pass from the Day and Evening Junior Technical Schools to the Trades and Domestic Science Schools, from Lower to Higher Trades Courses, and from Trades to Diploma Courses at the Technical College. Students holding Leaving Certificates may obtain entrance by scholarship to the (Technical) Diploma Courses; and those who have gained the Intermediate Certificate at the Technical High School may obtain scholarships enabling them to enter the Higher Trades Courses at the Technical College. These technical scholarships carry a grant of text-books and appliances and exemption from fees, and holders must be engaged in the trade or profession for which the course has been established. Students who pass through the Diploma Course with sufficient distinction are enabled to continue their education at the University by means of scholarships awarded annually and valued at £100 per annum.

At the Superior Public School Certificate Examination in 1926, ten boys and seventy-five girls gained scholarships tenable for three years at a technical college. At the Intermediate Certificate examination 32 scholarships for Lower Trades Courses were awarded, viz., 20 to boys and 12 to girls, and 12 Hawkesbury Agricultural Scholarships, as well as two scholarships, valued at £25 per annum, tenable for two years, to enable the boy and the girl who gained the best passes to complete the secondary course. At the Leaving Certificate Examination 14 boys and 1 girl were awarded scholarships for diploma courses at Technical Colleges; in addition, 200 exhibitions were provided exempting the holders from the payment of fees to the University, viz., 119 pupils of State schools, and 81 pupils of registered secondary schools. In the same year 10 students at evening continuation schools won scholarships for free education and a supply of text-books valued at £1 10s. per annum, tenable at day courses.

#### *Bursary Endowment.*

The Bursary Endowment Act, 1912, provides public moneys for bursaries, tenable in public or private secondary schools and in the University of Sydney. The fund is administered by a board, consisting of two representatives each of the University of Sydney, of the Department of Education, and of the private secondary schools registered under the Act.

Schools desiring to educate bursars or competitors for bursaries must register with the Bursary Endowment Board. Such registration, which is effective for two years, is conditional upon the suitability of school premises, the organisation and equipment of the school, the method and range of instruction, efficiency of the teaching staff, and the general conduct of the school.

A number of bursaries tenable at secondary schools is made available for pupils between the ages of 12 and 14 years, whose parents' income is less than £260 per annum, or not more than a quota of £60 per annum for each

member of the family, exclusive of children earning 15s. or more weekly. Two-thirds of the bursaries are available for pupils of country schools, and special provision is made for pupils of small country schools.

Each bursary comprises a grant of text-books not exceeding in value £1 10s. per annum, and an annual allowance of £40 for the first three years, and £50 for the fourth and fifth years, to holders who live away from home in order to attend school, the allowance in the case of those who reside at home being £12 per annum to the intermediate standard, increasing to £18 and £24 respectively in the last two years. The bursaries awarded in 1926 numbered 286, viz., 173 to boys and 113 to girls. Of these 202 were tenable at State high schools and 84 at private schools.

Bursaries, tenable for two or three years, are awarded upon the results of the Intermediate Certificate Examination. They are of the value of fourth and fifth year bursaries. Thirteen were awarded to boys and 2 to girls in 1926.

Bursaries tenable at the University of Sydney may be awarded to candidates at the Leaving Certificate examination who are under 19 years of age and whose parents' means are inadequate for the expense of a University education. A full bursary entitles the holder to a grant for text-books not exceeding £5 per annum, and to free education. An allowance not exceeding £25 per annum is made to those who need not board away from home in order to attend the University, and not exceeding £65 per annum to those who must do so. The number of such bursaries awarded annually ranges from 25 to 40. Twenty were awarded to boys and 12 to girls in 1926.

At 30th June, 1927, excluding 492 holders of war bursaries, there were 1,205 pupils holding bursaries under the Bursary Endowment Act, viz., 1,094 were attending courses of secondary instruction, and 111 were attending University lectures. The annual monetary allowances paid in 1926-27 were as follow:—

Allowances.	Bursars.	Allowances.	Bursars.
£		£	
12	423	40	308
18	121	50	163
24	83	65	40
25	67		
		<b>Total ...</b>	<b>1,205</b>

In addition to the bursaries made available by the Bursary Endowment Board, three bursaries, tenable for three years at the Hawkesbury Agricultural College, are awarded by the Department of Agriculture on the results of the College entrance examination. These bursaries exempt their holders from payment of the education and maintenance fee of £30 per annum. There are also three scholarships, tenable for two years, at the farm schools at Bathurst and Wagga Experiment Farms; and one, tenable for one year, at the apprentice school at Wollongbar Experiment Farm.

War bursaries are provided by the Bursary Endowment Board for children of incapacitated and fallen soldiers. The number in operation at 30th June, 1927, was 492, each receiving £10 per annum. The total number awarded since they were initiated in 1916 was 1,959.

The war bursaries are awarded usually to children between the ages of 10 and 13 years. Upon reaching the latter age the children become eligible for benefits under a scheme adopted by the Repatriation Commission to assist

such children to obtain higher education and training for skilled trades, technical or professional careers. From the date these benefits became available in February, 1921, to 30th June, 1926, applications to the Commission were approved in 2,691 cases in New South Wales and a sum of £201,035 was expended in the State. This sum included private gifts and bequests, but the greater part was provided by the Commonwealth Government.

For the education of the children of fallen soldiers and sailors assistance is granted also from the Anzac Memorial Bursary Fund which was created by public subscription and vested in the Bursary Endowment Board. Bursaries awarded from this fund are tenable at secondary schools or the University. To 30th June, 1927, the number of such bursaries awarded was 70, of which six at the rate of £25 per annum were awarded in 1926-27.

TRAINING OF SCHOOL TEACHERS.

The Teachers' College is maintained by the State for the training of teachers for the State service. Teachers for private schools also may be trained at the College on certain conditions, but few persons avail themselves of this provision.

A course at the Teachers' College extending over a period of two years prepares teachers for the various classes of primary and infant schools. Teachers of small rural schools are required to undergo an abbreviated course of one year, and the course for teachers of secondary schools extends over four years. Special courses are arranged to meet the requirements of the State schools and for the benefit of individual students possessing special capabilities.

The training of the students enrolled at the Teachers' College is conducted at the University and at three practice schools. A hostel for the accommodation of women students has been established in connection with the Teachers' Training College.

The staff of the College consists of a principal, vice-principal, forty-five lecturers, five visiting lecturers, and ten clerical and library assistants. Members of the teaching staff are afforded opportunities to study abroad, and leave of absence, on full pay, may be granted for this purpose.

The library in connection with the College contains 27,200 volumes.

There were 1,256 students enrolled at the Teachers' College in 1926, as shown in the following statement:—

Students.	Men.	Women.	Total.
First year ... ..	163	318	481
Second year ... ..	130	245	375
Third year ... ..	42	51	93
Fourth and fifth ... ..	24	29	53
Graduate ... ..	6	10	16
Short Course (one year) ... ..	68	139	207
Cookery ... ..	...	31	31
<b>Total ... ..</b>	<b>433</b>	<b>823</b>	<b>1,256</b>

Of these students, 1,254 were in receipt of living allowances and 2 were paying fees.

*Classification of State Teachers.*

Teachers in the service of the State are classified, and are promoted from one grade to another according to their efficiency, which is gauged on reports of inspectors and their attainments as tested by written and oral

examinations. Students who have completed a course of training at the Teachers' College are required to obtain practical experience as teachers before they are classified.

A comparative statement of the classification of the teaching staff of the State schools at the end of the years 1916 and 1926 is shown below; those in the Technical Education Branch are not included.

Teachers.	1916.			1926.		
	Men.	Women.	Total.	Men.	Women.	Total.
High School Teachers ...	204	148	352	437	365	802
Principals and Assistants—						
First Class ...	273	101	374	517	151	668
Second Class ...	1,037	656	1,693	1,342	1,061	2,403
Third Class ...	1,466	1,005	2,471	1,141	1,639	2,780
Unclassified ...				142	415	557
Awaiting Classification ...	609	1,634	2,243	385	729	1,114
Cookery Teachers ...		59	59		110	110
Sewing Mistresses ...		115	115		221	221
Manual Training Teachers ...				181		181
Visiting Teachers ...				27	66	93
Temporary Teachers ...				57	573	630
Total ...	3,589	2,718	7,307	4,229	5,330	9,559
Students in Training ...	122	401	523	433	823	1,256
Subsidised School Teachers ...	31	508	539	27	471	498
Grand Total ...	3,742	4,627	8,369	4,689	6,624	11,313

There has been a general advance in the standard of educational attainments of teachers in New South Wales during the past ten years. The number of unclassified teachers has decreased absolutely and relatively, and a large increase has occurred among high school teachers and those holding first class certificates. At the end of 1926 there were 958 University graduates in the teaching service, viz., 480 men and 478 women.

Teachers awaiting classification consist mainly of ex-students of the Training College ineligible for classification until they have obtained the requisite teaching experience. Most of them possess the educational attainments for second or third class certificates.

Teachers of subsidised schools are not required to be trained, but they must have sufficient educational attainments to teach the curriculum of primary schools. The average number of pupils enrolled in subsidised schools is seven per teacher, the schools being situated in remote districts.

#### STATE EXPENDITURE ON EDUCATION.

##### *State Schools.*

Although the expenditure on the State schools rose steadily between 1901 and 1911, the recent expansion of the system has caused a very rapid increase in expenditure since that year, but more especially since 1919 on account of the substantial increases in salaries paid to teachers. Part of this additional expenditure has been occasioned by the increase in the number of scholars, but the cost of education per pupil has more than doubled since 1911. The total expenditure on primary and secondary schools during 1926 was £4,327,570.

The following statement provides a comparison of the State expenditure on schools at intervals since 1891. The expenditure on technical education is not included.

Year.	Maintenance and Administration.	School Premises.	Total Expenditure.	Per Pupil—Mean Quarterly Enrolment.		
				Maintenance and Administration.	School Premises.	Total Expenditure
1891	£ 578,191	£ 191,374	£ 769,565	£ s. d. 3 7 10	£ s. d. 1 2 6	£ s. d. 4 10 4
1901	708,974	57,663	761,637	3 6 2	0 5 5	3 11 7
1911	1,048,583	193,993	1,242,576	4 13 10	0 17 4	5 11 2
1921	3,229,042	329,795	3,558,837	10 4 4	1 0 10	11 5 2
1922	3,236,407	499,283	3,735,690	9 18 5	1 10 7	11 9 0
1923	3,186,477	653,625	3,840,102	9 13 1	1 19 7	11 12 8
1924	3,297,828	817,686	4,115,514	9 14 9	2 8 3	12 3 0
1925	3,522,320	676,132	4,198,452	10 6 5	1 19 7	12 6 0
1926	3,627,652	690,918	4,327,570	10 10 4	2 0 7	12 10 11.

The fees collected in high schools amounted to £25,395 in 1923 and to £28,259 in 1924. If these amounts be deducted from the cost of maintenance the average per pupil, as shown in the foregoing table, would be reduced by 1s. 6d. in 1923 and 1s. 8d. in the following year.

The following statement shows the distribution of expenditure, including capital expenditure in connection with primary and secondary schools (but omitting expenditure on technical education) in 1921 and subsequent years:—

Particulars.	1921.	1923.	1924.	1925.	1926.
Sites, Buildings, Additions*—	£	£	£	£	£
Primary Schools†	173,781	451,888	581,031	471,689	429,501
High Schools	28,703	9,051	14,844	28,187	40,742
Teachers' College	3,816	45,000	27,319	4,160	...
Rates (municipal and shire)†	36,376	25,034	51,667	55,021	61,531
Rent, Furniture and Repairs	89,120	122,652	142,825	117,075	168,144
Salaries and Allowances—					
Primary Schools†	2,446,636	2,438,278	2,563,447	2,642,783	2,645,591
High Schools	200,028	194,290	199,638	325,445	333,966
Evening Continuation Schools..	12,190	14,455	14,587	16,010	16,191
Other Maintenance Expenditure—					
Primary Schools†	188,975	176,099	185,486	180,058	195,673
High Schools	27,314	26,892	28,463	27,436	39,990
Evening Continuation Schools..	1,541	1,436	1,667	1,408	1,558
Bursaries and Scholarships	58,285	47,596	33,518	44,457	36,805
Boarding and Conveyance Allowances	36,149	36,715	39,549	39,706	44,503
Training of Teachers	98,537	80,031	77,256	83,286	118,315
School Medical Inspections	22,197	29,067	31,319	32,605	34,219
School Inspection	47,971	46,494	46,586	48,511	50,288
Administration and other Expenses	89,216	95,190	76,312	80,615	110,553
Total...	£ 3,558,837	£ 3,840,102	£ 4,115,514	£ 4,198,452	£ 4,327,570

\* Includes State Insurance on School Buildings. † Expenditure by Resumed Properties Department on behalf of Department of Education. ‡ Includes expenditure on super-primary education in intermediate high, district, continuation and rural schools.

The amounts shown in the foregoing tables do not include any allowance for vested residences granted to teachers, of which the annual value was £45,012 in 1926. The figures are exclusive also of interest paid on loan money used for the erection of schools.



*Capital Expenditure on School Buildings, etc.*

In view of an acute shortage of accommodation in State schools in recent years, large sums have been expended from the Loan Fund and the Public Works Fund for the purpose of building new schools, teachers' residences, etc. The total amount so expended during the decennium ended 30th June, 1927, was £4,278,893, the expenditure in each year being as follows:—

Year ended 30th June.	Expenditure from Loan and Public Works Funds.	Year ended 30th June.	Expenditure from Loan and Public Works Funds.
1918	295,449	1923	530,428
1919	193,872	1924	591,784
1920	270,223	1925	657,119
1921	251,734	1926	505,153
1922	330,084	1927	653,047

The amounts expended during the four years ended June, 1921, were disbursed from the Public Works Fund, which represents money derived from the sale of Crown lands and grants from consolidated revenue. In later years a large proportion was obtained from loans, but in some cases provision has been made that the amounts be recouped to the Loan Fund from the Public Works Fund.

*Total Public Expenditure on Education.*

In addition to expenses incurred in respect of the State school system, the public expenditure on education in New South Wales includes grants and subsidies to the University and other educational and scientific organisations. A summary of the total expenditure by the State in respect of education in various years since 1911 is shown below. The expenditure on buildings, equipment, sites, etc., representing capital expenditure, is distinguished as far as practicable from expenditure for maintenance, including grants and subsidies which may be regarded as annual costs.

Year ended 30th June.	Expenditure.			
	Capital.	Annual.	Total.	Per head of Population.
	£	£	£	£ s. d.
1911	176,778	1,213,368	1,390,146	0 17 5
1921	251,880	3,473,545	3,725,425	1 15 8
1923	555,765	3,651,840	4,207,605	1 18 9
1924	592,169	3,710,906	4,303,075	1 18 11
1925	665,239	3,901,337	4,566,576	2 0 6
1926	512,225	4,039,154	4,551,379	1 19 7
1927	666,304	4,223,077	4,889,381	2 1 8

These figures are exclusive of amounts spent by the State on the agricultural college and experiment farms and societies for the promotion of agricultural and allied interests, of which particulars are shown in the chapter relating to the agricultural industry. They exclude also the interest paid on loan money invested in works used for public instruction.

## EDUCATIONAL AND SCIENTIFIC SOCIETIES.

Many organisations are in existence in New South Wales which have for their objective the encouragement of professional interests, and the advancement of Science, Art, and Literature. The Commonwealth Government has afforded a measure of recognition to the efforts of Australian men of letters by establishing in 1908 a Commonwealth Literary Fund to provide pensions and allowances to literary men and their families.

The Royal Society of New South Wales is one of the oldest of the educational organisations. Its objects are the advancement of science in Australia, and the encouragement of original research in all subjects of scientific, artistic, and philosophic interest, which may further the development of the resources of Australia, draw attention to its products, or illustrate its natural history.

The study of the botany and natural history of Australia has attracted many enthusiastic students, and the Linnæan Society of New South Wales was established for the special purpose of promoting the advancement of these particular sciences. The Society has been richly endowed, and possesses a commodious building at Elizabeth Bay, Sydney, to which are attached a library and museum. The proceedings are published at regular intervals, and contain many valuable papers, with excellent illustrations of natural history.

Other important scientific societies are the Royal Zoological Society of New South Wales, inaugurated in 1879; a branch of the British Medical Association, founded in 1881; a branch of the British Astronomical Association; the Australasian Association for the Advancement of Science; the Royal Geographical Society; the University Science Society; Australian Historical Society; the Naturalists' Society of New South Wales; and a branch of the Economic Society of Australia and New Zealand formed in 1925.

All the learned professions are represented by associations or societies.

The Royal Art Society holds an annual exhibition of artists' work at Sydney; and of the many musical societies, mention may be made of the Royal Sydney Apollo Society, and the Royal Sydney Philharmonic Society.

#### *Workers' Educational Association.*

The Workers' Educational Association of New South Wales was founded at a conference called by the Labour Council of New South Wales in June, 1913. Its main purpose is "to bring the mellowing influence of education into the Labour Movement," and its appeal is to workers of all degrees. It works in conjunction with other educational associations (particularly the Tutorial Classes at the University) and with working-class organisations. It publishes a monthly magazine and a series of books on matters of local and general economic importance. In 1927 the membership of the association in New South Wales consisted of 989 individual members, and 126 organisations were affiliated with it.

In 1927 sixty-three classes were held, viz., twelve at the University, twenty-three in the city and suburbs, ten in the Newcastle district, and eighteen in other country districts. The number of students enrolled was 1,933, and the effective enrolment was 1,645. The association received an endowment of £400 from the State and grants amounting to £1,361 from the Carnegie Corporation, and its subscription fees amounted to £779. The surplus on the sale of literature amounted to £173 in 1927, and the surplus on all operations for the year was £1,350.

#### CONSERVATORIUM OF MUSIC.

The State Conservatorium of Music, which was established in 1915, provides tuition in music, from the elementary to the advanced stages. The studies are divided into two sections. The Music School Section consists of three courses, viz., elementary, intermediate, and advanced—the last-mentioned extending over two years. A certificate is granted on the satisfactory conclusion of each course. The advanced grade certificate of the Music School Section entitles the holders to admission to the Diploma

Section, in which a course of two years' tuition, leading to the Professional Diploma, is given under the personal direction of the Director of the Conservatorium. A preparatory course is available for juveniles who have not previously received musical tuition.

The number of students enrolled in the various courses of study at the Conservatorium was 1,622 in 1925, and 1,567 in 1926. The receipts in 1926-27 consisted of fees and deposits amounting to £24,861; revenue from hire of hall, concerts, etc., £1,161; and the expenditure—payments to professional staff, £18,601; other salaries, £8,855; and contingencies, £3,567. The excess of expenditure over receipts amounted to £5,001.

#### MUSEUMS, LIBRARIES, AND ART GALLERY.

The Government of New South Wales maintains a number of museums and libraries and a National Art Gallery. The expenditure by the State on buildings for these institutions to 30th June, 1927, amounted to £423,988.

##### *Museums.*

The Australian Museum in Sydney is the oldest institution of its kind in Australia. It is incorporated under control of trustees, with a State endowment, which is supplemented by annual Parliamentary appropriations. It contains fine specimens of the principal objects of natural history, and a valuable collection of zoological and ethnological specimens of distinctly Australian character. A library containing many valuable publications is attached to the institution. Lectures and gallery demonstrations are given in the Museum, and are open to the public. During the year 1926 visitors to the Museum numbered 280,350, as compared with 254,560 in 1925. The institution is supported by a statutory endowment of £1,000 per year and by an annual parliamentary appropriation, amounting in 1926 to £18,471. The expenditure during the year was £21,179.

A Technological Museum has been established as an adjunct to the Central Technical College. It contains a valuable series of specimens illustrative of various stages of manufacturing, and a collection of natural products acquired by purchase, gift, loan, or exchange. Technological Museums are established also at Goulburn, Bathurst, West Maitland, Newcastle, and Albury.

Research work is conducted by the scientific staff at the Technological Museum in connection with the development of the natural resources of Australia.

There is a Mining and Geological Museum attached to the Department of Mines. Its functions include the preparation and collection of minerals to be used as teaching aids in schools and in other institutions.

The Agricultural and Forestry Museum is an adjunct of the Department of Agriculture.

The public have access to the "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, the Museum of Normal and Morbid Anatomy, attached to the Sydney University, and the National Herbarium and Botanical Museum at the Botanic Gardens. Housed in the Macleay Museum is the Aldridge collection of Broken Hill minerals.

##### *Public Library of New South Wales.*

The Public Library of New South Wales was incorporated in 1890 with a statutory endowment of £2,000 per annum for the purchase of books. In 1924 the National Library Act authorised the erection of new buildings at an estimated cost of £495,500.

The scope of the library, which is essentially a reference institution, is extended by a loan system, under which books are forwarded to individual students in the country, and to institutions, such as libraries, schools of arts, progress associations, lighthouses, associations of primary producers, branches of the Public School Teachers' Associations and of the Agricultural Bureau, and schools.

In June 1927, the Reference Department of the Public Library (exclusive of the Mitchell Library) contained 281,852 volumes, including 52,372 volumes for country libraries under the lending system. The attendance of visitors during the year 1926-27 numbered 208,700.

The Mitchell Library contains a unique collection, principally of books and manuscripts relating to Australasia and paintings of local historic interest donated by Mr. David Scott Mitchell to the trustees of the Public Library. Mr. Mitchell endowed the library with an amount of £70,000, the income from which is expended on books and manuscripts. In 1927 there were 118,810 volumes in the Mitchell Library, which is located in a separate building. There were 20,560 visitors during the year 1926-27.

The total cost to the State of the Public Library buildings was £29,158, and of the Mitchell Library £43,738. The expenditure on maintaining the Public Library (including the Mitchell Library) during 1926-27 was £26,017, including £2,599 from the Mitchell Library Endowment Fund.

#### *Sydney Municipal Library.*

The Sydney Municipal Library is a free lending library administered by the City Council. It contained 45,572 volumes in 1926.

Maintenance costs during 1926 amounted to £14,845, made up as follows:—Salaries, etc., £8,133; books, periodicals, binding, and electric lighting, £6,712.

#### *Other Libraries.*

Local libraries established in about 400 centres throughout the State, may be classed broadly under two heads—Schools of Arts, receiving an annual subvention in proportion to the amount of monetary support accorded by the public; and Free Libraries established in connection with municipalities. Under the provisions of the Local Government Act any shire or municipality may establish a public library, art gallery, or museum.

The amount paid on behalf of the building and maintenance claims of Schools of Arts in 1926 was £5,181.

The library of the Australian Museum, though intended primarily as a scientific library for staff use, is accessible to students, and about 25,200 volumes may be found on the shelves. In the library attached to the National Herbarium there are 9,566 volumes.

The library in connection with the Technological Museum, at the Central Technical College, contains approximately 12,800 text-books. In the library of the Teachers' College there are 27,250 volumes; in libraries attached to State Schools, 455,075 volumes; and in the Fisher Library at the University 168,900 volumes.

The Parliamentary Library contains over 52,000 books, and large numbers of volumes are in the libraries of the Law Courts and Government Offices.

#### *National Art Gallery of New South Wales.*

The National Art Gallery contains a good collection of oil paintings, water colours and statuary, including some works of prominent modern artists, and some valuable gifts from private persons.

The present value of the contents of the Gallery is £174,700, and the cost of the building to 30th June, 1927, was £94,437.

The number of paintings, etc., in the Gallery at end of year 1926 was 2,860, and the total amount expended in purchasing works of art during that year was £4,667, distributed as shown below:—

Classification.	Paintings, etc., in Gallery.	Expenditure during 1926.
	No.	£
Oil Paintings ... ..	566	3,694
Water Colours ... ..	434	255
Black and White Works ... ..	856	276
Statuary, Casts, and Bronzes ... ..	186	418
Various Art Works in Metals, Ivory, Ceramics, Glass, Mosaic, etc. ... ..	818	24
Total ... ..	2,860	4,667

The total expenditure during the year amounted to £10,198, including salaries and wages of £3,249.

The attendance at the National Art Gallery during 1926 was 146,640 on week days and 77,850 on Sundays.

Art students under certain regulations, may copy works and enjoy the benefit of a collection of books of reference on art subjects. Collections of pictures are sent to the principal country towns for temporary exhibition, 290 pictures being so distributed among twenty-one country towns during 1926.

The Gallery has received but small support from private endowments, and consequent upon its limited funds, is restricted mainly to the collection of specimens of contemporary art.

The Wynne Art Prize consisting of the interest on approximately £1,000 is awarded annually to the Australian artist or sculptor producing the best landscape painting of Australian scenery in oils or water colours, or the best production of figure sculpture.

The Archibald Prize is awarded for the best portrait, "preferably of some man or woman distinguished in art, letters, science, or politics painted by any artist resident in Australasia." The amount available for the prize in each year is approximately £400.

## LAW COURTS.

ONE of the cardinal principles of the constitution of New South Wales is that of the supremacy of the law of the land inherited from England. By it equal legal status is accorded to all citizens. No person may be punished lawfully except for a breach of law proven in the courts before which all men have equal status, including rights of appeal and the right, in proper cases, to contest the validity of laws and regulations in the law courts.

### *Laws.*

The body of law in force in New South Wales consists of the following elements:—

- (i) The Common Law of England and English statute law inherited on the original settlement of the colony in 1788, or applied by Act of Parliament in 1828.
- (ii) Acts passed by the Parliament of the State of New South Wales, together with regulations, rules, and orders made thereunder, and certain decisions of the State Judges having the force of law.
- (iii) Acts passed by the Parliament of the Commonwealth of Australia within the scope of its allotted powers, together with regulations, rules, and orders made thereunder.
- (iv) Imperial laws binding New South Wales as part of the British Empire, as part of the Commonwealth of Australia, or as a State.

The last-named, however, relate mainly to external affairs or matters of Imperial concern.

The proper subjects for Federal legislation are limited in number. In some cases Federal powers of legislation are exclusive, in others concurrent with those of the State. In all cases of conflict valid Federal laws override State laws. The legislative powers of the Federal Parliament are confined mainly to public law, and to those matters of private law on which interstate uniformity is desirable. The greater part of private law is enacted by the State Parliament.

The legal system of New South Wales is highly developed, having been modelled closely on that of England by incorporating into the body of local law and legal procedure leading features from the English system.

The main features of the system are that established law is enforced by public law courts by judges who hold office until they reach a prescribed retiring age, subject only to good behaviour, as determined by Parliament; the advocates employed at law are subject to the special control of the Supreme Court; and officers of police or prisons are answerable at law for the manner in which their duties are performed.

The jurisdictions of the courts of law are distributed in such a way as to secure prompt trial. Minor civil and criminal cases are relegated to Courts of Petty Sessions within the districts in which they arise, and more important civil cases are heard before a judge of the District Court, who also presides in criminal jurisdiction over Courts of Quarter Sessions.

The Supreme Court of New South Wales has jurisdiction in all matters of law arising in the State, except certain matters of a Federal nature, which are reserved for the High Court of Australia. It may delegate certain of its powers, and exercise general powers of supervision over the administration of justice through its right to issue and enforce writs and to hear appeals.

A number of courts of law have been established to deal with certain special matters, viz., Licensing Courts, Fair Rents Courts, Taxation Courts of Review (Mining) Wardens' Courts, Courts of Marine Inquiry, Land and Valuation Court, and, among criminal courts of magisterial rank, Coroners' Courts and Children's Courts. Special jurisdictions are exercised by the Industrial Commission and by the Workers' Compensation Commission. Special matters arising under the various land laws of the State are dealt with by Local Land Boards.

The external courts of law, whose jurisdiction extends to New South Wales are the Judicial Committee of the Privy Council (appellate only); and the High Court of Australia (original in certain matters and appellate in other matters).

Jurisdiction under Federal laws is generally exercisable by any State court, presided over by a magistrate or judge, subject to the same limitations as are imposed on their jurisdictions under State laws.

#### FUGITIVE OFFENDERS AND EXTRADITION.

By the Service and Execution of Process Act (Federal), civil process commenced in any State of the Commonwealth may be served in any other, and judgment obtained in any State may be enforced in any other. In criminal proceedings, warrants issued in one State and endorsed in another may be duly executed in that State and the fugitive surrendered.

Special arrangements governing these matters as between different parts of the British Empire are made by the Fugitive Offenders' Act, 1881 (Imperial). Subject to local inquiry and committal, any person charged with an offence punishable by imprisonment for twelve months or more may be arrested under a warrant locally endorsed, or under a provisional warrant in cases of suspicion, and extradited.

Extradition to foreign countries is governed by Imperial Acts, or local Acts of special sanction, under treaties concluded with the countries concerned. But such treaties may be arranged only by the Imperial Government, and these are usually made applicable to the whole Empire. Various Acts are in force. As regards New South Wales, application for the surrender of a foreign criminal is made to the Governor-General by the foreign consul or government concerned. No person, however, may be surrendered without due inquiry into the charge laid against him, and when surrendered he must not be tried for any other offence. Persons charged with political offences only may not be extradited. Application to foreign countries for surrender of a criminal to New South Wales are usually made by the Attorney-General.

#### ADMINISTRATION OF LAW.

##### *Ministers of the Crown.*

In New South Wales the duty of administering laws is allotted to Ministers of the Crown in their respective spheres, and a table of Acts administered by each Minister may be found in "The New South Wales Parliamentary Companion." Usually an Attorney-General and a Minister of Justice are appointed, but sometimes these offices are combined and a Solicitor-General is included in the Cabinet. Sometimes the Solicitor-General is a salaried public servant. There is also a Crown Solicitor—a salaried public servant.

The Attorney-General is charged with the conduct of business relating to the higher courts (such as Supreme and District Courts); the offices of the Crown Solicitor, Crown Prosecutors, Clerk of the Peace, and Parliamentary Draftsmen, as well as statute law consolidation and certain Acts, including the Poor Prisoners' Defence Act and the Poor Persons' Legal Remedies Act. Furthermore, he corresponds with other Ministers on ques-

tions of State on which his legal opinion is required, and with judges on matters within his control, initiates and defends proceedings by or against the State, and determines whether prosecution lies in cases of indictable offences.

The Minister of Justice supervises the working of the magistrates' courts, of gaols and penal establishments, the infliction of punishment and execution of sentences, also the operations of the various offices connected with the Supreme and District Courts. He administers Acts of Parliament relating to justices, juries, coroners, prisons and prisoners, criminals, inebriates, registration of firms, companies, and licensed trades and callings.

#### *Judges of the Supreme Court.*

Judges of the Supreme Court of New South Wales are styled "Justices," and are appointed by Commission of the Governor on the advice of the Executive Council. No person may be appointed Judge of the Supreme Court unless he is a barrister of five years standing. In addition to exercising legal jurisdiction the judges have power to make rules governing court procedure and to control the admission to practice of barristers and solicitors and to supervise their conduct.

A judge is immune from prosecution for the performance of his judicial duties within the scope of his jurisdiction. He holds office "during good behaviour" until the age of seventy years at a salary fixed by statute—£3,500 per annum to the Chief Justice and £2,600 per annum to each puisne judge. By these provisions the judiciary is rendered completely independent of the executive, but a judge may be removed from office by the Crown on the address of both Houses of Parliament. Each member of the Industrial Commission of New South Wales has the same status and rights as a puisne judge of the Supreme Court.

#### *Judges of the District Court.*

Any barrister of five years standing or attorney of seven years standing may be appointed as judge of the District Court by the Governor to exercise the jurisdiction of the Court in districts allotted by the Governor. Such persons hold office during ability and good behaviour, at a salary of £1,500 per annum. They may be removed from office by the Governor for inability or misbehaviour subject first to appeal to the Governor-in-Council. A judge may not engage in the practice of the legal profession. The chairman of the Workers' Compensation Commission has the same status as a District Court Judge.

#### *Other Officers of the Courts.*

Certain ministerial functions are performed by magistrates and justices in addition to their judicial duties, but special officers are appointed for certain purposes in the administration of justice, viz., Crown Prosecutors to act in Criminal Courts in prosecuting persons accused of indictable offences, Clerks of Petty Sessions, the Clerk of the Peace and his deputies, to act as Clerks for the Courts of the Quarter Sessions, Registrars of the Small Debts and District Courts, and Bailiffs.

In connection with the Supreme Court there are two important officers in addition to those connected with special jurisdictions, viz., the Prothonotary and the Sheriff.

The Prothonotary of the Supreme Court is its principal officer in the common law and criminal jurisdiction. He acts as registrar of the Courts of Matrimonial Causes, Admiralty, and Criminal Appeal. The Prothonotary or his deputy may be empowered under rules of the court to transact business usually transacted by a judge sitting in chambers, except in respect of matters relating to the liberty of the subject.



The office of Sheriff is regulated by the Sheriff Act, 1900. There is a Sheriff and Under Sheriff. Sheriff's officers are stationed at convenient country centres, where there is a Deputy Sheriff—usually a Police Magistrate. The functions of the Sheriff include the enforcement of judgments and execution of writs of the Supreme Court, the summoning and supervision of juries, and administrative arrangements relating to the holding of courts.

#### *Magistrates.*

Magistrates are appointed from among members of the Public Service unless it is certified by the Public Service Board that no member of the service is suitable and available for such office. Persons so appointed must have attained the full age of thirty-five years, and have passed the prescribed examination in law. They hold office at the pleasure of the Governor.

(Within the districts of the Metropolis, Parramatta, Newcastle, Broken Hill, Bathurst, and Wollongong, the jurisdiction of the Court of Petty Sessions is exercised exclusively by Stipendiary Magistrates. In country districts jurisdiction in Petty Sessions is exercised by Police Magistrates wherever convenient, and otherwise by honorary justices in minor cases. Police Magistrates were first appointed in 1837, and Stipendiary Magistrates in 1881.

The jurisdiction of magistrates is explained in connection with Courts of Petty Sessions, and their functions comprise those of Justices of the Peace, explained later. In addition they usually act in country centres as District Registrars in Bankruptcy, Revising Magistrates, visiting Justices to gaols, Deputy Sheriffs, Mining Wardens, and Industrial Magistrates.

#### *Justices of the Peace.*

Persons of mature age and good character may be appointed as Justices of the Peace by Commission, under the Grand Seal. The office is honorary, and is held during the pleasure of the Crown. No special qualifications in law are required, but appointees must be persons of standing in the community and must take prescribed oaths. Women became eligible for the office under the Women's Legal Status Act, 1918.

The functions of justices are numerous, extending over the administration of justice generally, the maintenance of peace, and the judicial duties of the office. The judicial powers are explained in connection with the Courts of Petty Sessions, and other duties include the issue of warrants for arrests, issue of summonses, administration of oaths, and certification of documents.

In March, 1928, there were approximately 23,100 Justices of the Peace in New South Wales, including 691 women.

#### *Registration of Legal Documents, etc.*

The Registrar-General in New South Wales registers certain occurrences and transactions of special legal significance as prescribed by Act of Parliament. Registrations are made of births, deaths, and marriages; of deeds, titles to land, transfers, land leases; of mortgages and liens; of companies and firms, and of documents under the Real Property Act; of bills of sale, and of instruments under the Newspapers and Printing and certain other Acts.

The documents relating to registration are usually available for inspection by the public. Fees are charged in most cases for registration and for inspection. The amount collected as fees for registration, inspection, and searches, and for public documents sold by the Registrar-General during 1926 was £240,128, of which £170,163 were collected by the Lands Titles Branch and £60,916 by the Deeds Branch.

The registration of patents, copyrights, trade marks, and designs, devolves upon the Federal authorities. A patent granted under the Commonwealth law is afforded protection in all the States, and in the Territory of Papua, for sixteen years. The copyright in a book, the performing right in a dramatic or musical work, and the lecturing right in a lecture, continue for the author's life and fifty years after his death. The British Copyright Act, subject to certain modifications, is in force in the Commonwealth under the Copyright Act, 1912.

The registration of a trade-mark protects it for fourteen years, but may be renewed from time to time. An industrial design may be protected for five years, and the period extended to fifteen years, provided it is used in Australia within two years of registration.

Under the various Imperial and Federal Acts, arrangements may be made by means of reciprocal legislation for the protection in other countries of patents, copyrights, trade-marks, and designs. In all cases the rights of holders under the legislation of a State were conserved.

#### *Public Trustee.*

The Public Trustee exercises administrative functions in regard to estates in terms of the Public Trustee Act, 1913, as amended in 1923. The Public Trustee may act as trustee under a will, or marriage or other settlement; executor of a will; administrator under a will where the executor declines to act, is dead or absent from the State; administrator of intestate estates; and as agent or attorney for any person who authorises him so to act. In general the Public Trustee takes out probate or letters of administration in the Probate Court in the ordinary way, but he may file an election to administer in that court in certain cases in testacy or intestacy where the gross value of the estate does not exceed £400. He may act also as manager, guardian, or receiver of the estate of an insane or incapable person, or as guardian or receiver of the estate of an infant. He is a *corporation sole* with perpetual succession and a seal of office and is subject to the control and orders of the Supreme Court.

Where the net value of an intestate estate does not exceed £100, the Public Trustee may pay the whole amount direct to the widow, and he may apply the share of an infant, not exceeding £500, to the maintenance of the infant. As attorney or agent he may collect rents or interest on investments, supervise repairs, prepare taxation returns, and pay taxes, etc. Agents of the Trustee are appointed in towns throughout the State.

Operations are not conducted for profit, and the fees and commission chargeable are regulated to provide sufficient money to cover working expenses only. The accounts of the Public Trust Office are audited by the Auditor-General.

The following is a summary of the transactions during the last recent years:—

Particulars.	Year ended 30th June.				
	1923.	1924.	1925	1926.	1927.
Estates received for Administration ... ..	1,866	2,239	2,266	1,975	2,217
	£	£	£	£	£
Amount Received* ... ..	829,475	870,554	930,890	1,005,240	1,150,719
Amount Paid* ... ..	789,355	897,650	769,510	1,012,371	1,183,629
Commission and Fees ... ..	31,761	27,130	30,822	35,538	40,002
Unclaimed Money—					
Paid into Treasury ... ..	3,822	10,865	2,139	89,731	22,430
Subsequently Claimed... ..	995	1,383	1,860	1,514	1,168
Credit Balances of Estates ... ..	2,887,434	3,235,742	3,637,188	3,642,624	4,163,622

\* On behalf of estates.

During the year ended 30th June, 1927, the operations resulted in a profit of £5,626, which increased the accumulated profits to £27,337.

The number of estates handled between the inception of the office of Public Trustee on 1st, January, 1914, and 30th June, 1927, was 34,269, and their aggregate value £11,282,078.

#### JURY SYSTEM.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court or Courts of Quarter Sessions must be tried before a jury of twelve persons, who find as to the facts of the case, the punishment being determined by the judge. Most civil cases may be tried before a special jury of four persons, or a jury of twelve persons, upon application and with the consent of the court. The jury in such cases determines questions of fact and assesses damages. The procedure in relation to juries is governed principally by the Jury Act, 1912, and its amendments, and other Acts regulate special cases.

Persons liable to service on juries include, with certain exceptions, any man above the age of 21 years residing in New South Wales, and having a clear yearly income of £30 or more from real and personal estate, or a real and personal estate of the value of £300 or more. The principal exceptions are foreign subjects, who have not resided in New South Wales for at least seven years, and certain persons attainted of treason or felony. Men specially exempt include judges, members of Parliament, certain public officers, officers of the public service of the Commonwealth, members of the defence forces, employees of the State Governments, clergymen, barristers, solicitors, magistrates, police officers, doctors, dentists, chemists, schoolmasters, certain employees of banks, incapacitated persons, and men above the age of 60 years who claim exemption. Women are not liable for service on juries.

A jurors' list is compiled annually in October for each Petty Sessions District by the senior police officer. This list is made available for public inspection, and revised in December before a magistrate. Lists of persons qualified and liable to serve on special juries are prepared also. They include persons of prescribed avocations.

The jurors summoned to hear an issue are decided by lot. Accused persons and the Crown each have the right to challenge eight jurors in criminal cases, and twenty in capital cases, without assigning reasons. In civil cases twice the number of jurors required are summoned, and one-fourth of the number is struck off by each party to the case.

In criminal cases the verdict of the jury must be unanimous. Where agreement is not reached within twelve hours, the jury may be discharged, and the accused tried again before another jury. In civil cases the verdict of three-fourths of the jury may be accepted after six hours' deliberation, but failing agreement within twelve hours, the jury is discharged and a new trial held.

#### LEGAL PROFESSION.

The legal profession in New South Wales is controlled by regulations of the Supreme Court, which prescribe the conditions of entry to the profession, regulate studentships at law and specify the legal examinations which must be passed prior to admission to practice. Separate boards have been established to govern the admission of barristers and of solicitors.

Any solicitor duly admitted to practice has the right of audience in all courts of New South Wales, but the Supreme Court may suspend or remove from the roll any solicitor for proven misconduct or malpractice. Barristers have, in general, no legal right to fees for their services in court, but

scales of charges for certain services rendered by solicitors are prescribed by regulation and in certain instances costs of suits are taxed off by an officer of the Supreme Court.

The following table shows the number of members of the legal profession in practice at intervals since 1911, and illustrates the increase in numbers in recent years:—

End of Year.	Barristers.	Solicitors.		
		Sydney.	Country.	Total.
1911	156	603	411	1,014
1921	185	681	431	1,112
1922	184	717	439	1,156
1923	199	754	440	1,194
1924	211	790	457	1,247
1925	217	798	476	1,274
1926	229	835	477	1,312
1927	227	858	494	1,352

The number of barristers at the end of 1927 included 31 King's Counsel. The number stated in the table does not include the District Court judges, the Master in Equity, magistrates, State officials who are barristers, non-practising barristers, nor those on the roll—but not resident—in New South Wales. There were also 64 certificated conveyancers.

Barristers are organised under the Council of the Bar of New South Wales, and solicitors under the Incorporated Law Institute of New South Wales. There is also a Society of Notaries.

#### *Poor Persons' Legal Expenses.*

Under the Poor Prisoners' Defence Act, 1907, a person committed for trial for an indictable offence may apply for legal aid for his defence before the jury is sworn. If the judge or committing magistrate considers that the person is without adequate means, and that such legal aid should be supplied, the Attorney-General may arrange for the defence of the accused and for payment of expenses of all material witnesses.

The Poor Persons' Legal Remedies Act, 1918, authorises judges to make rules regulating the practice and procedure, and the costs and fees payable in respect of proceedings to which poor persons are parties. Such proceedings may not be instituted without permission, and judges to whom applications for permission are made are authorised to act as conciliators. The rules made under this Act do not apply to criminal proceedings.

Barristers and solicitors have enrolled under this Act to give their services free of charge on being assigned in a proper case. Out-of-pocket expenses are paid by the Crown.

#### COURTS OF CIVIL JURISDICTION.

##### *Courts of Petty Sessions (Small Debts Court).*

A limited civil jurisdiction is conferred by the Small Debts Recovery Act, 1912, on magistrates and justices sitting as Small Debts Courts to determine, in a summary way according to equity and good conscience, actions for the recovery of debt or damages. The jurisdiction of these courts is limited to cases involving not more than £50. A police or stipendiary

magistrate may exercise the full jurisdiction of the court, two justices of the peace may hear cases involving amounts up to £30, and one justice up to £5. In cases of indefinite demands jurisdiction extends only to cases involving £10, or, by consent of the parties, up to £30, but the courts may not deal with matters involving titles to freehold or future rights.

In general, appeal may be made from a decision of the court only when it exceeds its jurisdiction or violates natural justice.

The principal officers of the court are a registrar, who acts as clerk to the bench and may enter judgment in cases of default of defence filed, or where claims are admitted and agreed upon, and such bailiffs as are appointed from time to time for the service and execution of judgments.

Particulars of the transactions of Courts of Petty Sessions in their civil jurisdiction during the last five years are shown below:—

Year.	Plaints entered.	Verdicts for Plaintiff.		Executions issued.	Garnishee Orders issued.
		Number.	Amount.		
1922	48,985	17,899	163,303	6,549	1,868
1923	59,747	24,716	198,558	7,846	2,694
1924	66,821	27,669	220,442	8,199	3,700
1925	70,798	29,278	249,418	9,807	5,205
1926	77,365	31,569	288,735	10,330	5,374

In garnishee cases the Court may order that all debts due by a garnishee to the defendant may be attached to meet a judgment debt, and by a subsequent order, may direct the garnishee to pay so much of the amount owing as will satisfy the judgment debt. In respect of wages or salary, garnishee orders may be made only for so much as exceeds £2 per week. The garnishee cases in 1926 numbered 5,374.

#### DISTRICT COURTS.

District Courts have been in existence in New South Wales since 1858 as intermediaries between the Small Debts Courts and the Supreme Court. They are presided over by judges with special legal training, who have jurisdiction only over cases arising in districts allotted to them. Sittings are held at places and times appointed by the Governor-in-Council. In 1926 there were seven District Court Judges and courts were held in sixty-two districts. The courts sit during ten months of the year in the Metropolis, and three or more times per year in important country towns. A registrar and other officers are attached to each court.

Ordinarily cases are heard by one judge sitting alone, but a jury may be empanelled by direction of the judge, or upon demand by either plaintiff or defendant, in any case where the amount claimed exceeds £20. The jurisdiction of the Court extends over issues of fact in equity, probate, and divorce proceedings remitted by the Supreme Court, and over actions at Common Law involving an amount not exceeding £400, or £200 where a title to land is involved.

Litigants may be compelled in appropriate cases to apply to the District Court by the power of the Supreme Court to remit proper cases to it, and by the rule of the Supreme Court not to allow costs to parties who recover a sum not exceeding £30 in litigation before it.

The findings of the District Court are intended to be final and right of appeal may be excluded by written agreement between litigants, but new trials may be granted at the discretion of the Judge of the District Court. Otherwise appeal may be made to the Supreme Court in cases involving more than £10 where a point of law or question of the admissibility of evidence is raised.

Particulars of suits brought in District Courts in their original jurisdictions during the last five years are given in the following table:—

Year.	Causes Tried.		Causes Discontinued or Settled without hearing.	Judgment for Plaintiff by Default, Confession, or Agreement.	Causes referred to Arbitration.	Total Suits disposed of.	Total Suits arising during Year.	Causes Pending and in Arrear.
	Verdict for Plaintiff.	Verdict for Defendant (including Nonsuit, etc.).						
1922	643	286	2,187	3,509	4	6,629	7,114	3,237
1923	768	317	2,668	4,019	27	7,799	8,162	3,600
1924	739	329	2,970	4,364	6	8,408	8,959	4,151
1925	752	309	2,764	4,846	3	8,674	8,874	4,351
1926	824	327	3,039	4,911	4	9,105	9,174	4,420

Of the cases tried during 1926, 112 were tried by jury and 1,029 without a jury. The amount of judgment for plaintiffs during the year was £274,605.

In addition to the suits covered by the foregoing table a considerable amount of work is done in the District Courts under various Acts.

The number of issues remitted for trial from the Supreme Court to District Courts in 1926 was 76, including 70 in matrimonial causes.

Under the Workmen's Compensation Act, there were 107 applications for arbitration, and 78 awards were made in favour of the applicants. Sums amounting in the aggregate to £39,939 were paid into Court in respect of 90 cases of death, and there were referred to the Judge 52 cases relating to agreements, while 59 agreements were registered without further inquiry.

There were four appeals under the Mining Acts from decisions of the Wardens' Courts. There were 112 appeals against rating by Local Government authorities; 9 assessments were confirmed, 47 assessments were varied; and 56 were settled. Other appeals under the Local Government Acts numbered 13, of which 5 were upheld, 2 were dismissed, and 6 were settled or discontinued.

There were 507 appeals against assessments under the Income Tax (State) Act; 14 assessments were confirmed, 17 were varied, 225 were settled or withdrawn or struck out, and 251 were pending at the end of the year.

In addition, 1,794 warrants and writs were issued for the enforcements of judgments and orders, there were 941 examinations of judgment debtors, 560 orders for attachment of debts, and 111 writs of *ca. sa.*

Appeals were made in 29 cases against judgments or orders of the District Court, and 2 such appeals were upheld, 7 were refused, 17 were dealt with otherwise or were not proceeded with, and 3 were pending.

## SUPREME COURT.

The Supreme Court of New South Wales was established in 1824 under the Charter of Justice. Jurisdiction is exercised by a Chief Justice and not more than eight Puisne Judges, of whom four are engaged usually in the Common Law and Criminal jurisdictions, and the remainder in Equity, Bankruptcy, Probate, Lunacy, and Matrimonial Causes.

The Court possesses original jurisdiction over all litigious matters arising in the State (other than special matters concerning land and industrial arbitration), in certain cases where extra territorial jurisdiction has been conferred, in Admiralty, and in appeal. Its original jurisdiction is exercised usually by one judge. The procedure and practice of the Court are defined by statute, or regulated by rules which may be made by any three or more judges. In proper cases appeals may be carried from findings of the Supreme Court to the High Court of Australia or to the Privy Council.

Particulars are given below of each division of the civil jurisdiction of the Court.

*Common Law Jurisdiction.*

The jurisdiction of the Supreme Court at Common Law extends to cases not falling within any other jurisdiction. Actions are tried usually in the first instance in sittings at nisi prius, before one judge and a jury of four, or of twelve in special cases. A jury may be dispensed with by consent of both parties and under statutes governing certain cases. A judge may sit "in chambers" to deal with questions not requiring to be argued in court.

The following table gives particulars of causes set down and writs issued in the Supreme and Circuit Courts (Common Law Jurisdiction) during the last five years. The number of writs issued includes cases which were settled by the parties without further litigation.

Particulars.	1922.	1923.	1924.	1925.	1926.
Writs Issued ... ..	5,072	5,585	6,284	6,645	6,625
Judgments Signed ... ..	2,433	2,787	2,990	3,247	3,182
Causes Tried—					
Verdict for Plaintiff ... ..	166	166	222	237	205
" Defendant ... ..	45	39	61	46	61
Jury Disagreed ... ..	1	2	2	2	2
Nonsuits ... ..	8	7	14	15	21
Total ... ..	220	214	299	300	289
Causes—					
Not proceeded with ... ..	236	255	249	218	345
Referred to Arbitration... ..	1	3	2	2	1
Total Causes dealt with ...	457	472	550	520	635
Fees paid into Consolidated Revenue Fund* ... ..	£ 18,404	£ 20,398	£ 21,517	£ 21,200	£ 19,783

\* Includes fees collected by Registrar in Divorce.

The number of new causes set down for hearing in 1926 was 639, and 104 were pending from the previous year. The cases dealt with numbered 635, and 108 were pending at the end of 1926.

Litigation in this jurisdiction, as indicated by the number of writs issued, has increased steadily. The difference between the number of writs issued and judgments signed indicates the extent to which suits are not proceeded with. The difference between the number of judgments signed and the number of causes tried indicates the extent to which cases are settled without legal proceedings in court.

#### *Equity Jurisdiction.*

The jurisdiction of the Supreme Court in Equity (which includes infancy) is exercised by the Chief Judge in Equity, by the Judge in Bankruptcy sitting in Equity, or by either sitting with two other Judges. The procedure of the Court is governed by the Equity Act, 1901, and subsidiary rules. The jurisdiction extends to granting equitable relief by enforcing rights not recognised at Common Law and by special remedies such as the issue of injunctions, writs of specific performance, and a jurisdiction in infancy. The Court in making binding declarations of right may obtain the assistance of specialists such as actuaries, engineers, or other persons. In deciding legal rights incidental to its cases, it exercises all the powers of the Common Law jurisdiction of the Supreme Court, and may award damages in certain cases.

Attached to the Court there is a Master in Equity who performs administrative duties and performs judicial functions where directed in determining certain minor matters, such as conducting inquiries, taking accounts, and taxing costs. He is also Registrar of the Court, and controls the records and funds within its charge.

The numbers of the various transactions of the Court during each of the last five years were as follow:—

Year.	Statements of Claims.	Statements of Defence.	Petitions.	Summonses.	Motions.	Decrees, Orders, and Certificates.	Trust Funds Invested.
1922-23	322	176	84	66	249	1,040	£ 736,288
1923-24	347	149	129	100	280	1,084	671,849
1924-25	351	183	114	168	345	1,115	761,350
1925-26	373	182	90	162	659	1,491	723,935
1926-27	441	191	116	198	367	1,815	859,706

The amount of trust funds invested under Equity Jurisdiction was distributed chiefly among war loans, funded stock, and mortgages, the rates of interest ranging from 3 to  $7\frac{1}{2}$  per cent.

The amount of court fees received in 1926-27 was £6,435.

#### *Lunacy Jurisdiction.*

Jurisdiction in Lunacy in the Supreme Court is exercised as a separate jurisdiction by the Chief Judge in Equity. There is a Master in Lunacy (who is also Master in Equity) to perform administrative work and manage estates. The Court upon hearing evidence, with or without examination of the person, may declare any person to be of unsound mind or incapable of managing his own affairs, or it may direct that such question be determined by a jury of four or twelve persons. When such a declaration is made the Master in Lunacy may assume the management of such person's estate until his discharge or death, or a committee of management may be appointed subject to supervision by the Master in Lunacy.



The amount of trust funds of insane persons and patients vested in the Master in Lunacy at the end of 1926 was £680,257. A deduction at the rate of 2 per cent. from the net income of estates of insane patients managed by the Master in Lunacy amounted in 1926 to £2,269 and the fees collected to £180.

#### *Bankruptcy Jurisdiction.*

Bankruptcy law and procedure in New South Wales were virtually codified by a consolidating Act passed in 1898. The State law will be superseded in part by the Bankruptcy Act of the Commonwealth which is to come into force on 1st August, 1928.

Under the law any person unable to meet his debts may surrender his estate for the benefit of his creditors, or the latter may apply for compulsory sequestration under certain conditions provided the aggregate amount of indebtedness exceeds £50. Upon the issue of an order of sequestration the property of the bankrupt vests in the official assignee, and no creditor has any remedy against the property or person of the bankrupt except by appeal to the Court. The jurisdiction of the Court extends over all these matters and its functions are to guard against fraud on the part of bankrupts, to distribute assets, and to relieve debtors of overwhelming obligations.

There is one Judge in Bankruptcy who exercises general control over bankruptcy proceedings and determines questions of law, equity or fact affecting a bankrupt estate. Questions of fact may be tried before a jury.

The Registrar of the Bankruptcy Court performs administrative duties and duties delegated by the Judge. He may hear debtors' petitions, make full examination of bankrupts or of persons suspected to be indebted to a bankrupt, and make sequestration orders. Certain of these powers are delegated in country districts to police magistrates and registrars of District Courts, but appeal lies in all cases to the Judge in Bankruptcy and thence to the High Court. An official assignee may be appointed by the Court to manage any assigned estate for the benefit of creditors.

Particulars of the operations of the Court in the past five years are given below:—

Heading.	1922.	1923.	1924.	1925.	1926.
Petitions for Voluntary Sequestration ...	247	360	421	341	437
„ Compulsory Sequestration ...	234	308	397	375	344
Sequestration Orders granted ...	403	570	668	578	647
Discharges granted or Composition					
accepted ... ..	43	41	47	39	39
Estates released ... ..	27	16	15	11	19
Certificates of Discharge suspended ...	86	92	121	108	141
Court Fees ... ..	£ 5,023	6,082	6,562	6,314	6,712

From the commencement of the Act of 1887 there have been 24,018 sequestrations, but only in 3,976 cases have discharges been granted or estates freed. More than 83 per cent. of bankrupts have remained undischarged.

Further details of proceedings in bankruptcy are published in the chapter Private Finance of this Year Book.

#### *Probate Jurisdiction.*

Probate jurisdiction extends over all property, real or personal, in New South Wales of deceased persons, testate or intestate. The jurisdiction is exercised by a Probate Judge (who is also Judge in Bankruptcy), or by any judge acting on his behalf. By probate rule of 18th October, 1906, the

Registrar in Probate exercises jurisdiction in granting probate and letters of administration in all matters where no contention has arisen. The Registrar or any interested party may refer any matter to the Court. The Registrar also exercises jurisdiction in minor dealings affecting estates where no objection is raised by any interested party.

Until the granting of probate or letters of administration the property of deceased persons vests in the Chief Justice, and cannot be legally dealt with except in minor matters. In this way the rights of the successors, the creditors, and the State are safeguarded. Cases of disputed wills are tried by the Judge, with or without a jury, to determine issues of fact, and jurisdiction is exercised over administrators and executors.

The following table shows the number and values of estates dealt with in the past five years:—

Year.	Probates Granted.		Letters of Administration.		Total.	
	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.
		£		£		£
1922	3,892	14,477,829	1,905	1,323,310	5,797	15,801,139
1923	4,007	17,308,916	1,997	1,708,968	6,004	19,017,884
1924	3,865	16,981,524	2,115	2,015,541	5,980	18,997,065
1925	3,988	17,432,389	2,076	2,401,356	6,064	19,833,745
1926	4,257	19,877,443	2,475	2,194,979	6,732	22,072,422

The values shown above represent the gross value of estates, inclusive of those not subject to duty, and of estates dealt with by the Public Trustee. In some cases probate or letters of administration are taken out a second time and such estates are duplicated in the foregoing figures. Where estates are less than £300 in value probate or letters of administration may be granted on personal application to the Registrar, without the intervention of a solicitor. Included in the figures shown above for the year 1926, there were 409 such cases, the total value of estates being £72,962.

#### *Jurisdiction in Matrimonial Causes (Divorce).*

This jurisdiction was conferred on the Supreme Court by the Matrimonial Causes Act, 1873, prior to which marriages could be dissolved only by special Act of Parliament. This Act, with its amendments, was consolidated in 1899. A Judge of the Supreme Court is appointed Judge in Divorce, but any other judge may act for him. The forms of relief granted are dissolution of marriage, judicial separation, declaration of nullity of marriage, and orders for restitution of conjugal rights. Orders for the custody of children, alimony, damages, and settlement of marriage property may be made. Decrees for the dissolution of marriage are usually made provisional for a short period, and absolute at the expiration thereof if no reason to the contrary is shown, *e.g.*, collusion.

The grounds on which dissolution may be granted on petition are as follow:—

*Husband v. Wife.*—Adultery; desertion; habitual drunkenness and neglect of domestic duties for three years; non-compliance with a decree for restitution of conjugal rights; imprisonment for three years and upwards at date when petition is presented and under sentence for at least seven years;

conviction for attempt to murder or to inflict grievous bodily harm within one year previously; repeated assaults and cruel beatings during one year preceding the date of filing the petition.

*Wife v. Husband.*—Adultery: desertion for three years or upwards; habitual drunkenness, coupled with neglect to support or cruelty, for three years; non-compliance with a decree for restitution of conjugal rights; imprisonment for three years and upwards at date when petition is presented and under sentence for at least seven years; imprisonment under frequent sentences amounting in the aggregate to three years within five years preceding the presentation of the petition; leaving wife habitually without means of support; conviction within one year previously of attempt to murder or to inflict grievous bodily harm; repeated assaults and cruel beatings within one year of petition.

Cases are heard usually without a jury, but where dissolution of marriage is involved a jury of twelve to try issues of fact may be requested by either party, or by the Court. Certain cases may be referred to the District Court of the district in which the case arose.

Usually, the petitioner must have been domiciled in the State for at least three years preceding the date of the petition. No relief is granted to persons who have resorted to New South Wales for the purpose of instituting proceedings.

Suits may be instituted for the purpose of obtaining restitution of conjugal rights, and failure to comply with a decree made in such a suit constitutes desertion, upon which a suit for divorce may be brought. A marriage may be declared null and void on the grounds that the respondent is incapable of consummating it, that the parties to the marriage are within the prohibited degrees of consanguinity, or that the parties are unable to contract a valid marriage. Such inability may arise from one of the parties being already married, having acted under duress, or in case of mistaken identity.

The following statement shows the number of petitions in matrimonial causes made and granted in New South Wales during the past three years in comparison with the average per year in quinquennial periods since 1908:—

Year.	Petitions for Divorce, Judicial Separation, and Nullity of Marriage Lodged.	Number of Petitions Granted.					Restitution of Conjugal Rights.	
		Divorces.		Petitions for Judicial Separation Granted.	Nullity of Marriage.		Petitions.	Decrees granted.
		Decrees Nisi Granted.	Decrees Nisi made Absolute.		Decrees Nisi Granted.	Decrees Nisi made Absolute.		
1908-12*	453	260	260	12	4	4	28	18
1913-17*	642	393	342	9	3	3	74	51
1918-22*	1,041	672	562	13	7	5	236	141
1923	1,266	888	729	13	5	10	998	177
1924	1,366	1,099	834	7	9	4	225	204
1925	1,435	891	1,064	11	12	9	221	130
1926	1,436	1,049	826	12	6	8	288	162

\* Average per year.

The number of petitions lodged *in forma pauperis* during 1926 was 444, of which 416 were for divorce, 5 for nullity of marriage, 2 for judicial separation, and 21 for restitution of conjugal rights.

The number of petitioners of each sex in cases where decrees for divorce or nullity of marriage were made absolute, or judicial separation was granted, during each of the past ten years were as follow:—

Year in which Petition was granted.	Number of Successful Petitions lodged by			Year in which Petition was granted.	Number of Successful Petitions lodged by		
	Husband.	Wife.	Total.		Husband.	Wife.	Total.
1917	147	249	396	1922	296	397	693
1918	167	224	391	1923	314	438	752
1919	190	244	434	1924	359	486	845
1920	267	300	567	1925	439	645	1,084
1921	389	418	807	1926	322	524	846

The number of marriages dissolved, or virtually dissolved in each year, was more than doubled between 1917 and 1921, and the proportion of petitions lodged by husbands increased from 37 per cent. to 48 per cent. In 1922 there was a marked decline in the number of successful petitions, and the proportion lodged by husbands dropped to 43 per cent. In each of the three succeeding years there was a pronounced increase in the number of petitions. In 1926, however, there was a decrease of 22 per cent. and the proportion of the petitions lodged by husbands fell to 38 per cent.

The grounds of suits in which decrees for divorce or nullity of marriage were made absolute during each of the past five years were as follow:—

Ground of Suit.	1922.	1925.	1924.	1925.	1926.
Adultery ... ..	211	175	190	252	189
Bigamy ... ..	5	8	2	7	6
Cruelty and Repeated Assaults ... ..	2	7	3	7	3
„ „ Habitual Drunkenness ... ..	12	18	22	23	19
Desertion ... ..	318	398	466	592	471
Habitual Drunkenness and Neglect to Support ... ..	8	2	5	13	16
Habitual Drunkenness and Neglect of Domestic Duties ... ..	...	2	2	4	8
Imprisonment of Husband for Three Years ... ..	1	2	...	4	1
Non-compliance with Order for Restitution of Conjugal Rights ... ..	127	125	146	169	119
Impotency or Non-consummation ... ..	...	2	1	1	...
Relationship ... ..	...	...	1	1	2
Total .. ..	684	739	838	1,073	884

In the 826 cases in which decrees for divorce were made absolute during 1926 the duration of marriage was as follows:—Under 5 years, 41; 5-9 years, 250; 10-14 years, 253; 15-19 years, 151. In 110 cases the duration was between 20 and 30 years; in 19 it was between 30 and 40 years; and in two cases the information was not recorded. In the case of 267 marriages there were no children; one child in 236 cases; two children, 172; three children, 69; four children 33; and five or more children in 34 cases. In 15 cases, the details were not stated.

#### *Admiralty Jurisdiction.*

Jurisdiction as a Colonial Court of Admiralty was conferred on the Supreme Court of New South Wales on 1st July, 1911, by Order-in-Council, under the Colonial Courts of Admiralty Act (Imperial), 1890. The Court

may sit also as a Prize Court by authority of a proclamation of August, 1914, under the Prize Courts Act (Imperial), 1894. Six causes of action arose during 1926, and four were tried in Court, the verdict being for plaintiff in each case.

#### *Courts of Marine Inquiry.*

Cases of shipwreck or casualty to British vessels, or the detention of any ships alleged to be unseaworthy, and charges of misconduct against officers of British vessels arising on or near the coast of New South Wales, or on any ship registered at or proceeding to any port therein, are heard by one or more authorised Judges of the District Court or Police or Stipendiary Magistrates sitting with two or more assessors as a Court of Marine Inquiry.

The findings of this Court are final, except when the responsible Minister directs a rehearing of the case where new evidence is available, or a miscarriage of justice is suspected.

The proceedings of the Court are governed by the Navigation Acts of the State and Commonwealth.

In 1926 inquiries were held regarding six cases, viz., four of collision, one of grounding, and one of loss of vessel. As a result of the inquiries the certificates of two masters were suspended. Two masters were found to be in fault, but as the cases were not serious their certificates were not suspended. Two masters were exonerated.

#### *Licensing Courts.*

Under the Liquor Act of 1912 and its amendments, a Licensing Court in each of the licensing districts in New South Wales deals with applications for new licenses, renewals, removals, or transfers of existing licenses to manufacture or sell intoxicating liquors.

Three police magistrates, appointed as licensing magistrates, constitute the Licensing Courts for all the districts of the State. The same magistrates constitute the Licenses Reduction Board. They may delegate minor functions to a police or stipendiary magistrate. The Court sits as an open court, and appeals from its decisions lie to the District Court.

Particulars relating to the operations of the Licensing Courts and the Licenses Reduction Board are shown in the chapter entitled "Social Condition."

#### *Fair Rents Courts.*

These courts, established under the Fair Rents Act, 1915-26, may determine, upon application, the fair rent of any dwelling-house, shop, or shop and dwelling-house combined, let for a term of three years or less at a rental not exceeding the rate of £3 per week in the case of a dwelling-house and £6 per week for a shop, or shop and dwelling-house combined leased to one tenant.

Particulars of the operations of the Court are published in the chapter "Food and Prices" of this Year Book.

#### *(Mining) Wardens' Courts.*

By virtue of the Mining Act, 1906, and amendments, mining wardens may hold courts to determine disputes within their districts as to the possession of mining lands, or claims under mining contracts. In general their procedure is summary, and their decisions final, but appeal lies in certain cases to a District Court sitting as a Mining Appeal Court or, on points of law, by way of stating a case to the Supreme Court.

*Taxation Courts of Review.*

Judges of the District Courts have been authorised to sit as Taxation Courts of Review under the Land and Income Tax Act, 1895. The jurisdiction extends to the hearing and determining of appeals lodged against assessments by the Commissioner of Taxation by persons within the local jurisdiction of the Court. Points of law may be referred to the Supreme Court, but otherwise no appeal is allowed.

## INDUSTRIAL TRIBUNALS.

A system of industrial arbitration was inaugurated in 1901, when courts of law were established to determine certain disputes between employers and employees relating to working conditions. The system has been changed fundamentally from time to time, and the statutory basis of the present system is the Industrial Arbitration Act, 1912, with subsequent amendments. The Industrial Arbitration (Amendment) Act, 1926, substituted an Industrial Commission for the former Court of Industrial Arbitration as from 15th April, 1926. There was an Industrial Commissioner appointed for a period of five years with authority to adjudicate in cases of illegal strikes, lockouts or unlawful dismissal; to inquire into any industrial matter referred to him by the Minister, to determine a standard of living and to declare the living wage, to hold conferences regarding settlement of any industrial matter; to hear appeals under the Act and to exercise the powers of the Board of Trade under the Monopolies Act. Many of these powers were exercised by the Commissioner sitting alone, but in inquiries into the living wage and other matters he was assisted by members of the Commission appointed by the Minister to represent employers and employees in equal numbers. The constitution of the Industrial Commission was altered by the Industrial Arbitration (Amendment) Act passed in December, 1927. The Commission consists now of a President and two other members, holding office during good behaviour with the same status and rights as a puisne Judge of the Supreme Court. Persons eligible for appointment as a member of the Commission are puisne judges of the Supreme Court, District Court Judges, barristers of five years' standing, and solicitors of seven years' standing. There is a Deputy Commissioner who exercises powers delegated by the Commission.

Conciliation committees may be established for various industries on the recommendation of the Industrial Commissioner. Their functions are to make awards governing working conditions. The committees have exclusive original jurisdiction in respect of industrial matters arising in industries for which they have been established.

Industrial magistrates are appointed under the Act of 1912, with jurisdiction over cases arising out of non-compliance with awards, and statutes governing working conditions of employees. Their powers are cognate with those of police magistrates.

Details of the constitution and operations of these tribunals are published in the chapter relating to "Industrial Arbitration."

*Workers' Compensation Commission.*

A special and exclusive jurisdiction was conferred on the Workers' Compensation Commission to determine all questions arising under the Workers' Compensation Act, which came into force on 1st July, 1926. The Commission is a body corporate, with perpetual succession, and it consists of a barrister of five years' standing, appointed as chairman with the same status, salary, and rights as a District Court Judge, together with two members

appointed for a period of seven years and representing employers and employees respectively. A medical referee may be summoned to sit as assessor with the Commission.

The Chairman alone decides points of law, but, on other matters the decision of the Commission is that of a majority of its members, and such decisions are to be based on the real merits of the case without strict observance of legal precedent. Either the chairman or a majority of the Commission may refer any question of law for the decision of the Supreme Court by way of stating a case, but otherwise the determinations of the Commission are final, and may not be challenged in any court.

For the purpose of conducting its proceedings the Commission has the powers of a Commissioner under the Royal Commissions Act, 1923.

During the year 1926-27 there were 688 applications to the Commission for the determination of claims for compensation; 551 were determined, 82 were struck out or discontinued, 36 were ordered to stand over generally. Judgment was reserved in 5 cases, and 14 were pending at 30th June, 1927. Other applications to the Commission include 893 for the medical examination of an injured worker, 818 were granted, 4 were refused, and 35 were withdrawn. In 33 cases the worker did not attend and 3 cases were pending. Forty-two applications for licenses as insurers under the Workers' Compensation Act were granted; and of 81 applications for licenses as self-insurers 64 were granted, 3 were refused, and 14 were withdrawn.

#### *Land Boards.\**

Local Land Boards each consisting of a salaried chairman, usually possessing legal and administrative experience, and of two other members (paid by fees) possessing legal knowledge, were first appointed under the Crown Lands Act of 1884. These boards sit as open courts, and follow procedure similar to that of Courts of Petty Sessions. Their functions are to determine questions under the Crown Lands Acts, and other matters referred by the Minister. Sittings are held as required at appointed places in each of twelve Land Board Districts in the Eastern and Central Divisions of the State. There are also special Land Boards for the Yanco and Coomealla Irrigation Areas.

The Western Lands Board which is charged with the management and control of Crown Lands in the Western Division of the State, discharges the functions of a local land board within the area of its jurisdiction.

#### *Land and Valuation Court.*

The Land Court of Appeal, established originally in 1889, was re-constituted at the close of 1921 as the Land and Valuation Court. This court is presided over by a judge, whose status is equal to that of a Judge of the Supreme Court, and who may sit as an open court at such places as he determines, with two assessors in an advisory capacity. The procedure of the court is governed by rules made by the Judge, who also exercises powers over witnesses and the production of evidence similar to those of a Judge in the Supreme Court. On questions of fact the decisions of the Judge are final, but appeal may be made to the Supreme Court against his decision on points of law.

Broadly stated, the functions of the court are to hear and determine the more important matters and appeals arising under the Crown Lands Acts and cognate Acts, cases involving the rateableness of lands and the more important appeals from valuations made by the Valuer-General or by valuers under the Local Government Act.

\*See, also, chapter on Land Legislation and Settlement.

During the year ended 30th June, 1927, the Land and Valuation Court dealt with 13 references from the Minister for Lands, 1 by a Local Land Board, and 2 by the Water Conservation and Irrigation Commission, and 37 appeals (9 being sustained) under various Land Acts; and 19 under the Irrigation Act; 2,432 objections to valuations under the Valuation of Land Act; 49 objections to Local Government assessments for rating, where the unimproved capital value exceeded £5,000, 24 assessments being confirmed, and 25 altered; and 10 claims for compensation under the various Acts. The Court granted 22 applications for registration under the Land Agents Act, 1927.

#### COURTS OF FEDERAL JURISDICTION.

By the Commonwealth Judiciary Act, 1903-1927, jurisdiction under Federal laws is vested in the several courts of the States within the limits of their several jurisdictions; as to locality, subject-matter, etc. Justices of the Peace are, however, precluded from exercising Federal jurisdiction. Certain Acts (*e.g.*, the Postal Act and Customs Act) also confer jurisdiction in special cases on State Courts.

There are two Commonwealth courts which possess certain jurisdiction, exclusive of State courts, viz., the High Court of Australia and the Commonwealth Court of Conciliation and Arbitration. An account of the latter court and of special industrial tribunals appointed under the Industrial Peace Acts is given in the chapter of this volume entitled "Industrial Arbitration."

The High Court of Australia was established in 1903, and consists of a Chief Justice and six puisne justices. Its principal seat is at the seat of Government, but sittings are held in the various States, and district registrars are appointed as required. The jurisdiction of the Court, which may be exercised in the first instance by one judge, is exclusive with regard to suits between States or any State and the Commonwealth, matters arising directly under a treaty, or writs of mandamus or prohibition against a Federal officer or court.

The High Court is constituted also as a Court of Appeal for Australia.

#### LOWER COURTS OF CRIMINAL JURISDICTION.

##### *Courts of Petty Sessions (Police Courts).*

These Courts are held daily in large centres, and periodically, as occasion demands, in small centres. They operate under various statutes (chiefly the Crimes Act, 1900, Police Offences Act, 1901, and Vagrancy Act, 1902), which describe the nature of offences, penalties, and certain procedure, and prescribe the number of justices or magistrates for the trial of various offences. Cases are heard by a Stipendiary Magistrate in the Sydney, Broken Hill, Parramatta, Newcastle, Bathurst, and Wollongong districts, and in other districts by a Police Magistrate, or by Justices of the Peace. The procedure is governed in a general way by the Justices Act, 1902-18. These courts deal with minor offences, which may be treated summarily, while serious charges are investigated in the first instance, and the accused committed to higher courts when a *prima facie* case is made out.

Offences punishable summarily by Courts of Petty Sessions include most offences against good order and breaches of regulations. Certain offences are made punishable summarily with the consent of the accused. The courts deal also with certain other cases, such as proceedings arising under the Master and Servants Act, the Deserted Wives and Children Act, Child Welfare Act, and administrative regulations.



Appeal against fine or imprisonment is heard by the Court of Quarter Sessions, but on a disputed point of law the magistrate may state a case for the Supreme Court.

‡

### *Children's Courts.*

Children's Courts were established by proclamation under the Infant Protection Act, 1904, and the Neglected Children and Juvenile Offenders Act, 1905, which were consolidated with other enactments by the Child Welfare Act, 1923. Each court consists of a special magistrate with jurisdiction within a proclaimed area. Elsewhere the jurisdiction of a court may be exercised by a special magistrate, or two Justices of the Peace. The magistrates exercise all the powers of a Police or Stipendiary Magistrate in respect of cases involving children as parties or witnesses to the exclusion of ordinary courts of law. By this means children are protected against the adverse influences which they would encounter in the ordinary courts.

The jurisdiction embraces proceedings concerning maintenance of infants, offences by or against children, and neglected or uncontrollable children. The Court is endowed with extensive powers, such as the committal of children to reformatory homes, release on probation, etc.

Appeal from its decision lies in proper cases to the Supreme Court, Quarter Sessions, or in certain circumstances to a District Court.

Separate statistics of the proceedings of Children's Courts are not available, as they are included with those relating to ordinary Courts of Petty Sessions.

### *Cases before Magistrates' Courts.*

Particulars of the number of offences charged, and convictions obtained in Courts of Petty Sessions and Children's Courts, are shown below. Except where otherwise stated the figures represent the total number of offences charged, and where multiple charges are preferred separate account is taken of each.

Toward the end of 1916 provision was made whereby persons arrested for drunkenness were allowed to forfeit a deposit (nominally bail) in lieu of appearing in court. The amount was originally fixed at 5s., the usual penalty imposed, but it has been increased to 10s. Approximately one-third of the cases of drunkenness are dealt with in this manner, and they are included in the statistics as convictions:—

Year.	Offences Charged.				Per cent.		
	Withdrawn or Discharged.	Convicted.	Committed to Higher Courts.	Total.	With-drawn.	Convicted.	Com-mitted to Higher Courts.
1906	10,702	59,900	1,459	72,061	14·9	83·1	2·0
1911	8,878	65,058	1,178	75,114	11·8	86·6	1·6
1921	11,877	80,214	2,594	94,685	12·6	84·7	2·7
1922	12,231	82,263	2,495	96,989	12·6	84·8	2·6
1923	13,001	88,864	2,654	104,519	12·4	85·0	2·6
1924	12,755	83,019	2,327	98,101	13·0	84·6	2·4
1925	14,601	85,970	1,806	102,377	14·2	84·0	1·8
1926	14,199	100,644	1,832	116,675	12·2	86·2	1·6
1927	14,478	107,657	1,895	124,030	11·7	86·8	1·5

It is not possible to determine the number of distinct persons charged in each year, as particulars obtained from persons accused of minor offences, particularly vagrants, do not form a reliable basis for identification.

Only a small proportion of the offences for which summary convictions are effected are really criminal offences, that is, offences against person or property. The following table shows a classification of the offences for which summary conviction were recorded, also the rate per 1,000 of mean population:—

Year.	Number of Convictions for Minor Offences.					
	Against the Person.	Against Property.	Against Good Order.		Other Offences.	Total Summary Convictions.
			Drunkenness.	Other.		
1911	1,664	3,404	29,299	14,886	15,805	65,058
1921	2,127	5,924	28,702	18,086	25,375	80,214
1926	1,913	7,328	31,361	16,485	43,557	100,644
1927	1,924	8,114	32,649	17,401	47,569	107,657
	Number per 1,000 of Mean Population.					
1911	1·00	2·04	17·60	8·94	9·49	39·07
1921	1·01	2·81	13·61	8·58	12·04	38·05
1926	0·82	3·16	13·51	7·10	18·76	43·35
1927	0·81	3·42	13·75	7·33	20·03	45·34

The number of summary convictions per 1,000 of population declined during the five years 1921 to 1925, but showed a marked increase in 1926. The upward tendency was slight in regard to offences against the persons and against good order, and the increase occurred for the most part in offences classified under the heading "other offences," which consist mainly of breaches of administrative law, *e.g.*, traffic regulations and local government by-laws. A large proportion are minor breaches or are committed through inadvertence or in ignorance of the law, and are met with the infliction of a fine. As local and other administrative activities have been extended, it is a natural corollary that an increase should occur in such offences. Thus the convictions under the traffic regulations increased from 4,192 in 1921 to 19,329 in 1926 and 23,607 in 1927; breaches of the Industrial Arbitration and the Factories and Shops Acts from 982 to 3,455 and 2,029 in the respective years.

#### *Coroners' Courts.*

The office of Coroner was established in New South Wales by letters patent in 1787, and is now regulated by the Coroners Act, 1912, which consolidated previous laws.

Every Stipendiary or Police Magistrate has the powers and duties of a coroner in all parts of the State, except the Metropolitan Police District, which is under the jurisdiction of the City Coroner. In districts not readily accessible by Police Magistrates, a local resident, usually a Justice of the Peace, is appointed coroner.

At the discretion of the Coroner, inquiries are held into the causes of violent or unnatural deaths, into the causes of deaths in gaols, and into the origin of fires causing damage or destruction to property, but may be dispensed with where the Coroner deems inquiry unnecessary. The Coroner may order the attendance of any medical practitioner at the inquest, and may direct him to hold a post-mortem examination. On the evidence submitted the Coroner is empowered to commit for trial persons adjudged guilty of manslaughter, murder, or arson.

In certain cases a jury of six persons may be empanelled to find as to the facts of the case, and on their verdict against any person he may be committed for trial. The instructions to coroners provide that an inquest should be held into the cause of every death occurring among prisoners in gaols and lock-ups. In such cases a jury of six freemen and six prisoners is empanelled.

During 1926 the coroners held 1,841 inquiries into causes of death and 213 into the origin of fires. It was found in 1,147 cases that death had been accidental, and in 285 cases that suicide had occurred. There were 37 deaths due to homicide and 43 due to illegal operations. Fifteen persons were committed for trial by coroners on charges of murder, 27 for manslaughter, and 10 for arson. It was found that 32 fires were accidental, 29 were caused wilfully, and in 152 cases the evidence was insufficient to indicate the origin.

#### HIGHER COURTS OF CRIMINAL JURISDICTION.

The higher courts of criminal jurisdiction consist of the Central Criminal Court (which sits in Sydney and is presided over by a Judge of the Supreme Court), of the Supreme Court on circuit, and of Courts of Quarter Sessions, held at important centres throughout the State, each presided over by a Judge of the District Court as chairman. The courts deal with indictable offences which are the more serious criminal cases. Offences punishable by death may be tried only before the Central Criminal Court, which exercises the criminal jurisdiction of the Supreme Court, or before the Supreme Court on circuit.

All persons charged with criminal offences must be charged before a judge with a jury of twelve chosen by lot from a panel provided by the sheriff. The jury finds as to the facts of the case, and its verdict must be unanimous. If unanimity is not reached within twelve hours, a verdict is not returned, and the accused may be tried again before another jury.

#### *Courts of Quarter Sessions:*

These Courts are held at times and places appointed by the Governor-in-Council, in districts which coincide with those of District Courts. Forty-two places were appointed in 1927, courts being held usually at the conclusion of District Court sittings, from two to four times a year in country centres, but ten times in Sydney, and six times in Parramatta.

In addition to exercising their original jurisdiction, the courts hear appeals from Courts of Petty Sessions and certain appeals from other courts, e.g., Licensing Courts. Appeals from Quarter Sessions are heard by the Court of Criminal Appeal.

#### *Central Criminal Court and Supreme Court on Circuit.*

The Central Criminal Court exercises the criminal jurisdiction of the Supreme Court in Sydney, and a Judge of the Supreme Court exercises a similar jurisdiction in circuit towns. Usually capital offences, the more

serious indictable offences committed in the metropolitan area, and offences which may not be tried conveniently at Quarter Sessions, or at sittings of the Supreme Court in the country, are tried at the Central Criminal Court. Appeal from the finding of these courts lies to the Court of Criminal Appeal, consisting of three or more Judges of the Supreme Court and, in proper cases, to the High Court of Australia or the Privy Council. A Judge of the Supreme Court sitting in Sydney may act as a Court of Gaol Delivery, to hear and determine the cases of untried prisoners upon returns of such prisoners supplied by the gaolers of the State under rules of the Court.

*Cases before Higher Criminal Courts.*

The following table relates to the number of distinct persons charged before Courts of Quarter Sessions, sittings of the Supreme Court at circuit towns, and the Central Criminal Court, and it shows the number convicted for each of the classes of more serious offences. Where two or more charges were preferred against the same person, account has been taken only of the principal charge.

Year.	Distinct Persons Charged.	Not Guilty, etc.	Convictions—Principal Offence.						Total Persons Convicted	
			Against Person.	Against Property.	Against Currency, and Forgery.	Other Offences.	Number.	Per 10,000 of Population.		
1911	979	441	141	313	48	36	538	3·23		
1912	993	373	136	410	48	26	620	3·55		
1913	1,125	353	189	478	60	45	772	4·24		
1921	1,722	611	166	853	48	44	1,111	5·27		
1922	1,635	595	176	778	48	38	1,040	4·84		
1923	1,673	614	191	757	59	52	1,059	4·83		
1924	1,536	534	174	739	50	39	1,002	4·50		
*1925-6	1,800	740	220	749	37	54	1,060	4·63		
1926-7	1,181	437	156	515	23	50	744	3·17		

\* Eighteen months ended June, 1926.

In view of the facts that trials of accused persons in higher criminal courts take place on indictment by the Attorney-General, and usually after magisterial inquiry into the sufficiency of evidence for such trials, and that the question of guilt is decided by a jury of laymen, it is interesting to note that less than two-thirds of the persons charged are convicted, and in the case of offences against the person, this proportion is less than one-half.

The number of offenders convicted of serious crime in proportion to the population has decreased in each year since 1921, and it was lower in 1926-27 than during the three years immediately preceding the outbreak of war.

Of the persons convicted during the year ended 30th June, 1927, the males numbered 718 and females 26. The proportion per hundred thousand of each sex were: Males, 60; females, 2.

The following table shows the number of persons convicted for specific offences included in the foregoing statement:—

Offences.	Number of Offenders Convicted.				
	1911.	1921.	1924.	*1925-26.	1926-27.
Murder ... ..	3	8	7	8	7
Attempted Murder, Shooting with Intent ...	3	3	2	5	2
Manslaughter ... ..	4	13	5	3	6
Rape and other Offences against Females ...	29	21	42	59	33
Unnatural Offences ... ..	2	23	18	37	15
Abortion and Attempts to Procure... ..	3	2	5	2	4
Bigamy ... ..	16	22	19	17	18
Assault ... ..	80	63	74	85	55
Burglary and Housebreaking ... ..	62	244	209	278	198
Robbery and Stealing from the Person ...	14	35	52	63	45
Stealing Horses, Cattle, Sheep ... ..	26	48	22	3	1
Embezzlement and Stealing by Servants ...	26	42	44	50	13
Larceny and Receiving ... ..	131	376	283	209	160
Fraud and False Pretences ... ..	38	80	85	88	59
Arson ... ..	...	1	5	9	4
Forgery, Uttering Forged Documents ...	41	44	48	31	22
Conspiracy ... ..	10	16	16	29	38
Perjury and Subornation ... ..	10	17	8	15	5

\* Eighteen months ended June, 1926.

In so far as the number of persons convicted indicates the vogue of crime, the above statement shows that during post-war as compared with pre-war years, the increase in crime occurred principally in burglary and housebreaking. On the other hand considerable decreases took place in the number of assaults and cases of forgery.

#### COURTS OF APPELLATE JURISDICTION.

Generally speaking, appellate jurisdiction is exercised, in cases where appeals are permitted, by the District Courts and Courts of Quarter Sessions from Magistrates' Courts, by the Supreme Court from District Courts, and Courts of Quarter Sessions, by the High Court of Australia from the Supreme Court, and (in certain cases) by the Privy Council from either of the two last-named courts. Appeal on points of law (usually by stating a case) may be made to the Supreme Court from any ordinary court of the State or from any special court (*e.g.*, Land, Industrial Commission, and Workers' Compensation Commission).

A Court of Criminal Appeal, presided over by Judges of the Supreme Court, was established in 1912.

#### *Civil Appeals to the Supreme Court.*

Three or more Judges of the Supreme Court may sit in its various civil jurisdictions (1) *in Banco*, to hear appeals from District Courts or from decisions of justices in chambers, and to consider motions for new trials and kindred matters—in certain circumstances such cases may be heard by one justice; (2) as a Full Court of three or more justices, to hear appeals from orders and decrees made by one justice in the various jurisdictions of the court. One judge may sit in chambers to hear applications for writs of mandamus or prohibition, and to determine special cases stated by magistrates.

During 1926 there were 42 motions for new trials before the Full Court at Common Law, 16 were granted, 11 refused, 12 not proceeded with, and 3 were pending at the end of the year. Of 7 appeals in Equity, 2 were sustained and two were disallowed. There were 7 appeals in Divorce, 2 being sustained, 4 disallowed, and 1 was not proceeded with. One appeal in Bankruptcy was sustained and 1 was not concluded. Of 26 appeals from judgments in District Courts, 5 were allowed, 7 dismissed, and 14 were not proceeded with. Ten writs of prohibition were granted by the Supreme Court and 5 refused. Three writs of mandamus were granted. In special cases stated by magistrates, the magisterial finding was sustained in 4 cases and reversed in 9. In 2 cases stated by the Commissioner for Stamp Duties the decision was reversed. Two cases were stated by the Commissioner of Taxation, 1 decision being sustained and 1 reversed.

#### *Appeals to the High Court of Australia.*

Appeal to the High Court of Australia from judgments of the Supreme Court of New South Wales may be made in any case by permission of the High Court, and as of right in cases involving a matter valued at £300 or more, or involving the status of any person under laws relating to aliens, marriage, divorce or bankruptcy, provided that appeal lay to the Privy Council in such case at the date of establishment of the Commonwealth. Such appeal may be made irrespective of whether any State law provides that the decision of the Supreme Court is final.

During 1926 the appeals heard by the High Court were as follow:—From a single judge exercising jurisdiction of the Supreme Court in Equity, 7 allowed, 8 dismissed; from the Full Court of the Supreme Court, 5 allowed, 7 dismissed, and 1 settled otherwise. In addition, 2 appeals were heard from assessments under the Federal Land Tax Act; 1 was dismissed and 1 was allowed. There were also 3 appeals from a judge exercising Federal jurisdiction in New South Wales. One appeal from a magistrate exercising Federal jurisdiction was allowed and one was dismissed.

#### *Appeals to the Privy Council.*

Appeals from Dominion Courts to the Crown-in-Council are heard by the Judicial Committee of the Privy Council by virtue of the royal prerogative to review decisions of all Courts of the Dominions, which can be limited only by Act of Parliament.

The cases which may be heard on appeal by the Judicial Committee were defined by Order-in-Council in 1909. Appeal may be made as of right from determinations of the Supreme Court involving any property or right to the value of £500 or more, and as of grace from the Supreme or High Court in any matter of substantial importance, including criminal cases in special circumstances. Except where the High Court consents no appeal may be made to the Privy Council upon any question as to the limits *inter se* of the constitutional powers of the Commonwealth or States.

The applications to the Privy Council for leave to appeal during the past ten years included 15 in Common Law and 15 in Equity. In this period 7 appeals in Common Law were upheld and 7 were dismissed; in Equity, 1 was upheld and 1 dismissed. Two appeals in Admiralty were dismissed. An appeal in Bankruptcy was upheld in 1926. There have been no appeals in Divorce.

## APPEALS IN CRIMINAL CASES.

*Appeals to Quarter Sessions.*

The right of appeal from Courts of Petty Sessions to Courts of Quarter Sessions lies against all convictions or orders by magistrates, excepting adjudication to imprisonment for failure to comply with an order for the payment of money, for the finding of sureties for entering into a recognisance or for giving security, and orders for the payment of wages and convictions for breaches of discipline under the Seamen's Act, 1898. The Appeal Court rehears the cases, deciding questions of fact as well as of law.

The results of appeals from Courts of Petty Sessions during the last five years are shown below:—

Year.	Cases in which Conviction or Order was—			Total Cases Concluded.	Cases not Concluded.
	Confirmed.	Varied.	Quashed.		
1922	538	87	148	773	113
1923	470	96	193	759	111
1924	468	126	175	769	104
1925	402	102	152	656	130
1926	580	98	123	801	129

Appeals are made from less than 1 per cent. of the convictions in Magistrates' Courts. In 1926 convictions were quashed in 15 per cent. of the appeal cases concluded, and varied in 12 per cent. of such cases.

*Court of Criminal Appeal.*

The Court of Criminal Appeal was established by the Criminal Appeal Act of 1912, which prescribes that the Supreme Court shall be the Court of Criminal Appeal, constituted by three or more Judges of the Supreme Court as the Chief Justice may direct. Any person convicted on indictment may appeal to the Court against his conviction (1) on any ground which involves a question of law alone, or (2) with the leave of the Court or upon the certificate of the judge of the court of trial, on any ground which involves a question of fact alone, or of mixed law and fact, or any other ground which appears to the Court to be sufficient. With the leave of the Court, a convicted person may appeal also against the sentence passed on conviction. In such appeal the Court may quash the sentence and substitute another either more or less severe.

In addition to determining appeals in ordinary cases the Court has power, in special cases, to record a verdict and pass a sentence in substitution for the verdict and sentence of the Court of trial. It also may grant a new trial, either on its own motion or on application of the appellant.

The result of appeals to the Court of Criminal Appeal during the last five years is shown hereunder:—

Year.	Convictions Affirmed.	Convictions Quashed.	New Trials Granted.	Total Cases Decided.	Sentences Varied (included in Convictions Affirmed).	Appeals Abandoned.
1922	33	1	6	40	4	16
1923	53	1	4	58	...	16
1924	73	5	12	90	9	15
1925	57	2	4	63	6	26
1926	47	...	5	52	...	21

## POLICE.

THE police force of New South Wales is organised under the Police Regulation Act of 1899 and amendments. The Commissioner of Police, under direction of the Colonial Secretary, is charged with the superintendence of police, and is responsible for the organisation, discipline, and efficiency of the force. Superintendents and inspectors of police are appointed by the Governor as subordinates of the Commissioner. Sergeants and constables are appointed as required by the Commissioner, but such appointments may be disallowed by the Governor.

No person may be appointed constable unless he is of sound constitution, able-bodied, under the age of 30 years, of good character, and able to read and write. Any person who has been convicted of a felony, is in other employment, or keeps a house for the sale of liquor, is incapable of acting as an officer of police. A high physical standard is required of recruits.

Members of the force must take an oath of faithful and impartial service, and may be punished by fine in Courts of Petty Sessions for failure or refusal of duty. They remain in office until the age of 60 years (or 65 with special permission), unless previously discharged. They may resign on giving three months' notice.

The Police Regulation (Appeals) Act, 1923, which came into operation on 1st February, 1924, provides for the appointment of a Board, constituted by a District Court Judge, to hear appeals against the decisions of the Commissioner of Police in regard to promotions or the imposition of punishments, consisting of fine, suspension, dismissal, reduction in rank or pay, or transfer. Any party to an appeal may require it to be heard before the judge and two members of the police as assessors, one being nominated by the Commissioner and one by the Police Force. The findings of the Board are subject to review by the Colonial Secretary, as the responsible Minister of State, and his decision is final.

Pension and gratuity rights accrue to officers who retire by reason of medical unfitness for duty, or on or after attaining the age of 60 years. Where an officer is disabled or killed in the execution of his duty, a special allowance not exceeding his salary at the time of disablement may be paid to him or his dependents. Particulars of the pension fund are shown in the chapter entitled "Social Condition."

The powers of police officers rest on the common law, with certain express additions made thereto by statute. The primary duties of the police are to prevent crime, to detect offenders and to bring them to justice, to protect life and property, to enforce the law, and to maintain peace and good order throughout the State. In addition, they perform many duties in the service of the State, *e.g.*, they act as clerks of petty sessions in small centres, as Crown land bailiffs, foresters, mining wardens, inspectors under Fisheries and other Acts; they collect revenue, such as taxes in respect of motor vehicles; they revise the electoral lists, and collect a large volume of statistical returns. In the metropolitan area the police regulate the street traffic.

New South Wales is divided into nine superintendents' districts, containing 682 police stations, and a police force numbering 3,144, of whom eight



are women, viz., four matrons and four special constables. The number stated includes one policeman on duty in the Federal Capital Territory. The distribution of the force in December, 1927, was as follows:—

Classification.	Commissioner and Superintendents.	In-spectors.	Ser-geants.	Con-stables.	Trackers.	Total.
General ... ..	12	64	560	2,020	31	2,687
Criminal Investigation Branch...	1	1	22	16	...	40
Others on detective work ... ..	...	...	38	113	...	151
Traffic ... ..	1	1	12	199	...	213
Water ... ..	...	3	9	41	...	53
<b>Total ... ..</b>	<b>14</b>	<b>69</b>	<b>641</b>	<b>2,389</b>	<b>31</b>	<b>3,144</b>

The mounted police numbered 805, including the inspectors and superintendents, 184 sergeants, 507 constables, and 31 black trackers.

The following statement shows for various years since 1901 the strength of the police establishment (exclusive of trackers and women police) in relation to the population. With a greater volume of administrative legislation their duties have been increased considerably during the period:—

Year.	Number of Police.	Inhabitants to each Policeman.	Year.	Number of Police.	Inhabitants to each Policeman.
1901	2,172	634	1924	2,890	781
1911	2,487	684	1925	2,933	784
1921	2,734	779	1926	2,966	792
1922	2,795	778	1927	3,105	773
1923	2,821	784			

Since 1901 the police force has grown at a slower rate than the population, though by reason of the addition of 139 men during 1927 it was stronger in proportion to the population than in any of the last seven years. Arrangements are being made for a further addition of 200 men.

## PRISONS.

A PRISON may be established by proclamation of the Governor, at any premises prepared and maintained as a prison at the public expense. A Comptroller-General and Deputy Comptroller-General of Prisons are appointed by the Governor for the care of prisons and custody of convicted prisoners. Persons in custody awaiting trial are held by the Comptroller-General for the Sheriff.

All prisons must be visited at least once each week by a magistrate appointed to be "Visiting Justice," who may enter and inspect, and report to the Chief Secretary upon any matter connected with the gaol as often as he deems necessary. Such justice may hear and determine complaints against prisoners and award as punishment a term of solitary confinement. In addition Judges of the Supreme Court may visit prisons and sit as a Court of Gaol Delivery to determine cases of untried prisoners.

At 30th June, 1927, there were 24 gaols in New South Wales. Six were classed as principal gaols, 7 as minor, and 11 as police gaols. The principal gaols were the State Penitentiary for men and the State Reformatory for Women—both at Long Bay, Sydney—and the gaols at Parramatta, Bathurst, Goulburn, and Maitland. Each of these gaols is used for a particular class of prisoners.

The State Penitentiary is used for prisoners awaiting trial, etc., and those sentenced at metropolitan courts to short periods of detention, and it is a centre from which long-sentence prisoners are distributed to country establishments. The State Reformatory is used for female prisoners of all classes. At Goulburn Gaol special treatment is provided for first offenders, and at Bathurst and Parramatta prisoners convicted more than once are imprisoned.

The smaller gaols are used for prisoners undergoing short sentences, and for the detention of those who require special treatment apart from other long-sentence prisoners. Among the minor gaols are the Afforestation Camp at Tuncurry, and the Emu Plains Prison Farm. At the latter, prisoners—usually first offenders—under 25 years of age are trained in farm work, and at Tuncurry older men are employed on a pine plantation. At these two establishments the conditions of gaol life are modified with the object of befitting the men to lead useful lives after release, and for this reason the prisoners sent to the camps are selected with discrimination. Another afforestation camp is being prepared at Milo, Bombala, for young prisoners, other than first offenders. The Shaftesbury Inebriate Institution is classed as a minor gaol, but it is used mainly for the treatment of inebriates. An account of its operations is shown in the chapter entitled "Social Condition."

The police gaols are used for the detention of persons sentenced in the various districts for periods not exceeding fourteen days.

In the larger gaols the prisoners are classified according to character and previous record, and the principle of restricted association is in operation.

## PRISONERS.

The number of gaol entries during various years since 1901 and the number of prisoners in gaol at the close of each year are shown below. The figures are exclusive of persons detained under the Inebriates Act:—

Year	Number of Gaol Entries during Year.	Prisoners at end of Year.							
		Under Sentence.		Awaiting Trial.		Total.			Prisoners under Sentence per 10,000 of Population
		Males.	Females.	Males.	Females.	Males.	Females.	Total.	
1901	14,361	1,499	197	106	10	1,605	297	1,812	12.3
1911	9,532	1,066	107	68	8	1,134	115	1,249	6.9
1921	8,817	1,182	91	90	6	1,272	97	1,369	6.0
1922	8,955	1,292	81	97	6	1,389	87	1,476	6.3
1923	8,752	1,263	76	86	8	1,349	84	1,433	6.1
1924	8,104	1,337	74	62	4	1,399	78	1,477	6.2
1925-26	8,760	1,324	80	54	5	1,378	85	1,463	6.1
1926-27	8,138	1,365	66	69	3	1,434	69	1,503	6.1

The number of gaol entries shown in the table includes convicted persons, persons awaiting trial, debtors, naval and military offenders, and persons on remand, some of whom were received and counted several times.

The number of convicted prisoners in gaols decreased in a marked degree between 1901 and 1911. At the end of the former year the number was 1,696 or 12.3 per 10,000 of population as compared with 1,173, or 6.9 per 10,000 of population in 1911. The prison population increased during the succeeding quinquennium, then a marked decline occurred. During the last six years the proportion of prisoners to the total population has shown only slight variation.

The number of distinct persons received into gaol under sentence during 1926-27 was 5,197, of whom 556 were women.

The following statement shows the number of prisoners received into gaol under sentence during various years since 1901, those received under sentence more than once during a year being counted each time received:—

Year.	Convicted in Higher Courts.			Convicted in Courts of Petty Sessions.			Other persons sentenced to Prison.*	Grand Total.
	Not previously in Prison.	Previously in Prison.	Total.	Sentenced to Prison.	Imprisoned in default of paying Fine.	Total.		
1901	270	582	652	2,804	8,182	10,986	202	11,840
1911	246	237	485	1,729	4,959	6,687	261	7,433
1921	422	440	862	1,270	4,441	5,711	41	6,614
1922	405	452	857	1,440	4,226	5,666	42	6,565
1923	563	344	907	1,467	4,104	5,571	47	6,525
1924	550	302	852	1,375	3,832	5,207	30	6,089
1925-6	311	321	632	2,359	3,854	6,213	25	6,870
1926-7	296	251	547	2,125	3,488	5,613	29	6,189

\* Includes persons imprisoned as debtors, as offenders against Federal laws, as naval and military offenders, and as a result of civil processes.

The number of persons received into prison under sentence counted once each time received in 1926-27 was 6,189, viz., males 5,248 and females 941. The total number was 48 per cent. lower than in 1901. When considered in relation to the population, the decrease appears more remarkable, as the number of prisoners received into gaol under sentence declined from 8.6 per 1,000 of population to 1901 to 4.5 in 1911, 3.1 in 1921, and 2.6 per cent. in 1926-27. The decrease is due mainly to a diminution in imprisonment for minor offences dealt with by Courts of Petty Sessions.

In 1926-27 more than half the persons convicted in the higher courts, *i.e.*, for the more serious crimes, had already been in prison under sentence, and 56 per cent. of the prisoners were committed to gaol in default of paying fines imposed by Courts of Petty Sessions.

The sentences imposed on the prisoners received into gaol during the year ended 30th June, 1927, were as follow:—

Not exceeding one week .. .. .	1,391
Over one week and not exceeding one month .. .. .	2,120
Over one month and not exceeding six months .. .. .	1,565
Over six months and not exceeding one year .. .. .	302
Over one year and not exceeding two years .. .. .	232
Over two years and not exceeding five years .. .. .	94
Over five years and not exceeding ten years .. .. .	9
Over ten years .. .. .	1
Life .. .. .	3
Death .. .. .	4
Term not specified .. .. .	468
Total .. .. .	6,189

Capital punishment may be inflicted in New South Wales, but executions are unusual. Since the beginning of the year 1918 there have been two executions—both during the year 1924.

The prisoners remaining in gaol under sentence on 30th June, 1927, numbering 1,431, included 57 serving life sentences, and 77 who had been declared habitual criminals and sentenced for an indefinite period.

The system of indeterminate sentences was introduced in terms of the Habitual Criminals Act, 1905, which empowers a judge to declare as an habitual criminal any person convicted for the third or, in some cases, the fourth time of certain criminal offences, as specified in the Act. The declarations were made only in the case of convictions on indictment until the Act was amended in 1924 to extend the system to persistent offenders, who are convicted summarily. In such cases a stipendiary or police magistrate may direct that an application be forwarded to a Judge of the Supreme Court or a Court of Quarter Sessions to have the prisoner declared an habitual criminal. In gaol, the habitual criminal serves the definite sentence imposed for the offence of which he has been convicted, then he is detained for an indefinite term, until he is deemed fit for freedom. The indeterminate stage is divided into three grades—intermediate, higher, and special. A minimum period of 4 years and 8 months must be spent in the lower grades before the prisoner can gain admission to the special grade, wherein cases may be brought under consideration with a view to release on license. After release he is required to report to the authorities at stated intervals during a period specified in the license.

The Habitual Criminals Act prescribes that while under detention as an habitual criminal every prisoner must work at some useful trade, and receive a share of the proceeds of his work. As the majority of these persons have not been trained in any branch of skilled labour, facilities are afforded them, while serving the definite term, to acquire training in some remunerative employment.

Sixteen men were declared habitual criminals during the year ended June, 1927, the total number so declared since the inception of the Act being 159, including 1 woman. At 30th June, 1927, there were under detention 27 men who had not yet completed the definite period of their sentence, and 50 men who had passed into the indeterminate stage.

Among the special classes of prisoners are those known as "maintenance confinees," who have been imprisoned for disobeying orders of the courts for the maintenance of their wives and children. Such prisoners are required to work, and the value of the work, after deducting the cost of the prisoner's keep, is applied towards the satisfaction of the orders for maintenance, etc.

During 1926-27 the number of maintenance confinees received into gaol was 368, as compared with 308 during the year 1925-26. Gaol earnings to the amount of £2,078 were paid to dependants of confinees during the year. Nine confinees paid the amount of their orders from gaol earnings, and 77 partly from gaol earnings.

#### *Sickness and Mortality in Gaols.*

The medical statistics of prisons show that, with an average daily number of 1,511 inmates during 1926-27, the total number of cases of sickness treated in hospital was 539. Ten prisoners died, and 14 were released on medical grounds. The death rate per 1,000 of the average number of inmates was 6.6. There were no executions during the year.

Particulars relating to cases of venereal diseases amongst prisoners and those detained in lock hospitals are shown in the chapter entitled "Social Condition."

#### *Industrial Activity in Prison Establishments.*

It is accepted as a principle that useful employment is one of the most important factors in promoting discipline and good conduct in the gaols and in reforming those who have lapsed into crime. Therefore employment at industries calculated to inspire interest, to encourage some degree of skill, and subsequently to prove remunerative, is provided under the supervision of competent instructors. The principal activities are farming, gardening, bread-baking and minor manufactures, and the scope for employment in skilled trades is being extended steadily. Under a system introduced in April, 1922, prisoners may receive payment for work produced in excess of a fixed task.

In 1926-27 the value of prisoners' labour amounted to £78,626, viz.:—Manufactures, £30,375; agriculture, £11,108; buildings, £6,893; domestic employment, £27,181; and afforestation, £3,069.

#### BIRTHPLACES, RELIGIONS, AND EDUCATION OF PRISONERS.

The number of persons serving sentences in gaols at 30th June, 1927, were distributed according to birthplaces and to religions as follow:—

Birthplace.	Males.	Females.	Total.	Religion.	Males.	Females.	Total.
New South Wales ...	785	40	825	Church of England	691	22	713
Other Australian ...	227	17	244	Roman Catholic .	444	39	483
New Zealand ...	32	3	35	Methodist... ..	57	1	58
England and Wales ...	169	2	171	Presbyterian ...	103	4	107
Scotland ... ..	54	1	55	Other Christian ..	23	...	23
Ireland ... ..	22	2	24	Non-Christian ..	19	...	19
Other British ...	21	...	21	No religion ... ..	26	...	26
Foreign Countries ...	51	1	52	Not stated ... ..	2	...	2
Not stated ... ..	4	...	4				
Total ... ..	1,365	65	1,431	Total ... ..	1,365	66	1,431

Nine male prisoners were illiterate, 3 could read English, but could not write, and 44 could read and write in a foreign language only.

## REMISSION OF SENTENCES.

*First Offenders.*

Special provision is made by the Crimes Act, 1900, and its amendments, for lenience towards any person convicted of a minor offence and sentenced to imprisonment, provided such person has not been convicted previously of an indictable offence. The term "minor offence" includes offences punishable summarily, and any other offence to which the court applies these provisions of the Act. In such cases the execution of the sentence is suspended upon the offender entering into recognisance to be of good behaviour for a fixed period, which may not be less than twelve months. Such persons are required to undergo an examination to facilitate future identification and to report periodically to the police. During the period of probation they may be arrested and committed to prison for the term of sentence imposed for any breach of the conditions of their release.

The hearing of charges against female first offenders must be in private unless the defendant elects to be heard in open court, and reports of such cases may not be published.

The following table shows particulars concerning persons released as first offenders in the various years since 1901; cases of children released on probation by the Children's Courts are not included.

Year.	First Offenders Released on Probation.			Year.	First Offenders Released on Probation.		
	By Higher Courts.	By Magistrates Courts.	Total.		By Higher Courts.	By Magistrates Courts.	Total.
1901	156	23	179	1924	97	406	503
1911	220	61	281	1925	28	370	398
1921	246	395	641	1926	29	502	531
1922	136	543	679	1927	30	364	394
1923	154	436	590				

*Prisoners released on Probation.*

By good conduct and industry certain classes of prisoners may gain the remission of part of their sentences. They are released on license on terms similar to those applied to first offenders as described above.

The licenses operate for the unexpired portion of the sentence, and a breach of the conditions of release may be punished by the cancellation of the license, and recommittal to gaol for the balance of the sentence. During the year ended 30th June, 1927, licenses were granted under the Crimes Act to 75 men and 10 women. Of these licenses 76 were without surety. Six licensees were returned to gaol for misbehaviour during the year. At 30th June, 1927, there were 73 licenses current.

## COST OF ADMINISTRATION OF JUSTICE.

The following table shows the amount expended by the State in the administration of justice, in the protection of property, and in the punishment of criminals, in New South Wales during 1920-21 and each of the last four years; also the amount of fines and fees, and net returns from prisoners' labour paid into the Consolidated Revenue:—

Expenditure and Revenue.	1920-21.	1923-24.	1924-25.	1925-26.	1926-27.
<b>Expenditure—</b>					
<b>Law Administration—</b>	£	£	£	£	£
Salaries, Pensions, etc., of Judges	59,106	62,868	65,221	61,434	59,608
Other ... ..	288,742	333,178	356,819	379,158	382,198
	347,848	396,046	422,040	440,592	441,806
<b>Police—</b>					
Administration, etc. ... ..	1,062,201	1,127,503	1,176,231	1,208,064	1,234,507
Payments to Pension Fund ... ..	80,000	116,300	139,200	153,650	170,600
	1,142,201	1,243,803	1,315,431	1,361,714	1,405,107
<b>Prisons ... ..</b>	126,122*	162,375*	163,283*	187,284	196,365
<b>Total Expenditure ... ..</b>	1,616,171	1,802,224	1,900,754	1,988,590	2,043,278
<b>Revenue—</b>					
Fees ... ..	100,188	132,645	134,696	149,332	150,195
Fines and Forfeitures ... ..	45,303	56,810	49,975	47,332	50,667
Receipts by Prisons Department	212	3,985	6,442	15,380	16,064
<b>Total Revenue ... ..</b>	145,703	193,440	191,113	212,044	216,926
<b>Net Cost ... ..</b>	1,470,468	1,608,784	1,709,641	1,777,546	1,826,352
<b>Expenditure per Head of Mean</b>					
<b>Population—</b>	s. d.	s. d.	s. d.	s. d.	s. d.
Law Administration ... ..	3 4	3 7	3 9	3 10	3 9
Police ... ..	10 11	11 3	11 8	11 10	12 0
Prisons ... ..	1 2	1 6	1 5	1 8	1 8
<b>Total Expenditure ... ..</b>	15 5	16 4	16 10	17 4	17 5
<b>Revenue ... ..</b>	1 5	1 9	1 8	1 10	1 10
<b>Net Cost ... ..</b>	14 0	14 7	15 2	15 6	15 7

\* Calendar year preceding.

The expenditure on law administration includes the salaries, etc., of judges, and the expenditure of the Departments of the Attorney-General and of Justice, except the expenditure on prisons, which is shown separately, and on sub-departments not directly concerned in the administration of the law, and certain other expenses.

The expenditure by the Police Department shown above is not absorbed solely by police services proper, since the members of the police force perform extensive administrative services for other Departments of State.

The receipts of the Prisons Department as stated in the table do not include the value of work done by the prisoners for the prisons and Government departments.

# POPULATION.

## EARLY ENUMERATIONS.

**T**HE growth of the population of New South Wales between 1788 and 1856 is traced on page 223 of the Official Year Book for 1922, and the area and population at each territorial readjustment are shown on page 1 of this issue.

With the exception of the territory ceded to the Commonwealth Government in 1911, New South Wales has occupied its present boundaries since 1859, and census particulars are available at regular decennial intervals since 1861. These particulars furnish a connected and accurate summary of the development of population since that date, and a survey of the growth of the total population of New South Wales, including Lord Howe Island, is shown in the following table:—

Year.	Population.	Index Number of Population.	Increase in Population since previous Census.			Number of Persons per Square Mile.
			Numerical.	Proportional.	Average Annual Rate.	
1861†	350,860	100	172,192*	per cent. 91·00	per cent. 6·98	1·12
1871†	503,981	144	153,121	43·64	3·69	1·61
1881†	751,468	214	247,487	49·11	4·08	2·41
1891†	1,132,234	323	380,766	50·67	4·19	3·64
1901†	1,359,133	387	226,899	20·04	1·84	4·33
1911†	1,648,746	470	289,613	21·31	1·95	5·32
1921†	2,101,968	599	453,222	27·49	2·46	6·79
1922†	2,174,553	619	72,585	3·45	1·96	7·03
1923†	2,211,106	630	109,138	5·19	1·86	7·15
1924†	2,256,090	643	154,124	7·33	1·90	7·30
1925†	2,300,081	656	198,113	9·42	1·91	7·43
1926†	2,349,401	669	247,433	11·77	1·95	7·59
1927†	2,401,884	684	299,916	14·27	2·00	7·76

\* Since 1851. † Census held at end of March or beginning of April. ‡ 31st December.

The annual rate of growth was 1·68 per cent. in 1923, 2·03 per cent. in 1924, 1·95 per cent. in 1925, 2·14 per cent. in 1926 and 2·23 per cent. in 1927.

Aborigines are not included in the population shown above for 1861; the numbers included in the totals of subsequent years are 983 in 1871; 1,643 in 1881; 8,280 in 1891; 4,287 in 1901; 2,012 in 1911; 1,597 in 1921. The population of the Federal Capital Territory is excluded in 1911 and subsequent years.

From this table it is apparent that a steady growth of population proceeded until 1891. This growth was especially marked between 1851 and 1861, when the gold discoveries were attracting eager fortune-hunters from other parts of the world, many of whom remained as settlers. After the gold rushes had ceased, the growth of population proceeded at a slower rate, but, though neither the average annual rate of increase nor the proportionate increase of that period was again attained, the actual numerical expansion in later periods has been greater. Indeed, the lull which occurred in the growth of population during the sixties developed gradually into a period of increasingly rapid expansion after 1871, and the next twenty years were, from a relative point of view, a time of unexcelled development.



It is significant that this speedy development proceeded during a period of remarkably flourishing trade, and came to an end when the trade boom ended in the commercial crisis of the early nineties.

The next twenty years were a period of little progress in the development of population, the reasons being the commercial and industrial stagnation which followed the crisis of 1893, the migratory and other losses due to the war in South Africa, and a more potent though, perhaps, subsidiary cause—the heavy decline in the birth-rate which lowered the rate of natural increase.

A new period of prosperity began early in the twentieth century, and the full weight of the trade revival was felt in the period 1911 to 1921, when the tide of population turned more definitely in favour of the growth of the State. Despite the serious effects of the war in diminishing the birth-rate, in temporarily stopping immigration, and in causing an exodus of men of reproductive ages, many of whom did not return, and despite the losses occasioned by the influenza epidemic of 1919, the period showed a greater relative expansion than either of its predecessors, and by far the greatest numerical increase on record. From 1921 to 1923 the volume of immigration was very restricted, and the increase in population depended mainly upon natural causes. Immigration increased, however, between 1924 and 1927, but the growth of population still depends mainly upon natural increase.

The estimated population at the end of the year and the mean population of New South Wales, including aborigines, for the last ten years, were as follow:—

Year.	Estimated Population at End of Year.			Mean Population.
	Males.	Females.	Total.	
1918	985,662	977,683	1,963,345	1,943,356
1919	1,042,959	996,764	2,039,723	2,000,573
1920	1,068,568	1,024,421	2,092,989	2,068,585
1921	1,085,275	1,044,230	2,129,505	2,108,369
1922	1,108,582	1,065,971	2,174,553	2,150,862
1923	1,128,089	1,083,017	2,211,106	2,192,146
1924	1,151,639	1,104,451	2,256,090	2,230,166
1925	1,172,470	1,127,611	2,300,081	2,275,886
1926	1,197,428	1,151,973	2,349,401	2,321,917
1927	1,224,847	1,177,037	2,401,884	2,374,264

#### Population of Australian States.

The following table shows the population of each State of the Commonwealth at the last two censuses, and at 31st December, 1927, also the proportion of population in each State. Aborigines of full blood are excluded from account.

State or Territory.	Population, Census 1911.	Population, Census 1921.	Estimated Population, 31st Dec., 1927.	Proportion in each State or Territory.		
				1911.	1921.	1927.
				per cent.	per cent.	per cent.
New South Wales ...	1,646,734	2,100,371	2,400,266	36·96	38·67	38·53
Victoria ...	1,315,551	1,531,280	1,740,335	29·53	28·19	27·91
Queensland ...	605,813	755,972	899,176	13·60	13·92	14·43
South Australia ...	408,558	495,160	575,771	9·17	9·13	9·23
Western Australia ...	282,114	332,732	332,292	6·33	6·06	6·29
Tasmania ...	191,211	213,780	215,862	4·29	3·91	3·46
Northern Territory ...	3,310	3,867	4,361	0·08	0·07	0·06
Federal Capital Terr.	1,714	2,572	5,735	0·04	0·05	0·09
Commonwealth ...	4,455,005	5,435,734	6,233,799	100·00	100·00	100·00

During the inter-censal period the population of New South Wales increased at an average annual rate of 2·46 per cent., which was faster than that of any other State of the Commonwealth. The next highest rate was in Queensland, 2·24 per cent.; South Australia, 1·94 per cent.; Western Australia, 1·66 per cent.; Victoria, 1·53 per cent.; and Tasmania, 1·12 per cent. The average for the whole of Australia was 2·00 per cent.

*Growth of Population of New South Wales.*

The extent to which each source—natural increase and net immigration—has contributed to the growth of the population of New South Wales during each census period since 1861 was shown on page 226 of the Official Year Book for 1922. In calculating the increase from 1901 to 1921 the population of the Federal Capital Territory has been omitted, but the aboriginal inhabitants have been taken into consideration throughout.

Natural increase, or the excess of births over deaths, has been by far the greater cause of growth in the population, and, as would be expected, has provided steadily-increasing additions. The rate of natural increase fluctuated with a falling tendency throughout the period, but a very sudden fall occurred after 1890 owing to the rapid decline in the birth-rate. Immigration has always been a subordinate cause of growth, but has intermittently provided considerable additions to the population. During the sixty years 1861–1921 the net immigration amounted to only 500,277, or about two-sevenths of the total increase. Of these immigrants, approximately 300,000, or 60 per cent., were males, and about 140,000 were assisted to immigrate. Immigration proceeded rapidly until 1886, when it declined heavily, and did not revive until the State reintroduced its policy of affording assistance to immigrants in 1905. Between the years 1892 and 1904 the State actually lost more than 10,000 inhabitants by net emigration. The rate of increase due to net immigration, measured in relation to population, has been very variable, and although considerable improvement is evident in the past thirty years the rate is still much below that of former years.

It is probable that the last decennial period would have shown a very considerable improvement in all respects had it not been for the unusual influences brought to bear by the war and the epidemic of influenza in 1919.

The actual growth of population in New South Wales during each of the last ten years was as follows:—

Year ended December—	Increase during Year.			Increase per cent. during Year.		
	Natural.	Net Immigration.	Total.	Natural.	Net Immigration.	Total.
1918	31,860	9,997	41,857	1·66	·52	2·18
1919	22,143	54,235	76,378	1·13	2·76	3·89
1920	33,013	20,253	53,266	1·62	·99	2·61
1921	34,600	1,916	36,516	1·65	·09	1·74
1922	36,036	9,012	45,048	1·69	·43	2·12
1923	33,061	3,492	36,553	1·52	·16	1·68
1924	32,849	12,135	44,984	1·48	·55	2·03
1925	33,792	10,199	43,991	1·50	·45	1·95
1926	30,938	18,382	49,320	1·34	·80	2·14
1927	31,088	21,395	52,843	1·32	·91	2·23

From 1917 to 1919 the return of troops caused an increasing flow of arrivals, and restored a temporarily absent element of population. In 1920 the last detachments of soldiers returned, and there was considerable immigration

from other States. During 1921 migration returned to its ordinary channels, and the net immigration of the year was inconsiderable. The annual gain by migration has since grown rapidly though irregularly.

After 1914 the annual number of births diminished until 1919, and the natural increase showed a considerable falling off, especially in 1919, when the epidemic of influenza caused heavy mortality. In 1920 and 1921 the number both of births and deaths increased, but the increase of births was the greater. The natural increase in 1922 was numerically the greatest on record, but proportionately was considerably below that of former years. A slight decline both in numbers and proportion occurred between 1923 and 1925, while in 1926 a decrease in the number of births synchronised with an increase in the number of deaths and, excepting some of the war years, resulted in the lowest natural increase recorded for any year since 1911.

#### MIGRATION:

A very large movement of population takes place each year into and out of New South Wales, but is due more to the movement of tourists, businessmen, and persons following itinerant callings, than to immigration or emigration properly so-called. During the war period and the years immediately following there were very considerable movements of troops. These are included in the figures shown below.

The net immigration to New South Wales is the excess of arrivals in over departures from the State, and is the result principally of intercourse with overseas countries. In recent years until 1920 the greater part of the immigrants to New South Wales came from or through other Australian States; but, in 1921, with the virtual cessation of movement of troops, the direction of interstate migration changed and the number of departures to other States has since exceeded the number of arrivals therefrom.

The interstate and overseas movement of people to and from New South Wales, as estimated for each of the past ten years is shown in the following table:—

Year.	Arrivals in New South Wales.			Departures from New South Wales.			Excess of Arrivals over Departures.	
	Interstate. *	From other Countries Direct.	Total.	Interstate. *	To other Countries Direct.	Total.	Interstate. *	Other Countries Direct.
1918.	299,735	38,744	338,479	288,732	39,750	328,482	11,003	(-) 1,006
1919	240,263	93,276	333,539	235,887	43,417	279,304	4,376	49,859
1920	311,068	72,515	383,583	303,222	60,108	363,330	7,846	12,407
1921	284,927	57,190	342,117	288,084	52,117	340,201	(-) 3,157	5,073
1922	277,939	53,326	331,264	293,432	38,820	322,252	(-) 5,494	14,506
1923	283,014	48,084	331,098	290,691	36,915	327,606	(-) 17,677	11,169
1924	300,816	55,066	355,882	304,095	39,652	343,747	(-) 3,279	15,414
1925	308,241	55,201	363,442	311,035	42,208	353,243	(-) 2,794	12,993
1926	288,354	62,395	350,749	288,793	43,574	332,367	(-) 439	18,821
1927§	244,456	65,485	309,941	242,541	46,005	288,546	(+) 1,915	19,480

(-) Denotes excess of departures. \* Including movement of population to and from overseas countries *via* other States. § Preliminary.

*Oversea Migration.*

Since the middle of 1924 statistics have been collected as to the residential intentions of persons arriving and departing oversea in each of the Australian States. These distinguish between permanent migrants, Australians travelling abroad, and visitors from other countries. The following summary shows the numbers in the various categories in the years 1925 and 1926, comparing the totals for New South Wales with those for all Australia. Owing to the difficulty of securing accurate records at all coastal points the recorded totals are not the actual numbers, and a small addition equal to about 2½ per cent. is made to the number of departures in order to adjust the balance:—

Heading.	1926.		1927.	
	New South Wales.	Commonwealth.	New South Wales.	Commonwealth.
<b>Arrivals—</b>				
Immigrants ... ..	25,515	59,464	27,437	67,078
Australians returning ...	15,986	23,657	15,986	23,863
Visitors ... ..	20,892	24,795	22,050	26,435
Not stated ... ..	2	8	12	27
<b>Total ... ..</b>	<b>62,395</b>	<b>107,924</b>	<b>65,485</b>	<b>117,423</b>
<b>*Departures—</b>				
Emigrants ... ..	9,215	17,344	9,297	18,348
Australians departing temporarily ... ..	14,051	22,661	14,175	23,138
Visitors ... ..	26,292	25,157	22,533	27,009
Not stated ... ..	16	42	...	14
<b>Total ... ..</b>	<b>43,574*</b>	<b>65,704*</b>	<b>46,005</b>	<b>68,509</b>

\*Approximate only, includes allowance for unrecorded departures.

Immigrants in the above table are described as persons arriving from oversea, intending to reside permanently in Australia, and "emigrants" as Australian citizens departing with the intention of residing permanently in some other country. It is noteworthy that the particulars for New South Wales relate to persons arriving from oversea at New South Wales ports irrespective of the State of their ultimate destination.

The majority of travellers between Australia and other countries embark or disembark at ports in New South Wales, and this is particularly noticeable in respect of visitors from abroad.

*Nationality of Oversea Migrants.*

Since the middle of 1924, the nationality of oversea migrants has been recorded, and the following table shows the numbers of each of the principal nationalities arriving in or departing from Australia *via* the ports of New South Wales in 1925, 1926 and 1927.

	1925.			1926.			1927.		
	Arri-vals.	Departures	Excess of Arri-vals.*	Arri-vals.	Departures.	Excess of Arri-vals.*	Arri-vals.	Departures.	Excess of Arri-vals.*
British ... ..	46,829	35,606	11,223	53,561	36,495	17,066	54,088	38,356	15,732
French ... ..	452	483	(-) 31	583	561	22	620	638	(-) 18
German ... ..	159	145	14	245	169	76	435	217	218
Italian... ..	1,712	628	1,084	964	364	600	1,955	403	1,552
Jugo Slavs ... ..	486	491	(-) 5	523	448	75	487	283	204
Russians ... ..	190	76	114	162	129	33	142	68	74
United States ... ..	1,340	1,197	143	1,474	1,160	314	1,743	1,575	168
Other European ... ..	1,127	748	379	1,374	750	624	2,391	791	1,600
Total, European ... ..	52,295	39,374	12,921	58,866	40,076	18,810	61,861	42,331	19,530
Chinese ... ..	2,020	2,083	(-) 63	2,555	2,705	(-) 150	2,664	2,959	(-) 295
Indians ... ..	374	326	48	479	474	5	446	398	48
Japanese ... ..	134	173	(-) 39	125	108	17	137	155	(-) 18
Syrians ... ..	132	38	94	125	24	101	140	22	118
Other Asiatic ... ..	49	31	18	33	17	16	75	22	53
Pacific Islanders ... ..	150	149	1	150	147	3	123	104	19
Other Non-Europeans ... ..	47	34	13	42	23	19	39	14	25
Total, Non-Europeans ... ..	2,906	2,834	72	3,509	3,498	11	3,624	3,674	(-) 50
Grand Total ... ..	55,201	42,208	12,993	62,395	43,574	18,821	65,485	46,005	19,480

\* (-). Denotes excess of departures.

The numbers in the above table embrace migrants arriving or departing, visitors from oversea, and Australian residents travelling abroad. An addition of approximately  $2\frac{1}{2}$  per cent. has been made to the number of recorded departures in order to make the necessary adjustment for unrecorded movement of population overseas.

*Passports.*

Under the Passports Act, 1920 (Federal), no person who is or appears to be more than 16 years of age may embark at any place in the Commonwealth for a journey to any place beyond the Commonwealth unless he is the holder of a passport or other document authorising his departure, properly endorsed for the journey or unless he is the subject of any special or statutory exemption in that regard. The fee for issuing a passport is 10s., and it is valid for a period of five years unless specially limited to a shorter period.

The statutory exemptions extend to members of the naval or military forces of any British Dominion on duty, members of the crew of a departing vessel who were members on its arrival or are by occupation seafaring men any natural born British subject proceeding to New Zealand, any other person proceeding to New Zealand under permit, any officer of the Administration, or any *bona fide* resident or tourist with a return ticket proceeding to Papua or Norfolk Island, any person holding a certificate exempting him from the dictation test, and any aboriginal native of Asia or of any island of the East Indies or of the Indian or Pacific oceans.

*Immigration.*

At Common Law aliens have no legal right of admission to any British country, and immigration to and emigration from New South Wales are regulated principally by statutes of the Federal Parliament, *e.g.*, the Immigration Act (1901-25) and the Contract Immigrants Act, 1905.

Any person may be refused admission to Australia who fails to write from dictation by an officer not less than fifty words in any prescribed European language; or any person who has not the prescribed certificate of health; any feeble-minded person; any person suffering from serious transmissible disease or defect, tuberculosis or certain other serious diseases; any person convicted of crime in certain circumstances; any prostitute or person living by prostitution; any advocate of revolution, assassination, or the unlawful destruction of property; any Turk of Ottoman race; or any person 16 years of age or over not possessed of a passport as prescribed. Should such persons gain admission, they may be deported. Usually persons formerly domiciled in the State cannot be excluded from return after temporary absence. For a period of five years from 2nd December, 1920, persons of German, Austro-German, Bulgarian or Hungarian parentage and nationality were excluded, but upon the expiration of that period no further restrictions were imposed. Ex-enemy subjects repatriated during the late war are required to obtain approval of their readmission.

In the matter of excluding undesirable immigrants, New South Wales is protected by the Federal authority. The number of persons refused admission to the Commonwealth in 1926 was 58, of whom 25 were Chinese, 17 British, 4 Hindoos, Cingalese, etc., 5 Maltese, 1 Syrian, 3 Pacific Islanders, 1 Papuan, and 1 North American. No persons passed the dictation test during the year. The number of recorded departures of coloured persons from the Commonwealth during the year was 3,420 including 2,145 Chinese, 293 Japanese, and 212 Hindoos, etc. The number of coloured persons admitted without test was 3,355, of whom 1,780 were Chinese and 328 were Japanese. Of these, 1,760 were admitted on the ground of former domicile, 735 as pearl-ers, 112 on passports, and 738 on other grounds. The number of coloured persons arriving in New South Wales from oversea in 1926 was 1,475 and the number of departures oversea 1,376.

*Assisted Immigration.*

In the early years of the colony's existence the Governors frequently discouraged free immigration, but in 1832 there was inaugurated a policy of State-assisted immigration, which was maintained until 1885. During the economic depression of the next twenty years no encouragement was given to immigrants, and assistance to migrate was not afforded again until 1905. In 1911 the Federal Government assumed the function of advertising the resources of Australia with a view to promoting voluntary immigration from the United Kingdom, Europe, and the United States of America, but the State continued to assist desirable immigrants. Activities were practically suspended during the war period and not revived until 1919. In view of the industrial position, however, assistance was at first restricted to nominees and domestic workers, but the Imperial Government also arranged to grant free passages to ex-service men and women and their dependents who could produce evidence that they would be acceptable to any dominion, and that provision had been made for them. This scheme operated until the end of 1922.

With the advent of more stable industrial conditions, the system of assisted immigration was reorganised by agreement as from 1st March, 1921, when the Federal Government undertook control of the entire oversea organisation for the encouragement and selection of immigrants, and for the provision of passages to Australia. Under this agreement the State arranged to indicate from time to time, how many settlers it could absorb.

A new agreement was made as from 1st May, 1923, when the Government of New South Wales extended the nomination system to include persons under 50 years of age of approved occupations for whom nominators are in a position to provide maintenance or employment for a period of at least one year. Nominations by church or other community organisations were also allowed.

Subsequently, during the currency of these agreements, a further agreement to operate for three years from 1st May, 1925, was reached, under the Empire Settlement (Imperial) Act, 1922. This provides that the Imperial and Federal Governments should grant in equal shares a subsidy for payment of passage money of each approved migrant. The amount of subsidy in particular cases is shown on a later page.

Approved migrants are immigrants nominated by relatives or friends in Australia and accepted by the Director of Australian Migration and Settlement in London, and persons (usually rural or domestic workers) selected from among applicants for assisted passages annually by the Director. The latter are introduced on the responsibility of the State. The age limit for women applicants for assisted passages as domestic workers is 40 years.

In certain cases immigrants receive instruction in rural work on the Government Agricultural Farm at Scheyville (near Windsor), and suitable employment is obtained in co-operation with the State Labour Exchanges. Any immigrant who settles upon the land as owner, lessee, or labourer, within a reasonable time of his arrival, may be granted concessions in regard to railway fares and freight when travelling to the district in which he settles. These concessions may be granted also to nominated immigrants proceeding to the homes of their nominators, or travelling to take up farm work or domestic service.

#### *Numbers of Assisted Immigrants.*

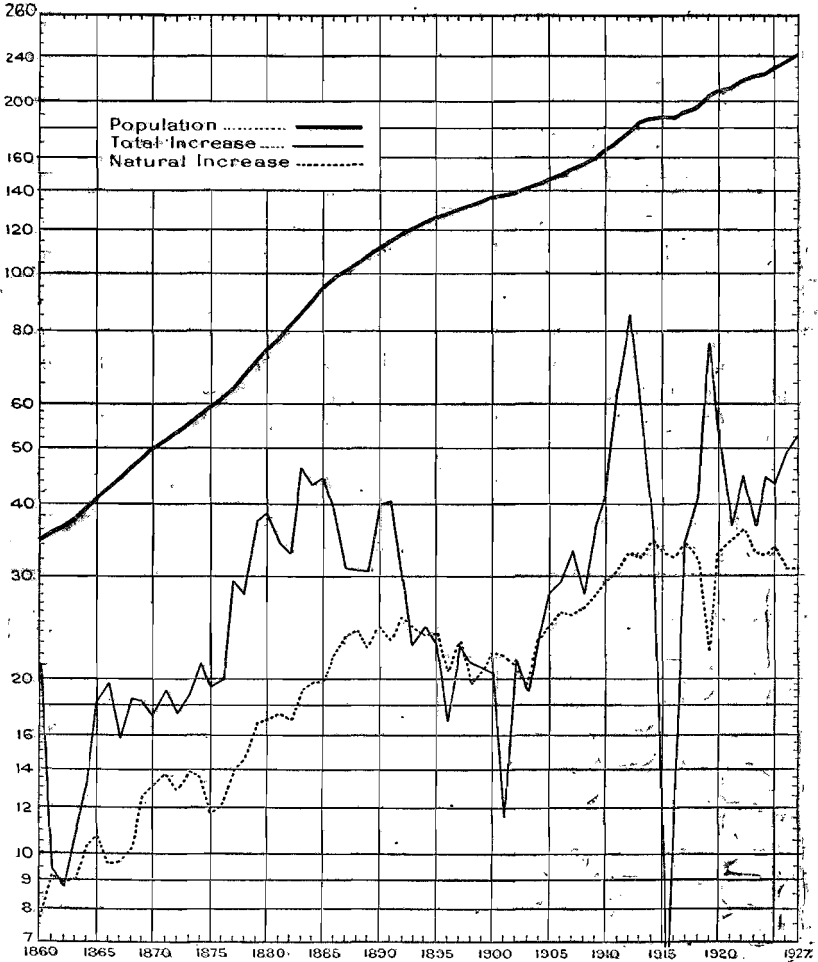
The following table shows particulars of the manner of choosing and the age and sex of assisted immigrants who arrived in New South Wales during each of the last five calendar years:—

Year.	Selected.	Nominated.	Adults and Children over 12 years of age.		Children under 12 years of age.		Grand Total.
			M.	F.	M.	F.	
1923 ... ..	984	4,058	2,134	1,841	527	540	5,042
1924 ... ..	1,499	4,714	2,575	2,334	660	644	6,213
1925 ... ..	2,239	6,548	3,812	2,993	1,030	952	8,787
1926 ... ..	1,572	11,257	5,082	4,539	1,633	1,575	12,829
1927 ... ..	1,542	8,718	3,593	4,174	1,268	1,225	10,260

The following statement shows the immigration to the State since 1832, and the total number of assisted immigrants who arrived in New South Wales under various schemes, inclusive of Victoria and Queensland before their

**POPULATION AND ANNUAL INCREASE, 1860 TO 1927.**

Ratio Graph.



NOTE.—(i) The numbers at the side of the graph represent 10,000 of population, 1,000 Total Increase and 1,000 Natural Increase.

(ii) In 1916 there was a decrease of 8,711 in the population owing to the departure of troops, and the curve fell below the limits of the graph.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual numbers are shown by means of the numbers at the side of the graph.



separation. After 1905 the number of immigrants nominated by residents of the State and the number selected abroad are shown separately.

Period.	Immigrants assisted.				
	Nominated.	Selected.	Total Arrivals.		
			Males.	Females.	Total.
1832-1905 § ...	.....	.....	104,106	107,866	211,972
1905-1909 § ...	6,144	2,713	*	*	8,857
1910-1914 § ...	32,406	12,444	23,816	21,034	44,850
1915-1919 § ...	4,123	1,322	2,067	3,378	5,445
1920-1924** ...	23,214	4,834	13,927	12,671	26,598
1925 ...	6,548	2,239	4,842	3,945	8,787
1926 ...	11,257	1,572	6,715	6,114	12,829
1927 ...	8,718	1,542	4,861	5,399	10,260
1832-1927 ...	92,410†	26,666†	160,334†	160,407†	329,598

\* Information not available.  
§ To 30th June.

† Excluding immigrants, 1905-1909.

† 1905 to 1927.

\*\* 5½ years ended 31st December, 1924.

There has been a revival in immigration in the past five years, and the number of assisted immigrants was 43,131, as compared with 44,850 in the quinquennium which preceded the war.

Since 1861 the number of assisted immigrants has been approximately 28 per cent. of the net number of immigrants to the State, and between the censuses of 1911 and 1921 the net immigration was 134,692 persons, or approximately three times the number assisted by the Government.

### Occupations of Assisted Immigrants.

The following statement shows the distribution of assisted immigrants in their respective occupational classes in each of the last five years. :-

Classification of Occupations.	1923.		1924.		1925.		1926.		1927.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Manufacture of—										
Wood products ...	64	1	71	1	36	...	82	...	59	...
Metal, Engineering, &c. ...	248	5	258	7	339	...	689	...	420	...
Food, Drink, &c. ...	24	6	38	11	38	5	51	1	42	28
Clothing, &c. ...	39	49	45	138	68	98	32	160	78	84
Books, Printing, &c. ...	23	1	14	9	16	5	17	8	19	13
Other Manufactures ...	43	32	41	33	36	13	61	7	31	4
Building Industry ...	33	...	80	...	98	...	151	...	142	...
Mining Industry ...	212	...	204	...	397	...	824	...	190	...
Rail and Tram Transport ...	27	...	27	...	30	...	56	...	30	...
Other Land Transport ...	51	...	42	...	65	1	81	1	75	...
Shipping and Wharf Labouring ...	13	...	13	...	31	...	26	...	16	...
Rural Industries ...	826	4	1,188	1	1,855	...	1,554	2	1,925	...
Domestic and Hotel Workers ...	3	816	22	794	13	814	20	1,143	11	1,422
Other trades ...	318	87	251	143	382	119	750	188	581	171
Dependents—										
Over 12 years of age ...	210	840	231	1,197	408	1,938	638	3,029	574	2,452
Under 12 years of age ...	527	540	660	644	1,030	952	1,633	1,575	1,263	1,225
Total each sex ...	2,661	2,381	3,235	2,978	4,842	3,945	6,715	6,114	4,861	5,399
Grand Total ...		5,042		6,213		8,787		12,829		10,260

Latterly selected immigrants have been mainly rural workers and domestic servants. Nominated immigrants have been distributed over many trades, but more especially those of the rural and mining industries, and engineering, and the manufacture of metal.

*Country of Origin of Assisted Immigrants.*

Practically all the assisted immigrants in the last five years have come from the United Kingdom; the relatively small number from other countries is shown in the following statement:—

Year ended 31st Dec.	Assisted Immigrants from—						Total Assisted Immigrants.		
	United Kingdom.		Other British Possessions.		Foreign Countries.		Nomin- ated.	Selected.	Total.
	Nomin- ated.	Selected.	Nomin- ated.	Selected.	Nomin- ated.	Selected.			
1923	4,005	984	8	...	45	...	4,058	984	5,042
1924	4,614	1,499	25	...	75	...	4,714	1,499	6,213
1925	6,425	2,239	56	...	67	...	6,548	2,239	8,787
1926	11,089	1,572	148	...	20	...	11,257	1,572	12,829
1927	8,533	1,542	183	...	2	...	8,718	1,542	10,260

*Adolescent Migrants.*

There are a number of private organisations which assist the immigration of young persons, including the Dreadnought Fund Trust, the Dr. Barnardo Homes, the Salvation Army, and the Catholic Immigration League.

The Dreadnought Fund was established in 1909 by public subscription to defray the cost of building for the Imperial Navy a war vessel of the Dreadnought type. On the institution of the Australian Navy it was decided to use part of the funds to assist the immigration of lads from 17 to 20 years of age, for the purpose of following rural pursuits. Up to 30th April, 1925 (when a new agreement was made as to payment of passage money of all assisted immigrants) the trustees paid part of the passage money, and, if necessary, the Commonwealth and Imperial Governments advanced a sum sufficient to defray the balance of the cost of bringing the lads to New South Wales. The trustees assist the boys during a course of training at one of the State farms. Upon completion of the course the lads are placed in employment through the agency of the State Labour Exchanges, and they repay in instalments any advances made. Under this scheme 63 boys were brought to New South Wales in 1921, 637 in 1922, 472 in 1923, 620 in 1924, 1,016 in 1925, 1,019 in 1926, and 865 in 1927.

The local organisation known as Dr. Barnardo Homes works in conjunction with an English institution of that name, which arranges passages and pays the passage money to Australia of boys trained in their homes and on farms in England. The local organisation places the boys with farmers, where the home conditions are found to be satisfactory. A hostel is maintained at Ashfield, Sydney, to accommodate them until they go to the country. The organisation keeps constantly in touch with them, and banks part of their wages till they reach the age of 21 years. From October, 1921, when the first of these boys were landed in Sydney, to December, 1922, 97 Barnardo boys had arrived in New South Wales. During 1923 a further 123 arrived, 51 in 1924, 88 in 1925, 50 in 1926, and 48 in 1927. The State also received 32 Barnardo girls in 1923, 101 in 1924, 42 in 1925, 48 in 1926, and 38 in 1927.

During 1923 an additional scheme was inaugurated under which 251 British farm lads, between the ages of 15 and 18 years, were received upon assisted passages and provided with rural employment in New South Wales, whilst 305 arrived in 1924, 75 in 1925, nil in 1926, and 17 in 1927. In 1927 there arrived also 20 Salvation Army (male) learners, 75 Salvation Army girl domestics, 50 Wembley lads, and 1 nominee of the Catholic Immigration League.

In 1923 the Juvenile Migrants Apprenticeship Act was passed to provide for the supervision and care of the persons and property of juvenile migrants until they reach the age of 21 years, and to empower the Minister for Labour to bind them by indenture to any trade or calling. On 17th March, 1926, this Act was replaced by a Juvenile Migrants Act, which provided for the reception of juvenile migrants between the ages of 14 and 18 years on their signing an undertaking to remain under the control of the Minister for Labour and Industry while in New South Wales, and until attaining the age of 18 years. The Minister is empowered by the Act to place such migrants for training and employment on a Government training farm or with any fit and proper person. Such migrants are not indentured, and have power to terminate their employment, provided notification of such termination is supplied to the Minister. During 1924 the number of apprentices under this scheme was 609, including 305 Dreadnought boys, whilst during 1925 the number was 540, including 283 Dreadnought boys.

#### *Passage Money of Assisted Immigrants.*

Prior to the war several steamship companies conveyed immigrant passengers from the United Kingdom at the rate of £14 per adult, and the State Government contributed from £4 to £8 toward the fares of assisted immigrants. Since the war the cost per berth has been much greater, and in January, 1925, was £33 per person over 12 years of age, and half that amount for children between the ages of 3 and 12 years. Children under 3 years of age are carried free. Since 1st May, 1925, under the Imperial scheme, contributions have been made in equal proportions by the Federal and Imperial Governments toward the cost of assisted passages for approved persons from the United Kingdom. Contributions are on the following scale:—

	Government Subsidy.			Paid by Migrant.		
	£	s.	d.	£	s.	d.
Children over 3 and under 12 years ...	16	10	0	Nil.		
Juveniles over 12 and under 17 years ...	27	10	0	5	10	0
„ „ 17 „ „ 19 „ ...	22	0	0	11	0	0
Domestics ... ..	22	0	0	11	0	0
Married couples, including husbands and wives, widows and widowers, if accompanied by one or more children under 19 years, each ... ..	22	0	0	11	0	0
Other approved immigrants ... ..	16	10	0	16	10	0

In the case of persons nominated for assisted passages by relatives or friends in the State, nominators are required to guarantee that employment awaits nominees, or that adequate provision will be made for their maintenance.

*Contract Immigrants.*

The admission of immigrants under contract to perform manual labour is regulated by the Contract Immigrants Act, 1905. Such contracts must be made by or on behalf of an Australian resident on the one part. In every case they are subject to Ministerial approval which may be withheld if the fulfilment of the contract is likely to prejudice the public welfare as affecting an industrial dispute or the conditions or standards prevailing in local industry. Except in the cases of contract immigrants who are British subjects born in the United Kingdom or descended from a British subject there born, it must be shown that there is difficulty in obtaining workers of equal skill and ability within the Commonwealth. The Act, however, does not apply to domestic servants and personal attendants accompanying their employers.

The number of contract immigrants admitted to Australia during 1926 was 55, including 27 weavers, 19 burlers and menders, 4 machinists, 3 lead-burners, and 2 mechanics. Of these, 22 had agreed to work at Orange, New South Wales, 12 at Albury, and 4 in Sydney.

*Distribution of Immigrants.*

A table published on page 91 of this Year Book for 1924 showed how persons born outside Australia and resident in New South Wales at the census of 1921 were distributed in respect of the metropolitan, urban and rural localities of the State. The tendency of migrants to remain in the capital city was shown by the fact that, whereas 97,344 males and 81,145 females born outside Australia were resident in the metropolis, the numbers in other parts of the State were 83,150 males and 53,091 females. The unequal distribution was further shown by the fact that, whereas 22·5 per cent. of all males and 17·5 per cent. of all females resident in the metropolis were born outside Australia, the corresponding proportions in rural districts were 11·8 per cent. of males and 8·2 per cent. of females.

A further analysis is made in the following table relating to persons resident in New South Wales at the date of the census who were born outside Australia and had been resident therein for less than ten years. Distinction is made between persons resident less than five years and those resident between five and ten years. Train and other travellers and crews of ships are omitted from account:—

Division.	Resident less than 5 years.				Resident over 5 years and less than 10 years.			
	Males.		Females.		Males.		Females.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Metropolitan... ..	8,843	61	11,727	62	26,037	57	21,097	59
Urban, Provincial ... ..	2,826	19	3,710	19	9,848	21	7,812	22
Rural ... ..	2,928	20	3,527	19	10,058	22	6,567	19
Total ... ..	14,597	100	18,964	100	45,943	100	35,476	100

Approximately 60 per cent. of all persons in New South Wales who had been resident in Australia less than ten years were living in the metropolis at the date of the census. At the same date approximately 43 per cent. of the population of the State were in the metropolis.

#### *New Settlers' League.*

The New Settlers' League is a voluntary organisation with divisions in each of the four eastern States of the Commonwealth. It was inaugurated in New South Wales in March, 1921. It consists of representatives of churches and public bodies interested in migration and land settlement.

Although originally operating under the auspices of the Commonwealth Government it is now subsidised jointly by the Commonwealth and State Governments to the extent of £1,500 per annum.

The objects of the league are, broadly, to stimulate interest in migration and to co-ordinate the efforts of the various bodies of the State in that direction. In addition it welcomes migrants on their arrival and assists them to become established by affording advice and guidance. This work is carried out through a head office in Sydney near the water front and about 200 country branches. These branches extend a welcome to migrants arriving in their district and afford them guidance. They also assist lads placed on farms and visit them to see whether they are content and how they are progressing. The social welfare of women migrants is also promoted by the league.

While assisted immigrants do not generally need the guidance of the league its facilities are available for them and it endeavours to fill the place of nominators who are not able to be present to welcome their nominees. The work of placing new arrivals in employment is done by the Department of Labour, the league advising the Department of vacant positions.

#### DISTRIBUTION OF POPULATION.

The population of New South Wales is distributed in a rather remarkable manner. At the end of December, 1926, including shipping, the city of Sydney contained 107,880 persons in a small area surrounded by an extensive group of suburbs with 962,630 inhabitants, making a total of 1,070,510 dwellers in the metropolis. Outside the boundaries of the metropolis in what is termed the extra metropolitan area there are seven municipalities and three shires, containing in all 131,240 inhabitants. Then scattered throughout the State are 133 municipalities, with a total population of 502,870; of these, 11 municipalities in the County of Cumberland, contained 45,610 persons, and 14, including the large mining centres of Newcastle, Broken Hill, Lithgow, and Wollongong, contained 147,820 inhabitants, leaving 309,440 in 108 of the larger rural towns incorporated as municipalities. Distributed over the remainder of the State—99 per cent. of its area—are 644,669 persons; of whom a small number live in the unincorporated towns, and only 14,929 in the unincorporated portion of the Western Division, which covers 40·5 per cent. of the area of the State.

The distribution of population at the end of 1926, together with the proportion in each division and the average population per square mile, are shown in the following table:—

Division.	Area† (including Rivers and Lakes).	Population at 31st December, 1926, including shipping and aborigines.		
		Total.	Proportion in each Division.	
	sq. miles.		per cent.	per sq. mile
Sydney ... ..	5	107,880	4·6	21,576·0
*Suburbs of Sydney ... ..	178	962,630	41·0	5,469·4
Metropolis ... ..	183	1,070,510	45·6	5,914·4
Extra Metropolitan Municipalities and Shires ... ..	504	131,240	5·6	260·4
Metropolitan Area as defined in Local Government Act ... ..	637	1,201,750	51·2	1,754·3
Country Municipalities ... ..	2,311	502,870	21·4	217·5
Country Shires ... ..	181,113‡	617,380	26·3	3·4
Murrumbidgee Irrigation Area ...	561	12,360	0·5	21·0
Western Division (Part unincor- porated) ... ..	125,309	14,929	0·6	0·1
Lord Howe Island ... ..	5	112	0·0	22·4
Total, New South Wales ...	309,986‡	2,349,401	100·0	7·5

\* Including Ku-ring-gai Shire, area 33 sq. miles, population 24,410.

† As revised excludes 36 sq. miles area of certain harbours and area of quarantine reserve, excluded from local government areas, but included in area of State. ‡ Excludes Federal Territory, 940 sq. miles.

The population of the metropolitan area as defined in the Local Government Act represents one-half of the total population; one-fifth of the people reside in the country municipalities, and less than one-third in the remaining rural districts.

The density of population diminishes rapidly from city, suburban, country urban to rural districts. The average density of population in New South Wales is greater than that of any other State of the Commonwealth except Victoria and Tasmania.

The lowness of the average in New South Wales—7·5 per square mile—is due largely to the inclusion of the extensive and practically unpeopled Western Division, much of which must remain sparsely settled until means are found to overcome its natural disability of a low average rainfall. The average density of population in the Eastern and Central Divisions of the State is 12·4 persons per square mile.

#### *Municipal and Shire Population.*

Slightly more than two-thirds of the population of New South Wales live within municipalities and practically the whole of the remainder within shires. Although the area unincorporated is more than two-fifths of the total

it contains less than 15,000 inhabitants. The number of inhabitants of municipalities, shires, and unincorporated districts of each division of New South Wales at 31st December, 1926, is shown below :—

Division.	Municipalities.	Shires.	Total.
Metropolis ... ..	1,046,100	24,410	1,070,510
Balance—Cumberland ... ..	134,240	59,450	193,690
North Coast... ..	34,590	89,370	123,960
Hunter and Manning ... ..	145,680	130,860	276,540
South Coast ... ..	45,610	43,840	89,450
Northern Tableland ... ..	19,730	29,290	49,020
Central Tableland ... ..	60,250	73,030	133,280
Southern Tableland ... ..	21,420	26,020	47,440
North-Western Slope ... ..	16,920	34,950	51,870
Central-Western Slope ... ..	18,250	36,210	54,460
South-Western Slope ... ..	39,610	59,250	98,860
North-Central Plain ... ..	6,820	17,590	24,210
Central Plain ... ..	6,160	14,350	20,510
Riverina ... ..	12,780	45,780	58,560
Murrumbidgee Irrigation area ... ..	...	...	12,360
Western Division—			
Incorporated ... ..	29,640	...	29,640
Unincorporated ... ..	...	...	14,929
Lord Howe Island ... ..	...	...	112
New South Wales ... ..	1,637,600	684,400	2,349,401

Particulars of the area, population and number of dwellings in each municipality and shire of the census of 1921 are shown at pages 6 to 17 of the Statistical Register for 1924–25.

#### *Urban and Rural Population.*

The population of New South Wales, in common with that of most other countries of the world, tends more and more to congregate in metropolitan and urban centres. A comparison of the number and proportion of inhabitants in metropolitan, urban and rural divisions was published on page 235 of the Official Year Book for 1922.

The outstanding features of the population at the present time are the dominance of the metropolitan element and the diminishing relative importance of the country towns, incorporated and unincorporated, and of the rural districts.

#### *Internal Migration.*

Tables published on page 236 of the Official Year Book for 1922 showed that there was considerable migration from the country districts to the city during the last three inter-censal periods.

Throughout the period the flow of population was continuous from the South Coast, from the whole of the Tableland Divisions, and from the Western Division. During the past ten years emigration from country divisions was more pronounced than ever before, and occurred from every rural district of the State considered in a general way, except where special settlement was brought about by the Murrumbidgee Irrigation project.

#### *The Population of the Metropolis.*

The Metropolis includes the City of Sydney, forty municipalities surrounding it, the Ku-ring-gai Shire, and the islands of Port Jackson. It embraces an area of 181 square miles. The boundaries may be described as follow :— On the east, the sea coast; on the south, the waters of Botany Bay and George's River; on the west, the western boundaries of Hurstville, Canterbury, Enfield, Strathfield, Homebush, Concord, Ryde, and Eastwood municipalities, and the western boundary of Ku-ring-gai Shire; on the north, the eastern

boundary of Ku-ring-gai Shire, the north-eastern boundary of Willoughby, and the northern boundary of Manly municipalities. The habitations within these limits are fairly continuous.

The following statement shows the population of each municipality of the metropolis, and of Ku-ring-gai Shire, at the censuses of 1911 and 1921, and at 31st December, 1926, including aborigines and shipping :—

Municipality.	Population.			Municipality.	Population.		
	Census, 1911.	Census, 1921.	31st Dec., 1926.		Census, 1911.	Census, 1921.	31st Dec., 1926.
City of Sydney ...	119,774	111,059	107,880	Manly ...	10,465	18,507	24,340
Alexandria ...	10,123	9,793	10,170	Marrickville ...	30,653	42,240	45,220
Annandale ...	11,241	12,648	12,910	Mascot ...	5,836	10,929	12,340
Ashfield ...	20,431	33,637	38,110	Mosman ...	13,243	20,063	23,500
Balmain ...	32,038	32,122	32,660	Newtown ...	26,498	28,169	28,400
Bexley ...	6,517	14,746	18,070	North Sydney ...	34,648	48,446	53,090
Botany ...	4,409	6,214	6,970	Paddington ...	24,317	26,364	26,740
Burwood ...	9,382	15,711	18,290	Petersham ...	21,712	26,236	27,440
Canterbury ...	11,335	37,639	60,420	Randwick ...	19,475	50,849	66,870
Concord ...	4,076	11,013	18,990	Redfern ...	24,427	23,978	24,090
Darlington ...	3,816	3,651	3,650	Rockdale ...	14,095	25,190	32,760
Drummoyne ...	8,678	18,764	25,580	Ryde ...	5,281	14,855	21,630
Eastwood ...	968	2,133	2,650	St. Peter's ...	8,410	12,700	13,460
Enfield ...	3,444	8,530	12,450	Strathfield ...	4,046	7,594	11,070
Ersleville ...	7,299	7,553	7,580	Vaucluse ...	1,673	3,730	6,240
Glebe ...	21,944	22,772	23,010	Waterloo ...	10,072	11,199	11,760
Homebush ...	676	1,622	2,860	Waverley ...	19,832	36,797	47,860
Hunter's Hill ...	5,019	7,334	9,100	Willoughby ...	13,037	28,074	39,070
Hurstville ...	6,533	13,394	18,390	Woolahra ...	16,992	25,461	31,530
Kogarah ...	6,954	13,226	24,910	Ku-ring-gai Shire	9,459	19,213	24,410
Lane Cove ...	3,306	7,592	13,290				
Leichhardt ...	24,254	29,356	30,750	Total ...	636,388	906,103	1,070,510

Some of the suburbs nearest the city have attained their maximum development as residential districts and some are even losing population as industrial and commercial establishments extend. The rate of growth of population is now greatest in the more remote municipalities such as Bexley, Canterbury, Hurstville, Kogarah, Randwick, and Ryde.

In addition to the suburbs enumerated above there are, in close proximity to the city, a number of important centres of population of a more or less suburban character, since large proportions of their inhabitants gain their livelihood in the city. An extended definition of the metropolitan area was given in the Local Government Act of 1919 (Schedule Four), and included the following additional localities, whose populations, including aborigines and shipping, are shown :—

Municipalities.	Population.			Shires.	Population.		
	Census, 1911.	Census, 1921.	31st Dec., 1926.		Census, 1911.	Census, 1921.	31st Dec., 1926.
Auburn ...	5,559	13,563	17,710	Hornsby ...	8,907	15,291	18,770
Bankstown ...	2,039	10,670	17,270	Sutherland ...	2,896	7,707	9,800
Dundas ...	1,136	3,523	4,890	Warringah ...	2,823	9,644	14,040
Ermington and Rydalmere ...	1,716	1,981	2,020	Extra-Metropolitan Shires ...	14,626	32,642	42,610
Granville ...	7,231	13,328	16,800	Population of Metropolitan Area as shown above ...	636,388	906,103	1,070,510
Lidcombe ...	5,419	10,524	13,540	Metropolitan Area as defined in Local Government Act.	686,590	1,006,929	1,201,750
Parramatta ...	12,476	14,595	16,400				
Extra-Metropolitan Municipalities ...	35,576	68,184	88,630				



The population of the metropolis, including aboriginals and shipping, at census periods and at the end of each year since 1923, is shown in the following table, together with the proportion which the metropolitan population bears to that of the whole State :—

Year.	Population at Census.			Increase.		Males per cent.	Proportion of Population of State in Metropolis.
	Males.	Females.	Total.	Numerical.	Per cent.		
1861	47,778	49,283	97,061	43,137	80·00	49·21	per cent. 27·7
1871	68,266	70,913	139,179	42,118	43·39	49·05	27·6
1881	114,936	112,230	227,166	87,987	63·22	50·60	30·2
1891	197,550	189,884	387,434	160,268	70·55	50·99	34·2
1901	241,700	246,232	487,932	100,498	25·94	49·54	35·9
1911	312,074	324,279	636,353	148,421	30·42	49·04	38·5
1921	439,691	466,412	906,103	269,750	42·34	48·54	43·1
1924	495,180	516,890	1,012,070	30,670	3·03	48·93	44·9
1925	508,790	530,600	1,039,390	27,320	2·70	48·95	45·2
1926	525,225	545,285	1,070,510	31,120	3·00	49·06	45·5
1927	541,810	559,350	1,101,190	30,680	2·37	49·20	45·8

The proportion of the population of the State resident in the metropolis has increased rapidly in the past half-century and especially in the last fifteen years. Since 1891 the proportion of females in the metropolis has increased, so that at the census of 1921 there was an excess of three females in every hundred of the population.

The populations of the capital cities (including suburbs) of the States of the Commonwealth are shown below :—

Metropolis.	Census, 1911.*	Census, 1921.*	31st December, 1927.†			Proportion to Population of Whole State, 1926.
			Males.	Females.	Total.	
Sydney ... ..	629,503	899,059	541,840	559,350	1,101,190	per cent. 45·8
Melbourne ... ..	588,971	766,465	460,850	514,310	975,160	56·0
Adelaide ... ..	189,646	255,375	160,402	167,284	327,686	56·9
Brisbane ... ..	139,480	209,946	142,183	153,247	295,430	32·8
Perth ... ..	106,792	154,873	96,433	95,358	191,791	48·9
Hobart ... ..	39,937	52,361	26,875	29,318	56,193	25·0

\* Excluding Shipping. † Including Shipping.

#### THE TOWNS OF NEW SOUTH WALES.

As might be expected from the nature of the industries of the State there are in New South Wales comparatively few large towns. Outside the metropolitan area, the only towns of outstanding importance are Newcastle and Broken Hill, and the existence of both is due to the rich mineral deposits in their neighbourhood. Lithgow, the third, and Cessnock, the fourth, largest towns outside County Cumberland, are also dependent on mining. Apart from these and the centres in the County of Cumberland dependent upon the city, there are only three country municipal towns with a population exceeding 10,000; ten, including one unincorporated, between 5,000 and 10,000; and twenty, including two unincorporated, between 3,000 and 5,000.

The following table affords a comparison of the populations at the last four censuses and at the end of 1926 of the towns, which at the census of 1921 had more than 3,000 inhabitants, including aboriginals and shipping, the metropolitan and closely dependent municipalities being shown first :—

Municipality.	Population.				
	Census 1891.	Census 1901.	Census 1911.	Census 1921.	31st Dec. 1926 (estimated).
Sydney and Suburbs† ... ..	397,331	487,900	636,388	906,103	1,070,510
Auburn*† ... ..	2,026	2,948	5,559	13,563	17,710
Granville† ... ..	4,248	5,094	7,231	13,328	16,800
Parramatta† ... ..	11,677	12,560	12,476	14,595	16,400
Bankstown*† ... ..	108	1,246	2,039	10,670	17,270
Lidcombe† ... ..	2,084	4,496	5,419	10,524	13,540
Dundas† ... ..	881	1,087	1,136	3,523	4,890
Newcastle and Suburbs ... ..	50,662	54,991	55,380	86,267	99,850
Broken Hill ... ..	19,789	27,500	30,974	26,333	24,010
Lithgow ... ..	3,865	5,268	8,196	13,275	16,380‡
Cessnock‡ ... ..	203	165	3,957	7,343	13,840
Maitland ... ..	10,214	10,073	11,318	12,009	12,960
Goulburn ... ..	10,916	10,612	10,023	12,934	11,940
Katoomba ... ..	1,592	2,270	4,924	9,057	10,020
Bathurst ... ..	9,162	9,223	8,578	9,441	9,380
Lismore ... ..	2,925	4,464	7,382	8,712	9,280
Albury ... ..	5,447	5,821	6,309	7,752	8,210
Wagga Wagga ... ..	4,596	5,108	6,419	7,679	8,410
Wollongong ... ..	3,058	3,554	4,673	6,708	7,580
Tamworth ... ..	4,602	5,799	7,147	7,264	6,960
Kurri Kurri§ ... ..	...	...	4,154	5,542	6,500
Orange ... ..	5,064	6,331	6,722	7,398	7,960
Armidale* ... ..	3,826	4,249	4,739	5,486	5,730
Hornsby†§ ... ..	423	1,818	2,213	4,096	5,570
Dubbo ... ..	3,551	3,409	4,455	5,032	5,130
Glen Innes ... ..	2,532	2,918	4,089	4,974	4,520
Grafton ... ..	3,618	4,173	4,685	4,609	4,750
Forbes ... ..	3,011	4,294	4,436	4,376	4,680
Inverell ... ..	2,534	3,293	4,549	4,369	4,510
Cowra ... ..	1,546	1,811	3,292	3,732	4,310
Windsor† ... ..	2,033	2,039	3,466	3,868	4,180
Parkes ... ..	2,449	3,181	2,935	3,941	4,260
Penrith† ... ..	3,099	3,559	3,683	3,605	3,790
Cootamundra ... ..	2,026	2,424	2,967	3,531	3,750
Junee ... ..	1,682	2,190	2,531	3,560	3,650
Casino ... ..	1,486	1,926	3,429	3,461	3,460
Kempsey ... ..	2,194	2,329	2,947	3,613	3,360
Wellington ... ..	1,545	2,984	3,958	3,924	3,340
Young ... ..	2,746	2,755	3,140	3,284	3,490
Mudgee ... ..	2,410	2,789	2,942	3,170	2,940
Singleton ... ..	2,595	2,872	2,999	3,275	3,290
Moree ... ..	1,143	2,298	2,937	3,028	3,300
Temora ... ..	915	1,603	3,784	3,049	3,250
Narrandera ... ..	1,815	2,255	2,374	3,012	3,370
Towns in County Cumberland ... ..	413,910	522,727	679,610	983,815	1,170,660
Newcastle and Suburbs ... ..	50,662	54,991	55,380	86,267	99,850
Other Country Towns ... ..	125,057	149,941	187,964	214,878	228,520
Total population in towns of over 3,000 inhabitants ... ..	589,629	727,659	922,954	1,284,960	1,499,030

\*Not incorporated 1891.

† Towns in County Cumberland.

‡ Incorporated 1926 and district enlarged.

§ Locality, not incorporated, Aboriginals excluded.

It would appear that the population of the unincorporated town of Weston reached a total of 3,000 in 1925. The foregoing list excludes municipalities with extensive areas or whose boundaries embrace more than one distinct locality.

The total population of these larger towns has grown at a fairly uniform rate during the whole of the period covered, and the towns of County Cumberland have shown an especially rapid increase in the last thirteen years. Newcastle, after twenty years of slow progress, made rapid headway between 1911 and 1921, largely on account of the growth of its manufacturing industries. The other rural towns, on the whole, have maintained a steady growth throughout, but the decline of the silver-lead mining industry—due largely to derangement of the markets of the world—has arrested the growth of Broken Hill, which has actually lost population since the year 1911. Lithgow, a coal-mining and partly manufacturing town, has continued to grow rapidly. Goulburn has developed, after twenty years of stagnation, into the leading town of the interior not dependent on mining; and Katoomba, a residential town, 60 miles from Sydney, has also grown rapidly.

A list of the mining settlements of the State, together with the number of their population at each of the last four censuses, was published on pages 155 and 156 of the Official Year Book for 1923.

#### SEX DISTRIBUTION.

As is the case in most of the younger countries, the population of New South Wales contains a surplus of males over females, although in older countries females are usually the more numerous.

The disparity in New South Wales is brought about by the operation of several factors. The development of the colony was first stimulated actively by the "gold rushes" and later depended on the pastoral and mining industries. This, combined with its remoteness from the Old World, led to far greater immigration of men than of women. In recent years the pre-dominance of males among immigrants has tended to increase the disparity between the sexes.

On the other hand, despite the excess of male over female births, the higher rate of mortality among males renders the natural increase of females the greater. Thus, during the ten years, 1910 to 1919, the natural increase consisted of 147,640 males and 166,544 females. As a consequence the excess of males diminished, and the diminution was hastened by the war. During the eight years ended 1927 the natural increase of females was 13,815 greater than that of males, but the increase of males by migration was 16,430 greater than the increase of females from the same cause.

The distribution of the sexes at each census from 1861 to 1921, and at the end of each of the subsequent years was as follows:—

Year.	Distribution of Population in Sexes (including aborigines).				Males per 100 Females.
	Males.	Females.	Proportion of Males.	Proportion of Females.	
1861	198,488	152,372	per cent.	per cent.	No.
1871	275,551	228,430	56·57	43·43	130
1881	411,149	340,319	54·67	45·33	121
1891	612,562	519,672	54·86	45·14	121
1891	612,562	519,672	54·14	45·86	118
1901	712,456	646,677	52·42	47·58	110
1911	858,850	789,896	52·09	47·91	109
1921	1,072,424	1,029,544	51·02	48·98	104
1922	1,108,582	1,065,971	50·98	49·02	104
1923	1,128,089	1,083,017	51·02	48·98	104
1924	1,151,639	1,104,451	5·05	48·95	104
1925	1,172,470	1,127,611	50·98	49·02	104
1926	1,197,428	1,151,973	50·97	49·03	104
1927	1,224,847	1,177,037	50·99	49·01	104

From an analysis of the excess of males at each age-group at the census of 1921, it was concluded\* that, although the tendency of the natural increase to maintain the predominance of males was greater between 1911 and 1921 than in the previous decade, it is clear, from the fact that the greatest surpluses of males are now at ages 50 to 65, that as time passes the proportion of females will increase.

## AGES OF THE POPULATION.

A summary of the number of persons in quinquennial age-groups at the censuses of 1911 and 1921, and of the proportions in the same groups at successive censuses since 1861, was published on page 244 of the Official Year Book, 1922.

## BIRTHPLACES OF THE POPULATION.

Broadly speaking, nationality is determined in New South Wales by the common law principle of locality of birth, although it is also provided that, irrespective of place of birth, any child whose father was a British subject, or a child born on a British vessel, shall be deemed a British subject. The localities of birth of the inhabitants of New South Wales (exclusive of aboriginals of full blood), as stated at the Census of 1921, were as follow:—

Birthplace.	1921.	Birthplace.	1921.
British Empire—		Other Countries—	
Australasia—		Europe ... ..	19,270
Australia ... ..	1,772,614	Asia ... ..	8,081
New Zealand ... ..	19,266	Africa ... ..	115
Other ... ..	231	America ... ..	3,471
British Isles... ..	260,426	Polynesia ... ..	741
British India ... ..	2,469	At Sea ... ..	1,283
Union of South Africa ... ..	2,191	Unspecified ... ..	5,903
Canada ... ..	1,519		
Polynesia ... ..	910		
Other... ..	1,881		
Total ... ..	2,061,507	Grand total ... ..	2,100,371

The proportion of the population born in Australia was 84·4 per cent.

The table demonstrates the fact that the population is distinctly Australian by birth, still more distinctly British, and that, among the immigrant element, that from the British Isles is overwhelmingly preponderant.

When consideration is given to the period of residence of persons born outside of the Commonwealth some very interesting facts as to immigration are revealed. Thus, in 1921 there were in New South Wales 37,916 persons who had entered Australia between 1916 and 1921, a large proportion being travellers and others than permanent settlers, and 81,736, who entered in the previous five years, making a total of 119,652 for the ten years against a total increase of non-aboriginals by migration of 135,117, indicating that the net number of migrants received in New South Wales from other States during the period was 15,465, excluding from account migrants who died in the period.

## POPULATION ACCORDING TO RACE.

The only outstanding racial element in the population is the European, which at the census of 1921 was shown to embrace no less than 99·1 per cent. of the total population as against 98·9 per cent. in 1911. The largest decrease has occurred among Chinese, who constitute by far the greatest non-European

\* Official Year Book, 1922, page 243.

element. The total number of persons recorded at the census of 1921 was 2,100,371, and of these 2,082,418 were of the European race, 11,087 were non-Europeans, and 6,866 were half-caste. In the period 1911 to 1921 the number of Europeans increased by 27·8 per cent, that of half-castes increased by 10·5 per cent., while that of non-Europeans decreased by 3·6 per cent. The numbers of males and females of the European and various non-European races at the censuses of 1911 and 1921 are shown below, the figures having been revised to accord with the final statement of the census :—

Race.	3rd April, 1911.			4th April, 1921.		
	Males.	Females.	Total.	Males.	Females.	Total.
European ... ..	844,014	785,068	1,629,082	1,058,196	1,024,105	2,082,301
Non-European (full blood)*—						
Afghan † ... ..	50	2	52	44	3	47
Chinese ... ..	7,939	284	8,223	6,903	379	7,282
Cingalese ... ..	89	13	102	50	12	62
Hindu ... ..	1,119	63	1,182	1,076	87	1,163
Japanese ... ..	119	7	126	290	19	309
Malay ... ..	28	1	29	18	3	21
Negro ... ..	134	23	157	53	7	60
Polynesian ... ..	301	42	343	273	59	332
Syrian ... ..	654	540	1,194	862	743	1,605
Other ... ..	74	25	99	159	41	200
Total Non-European*	10,507	1,000	11,507	9,728	1,353	11,081
Half-caste ... ..	3,177	2,968	6,145	3,577	3,412	6,989
Grand Total* ...	857,698	789,036	1,646,734	1,071,501	1,028,870	2,100,371

\* Excluding Aborigines of Full Blood.

† Including Baluchis.

#### Non-European Races.

The distribution of the non-European elements of the population according to age groups at the census of 1921 as shown below is very illuminating :—

Age last birthday.	Non-European Full blood.*		Half-castes.			
	Males.	Females.	Other than Aborigines.		Aborigines.	
			Males.	Females.	Males.	Females.
Years.						
0-14	620	544	482	513	1,069	997
15-44	3,330	640	568	570	832	956
45-64	4,857	138	137	97	183	264
65 and over	623	16	14	7	52	65
Not stated	298	15	9	4	85	85
Total ...	9,728	1,353	1,210	1,191	2,221	2,367

\* Excluding 1,597 Aborigines.

Approximately 52 per cent. of the non-Europeans of full blood have passed the age of 45 years, while scarcely more than 20 per cent. of the rest of the population have attained that age. As the further entry of persons

of this class is very closely restricted, it is apparent that the proportion of non-Europeans in the population will diminish steadily from natural causes with the effluxion of time. A further significant factor is the smallness of the number of women of reproductive ages. However, the proportion of non-European children under the age of 10 years to the number of non-European women of reproductive ages was approximately twice as great as the corresponding proportion among Europeans.

#### NATIONALITY OF THE POPULATION.

The nationality of the population of New South Wales is preponderantly British, no less than 2,082,272 persons, or 99.1 per cent. of the inhabitants, having been of British allegiance at the census of 1921. The number of persons of foreign allegiance at the same date was 16,915.

The following table, revised in accordance with the final figures available from the census of 1921, shows the number of persons of each nationality in New South Wales at that date, exclusive of aborigines of full blood:—

Nationality.	4th April, 1921.			Nationality.	4th April, 1921.		
	Males.	Females.	Total.		Males.	Females.	Total.
British—							
Australian born..	880,892	891,722	1,772,614	Russian ... ..	585	191	776
Born elsewhere...	172,982	132,070	305,052	Swedish ... ..	512	24	536
Birthplace not				Danish ... ..	351	89	440
stated ...	2,597	2,009	4,606	Dutch ... ..	313	99	412
Total ... ..	1,056,471	1,025,801	2,082,272	Norwegian ...	359	25	384
Foreign—				Japanese ...	272	17	289
Chinese ... ..	5,982	76	6,058	Polish ... ..	173	71	244
United States of				Swiss ... ..	179	69	248
America ... ..	1,217	412	1,629	Finnish ... ..	243	19	262
Greek ... ..	1,133	138	1,271	Other ... ..	840	311	1,151
French ... ..	603	556	1,159	Total, Foreign ..	14,305	2,610	16,915
Italian ... ..	851	266	1,117	Not stated ...	725	459	1,184
German ... ..	692	247	939	Grand Total ...	1,071,501	1,028,870	2,100,371

#### ABORIGINALS.

The number of aborigines in New South Wales during the first century after the date of settlement is not accurately known, but it is certain that they have never been numerous.

The first careful enumeration was made in 1891, when it was found that only 8,280 aborigines of full blood were in existence. Since that date the numbers recorded at successive censuses have declined rapidly to 4,287 in 1901, 2,012 in 1911, and 1,597 in 1921.

Certain particulars relating to aborigines are collected annually by the Aborigines' Protection Board through the agency of the police, but, owing to the difficulty of tracing individuals, it is not considered that a complete enumeration is obtained by this means. The number of aborigines of full blood recorded at 1st June, 1927, was 964, of whom 540 were males and 424 were females. There were included 131 males, and 139 females under 21 years of age. The number recorded by the same means at the date of the census in 1921 was 1,281 or 316 less than the total actually enumerated at the census.

Of the aborigines of full blood enumerated in 1927, 359 were receiving aid from the State and inclusive of some of these 417 were living on reserves.

The numbers of half-castes enumerated at successive censuses were as follows:—In 1891, 3,183; in 1901, 3,147; in 1911, 4,512; and in 1921, 4,560, of whom 2,349 were males and 2,211 females. The number recorded at the annual collection of 1st June, 1927, was 5,829, comprising 3,149 males and 2,680 females. However, it is considered probable that this number is considerably overstated through the inclusion of full-bloods, for various reasons, and possibly through the inclusion of quadroons and persons of lesser caste.

Of the half-castes enumerated in 1927, 1,329 were receiving aid from the State and including many of these 1,975 were living on reserves.

#### NATURALISATION.

Under certain conditions a person of foreign allegiance may be granted a certificate of naturalisation, which entitles him to all the political and other rights, powers, and privileges, and subjects him to all obligations to which natural-born British subjects are entitled, or subject in the Commonwealth of Australia, except insofar as special distinction is made by law between the prerogatives of natural born and naturalised British subjects.

The issue of these certificates is now exclusively a function of the Commonwealth, and they may be granted only by the Governor-General in Council. Aboriginal natives of Asia, Africa, or the islands of the Pacific (except New Zealand) are not eligible for naturalisation.

Any person seeking naturalisation must—

- (a) Declare his intention of settling in the British Empire.
- (b) Have resided within the Commonwealth continuously for at least one year, and within the British Empire during four of the eight years immediately preceding the date of application.
- (c) Must abjure former allegiance and take an oath of allegiance to the reigning sovereign and his successors.

He must, furthermore, advertise his intention to seek naturalisation, produce certificates of good character, declare certain personal particulars, and satisfy the responsible Minister of the Crown that he can read and write English. Certificates of naturalisation may be refused with or without assigning reasons. Letters or certificates of naturalisation issued in the United Kingdom are accepted in Australia on proof of identity and genuineness.

The privileges of naturalisation have not been widely sought in New South Wales on account of the smallness of the non-British element in the population. There were 378 persons naturalised during 1926. Between 1849 and 1926 the total number of persons naturalised was 18,871, of whom 6,736 were of German origin; 1,764 were Swedes; 1,274 Russians; 1,208 Danes; 1,140 Italians; and 852 French. There were also 1,186 Asiatics, of whom 249 were Chinese, and 264 Syrians. Only 2 Chinese have been naturalised in New South Wales since the passage of the Chinese Restriction and Regulation Act of 1888. Certificates of naturalisation issued under former State laws remain in force under the present Federal statute (Nationality Act, 1920).

## VITAL STATISTICS.

### REGISTRATION OF BIRTHS, DEATHS, AND MARRIAGES.

CIVIL registration of births, deaths, and marriages was inaugurated in New South Wales in March, 1856, when a general registry was established, and a Registrar-General appointed by the Governor. The laws relating to registration were consolidated by the Registration of Births, Deaths, and Marriages Act, 1899, and the Acts relating to marriage by the Marriage Act, 1899, which has been amended by the Marriage (Amendment) Acts, 1924 and 1925. New South Wales is divided into 217 registry districts, in each of which a District Registrar has been appointed.

The births of all children born alive are required to be registered within sixty days of the birth, and a child is considered to have been born alive if it has breathed and has been wholly born into the world whether it has had an independent circulation or not. After the expiration of a period of sixty days no birth may be registered unless, within six months, a declaration is furnished by the parent, or by some person present at the birth. Usually, however, births are registered promptly in order to obtain the benefit of the maternity allowance. Within six months of the arrival in New South Wales of a child under the age of 18 months, born outside the State, the birth may be registered, upon declaration by the parent, if the parents intend to reside in New South Wales. Still-births are not at present registered, but provision has been made whereby cases of still-birth attended by midwives registered under the Nurses' Registration Act will be notified. It is anticipated that such records will first become available in respect of the year 1928.

Before interment, notice of the death of any person must be supplied to the District Registrar by a relation of the deceased, or by the householder or tenant of the house or place in which the death occurs. Such notice must be accompanied by a proper certificate as to the cause of death. When a dead body is found, the death is registered by the Coroner or by the nearest Justice of the Peace.

Marriages may be celebrated only by a minister of religion registered for that purpose by the Registrar-General or by the District Registrar for marriages of the district in which the intended wife ordinarily resides. In the latter case the parties to be married must sign, before the District Registrar officiating, a declaration that they desire to be married, and affirming the usual place of residence of the intended wife. Approximately 5 per cent. of the marriages of the past ten years have been performed by registrars. The proportion has increased steadily from 3.5 per cent. in 1917 to 6.2 per cent. in 1926. Marriage of minors is permissible only with the written consent of parents and guardians. Marriage with a deceased wife's sister or a deceased brother's widow is valid in law in New South Wales.

At the beginning of 1928 there were registered 2,131 persons as ministers of religion for the celebration of marriages in New South Wales. Of these 611 belonged to the Church of England, 578 were Roman Catholic, 310 Methodist, 294 Presbyterian, 78 Congregational, 76 Baptist, 50 belonged to the Salvation Army, 33 were Seventh Day Adventists, 33 belonged to the Church of Christ, and 12 to the Latter Day Saints. There were 27 other religious bodies represented.



## CONJUGAL CONDITION OF THE POPULATION.

The proportion of married persons living in New South Wales at the census of 1921 was considerably more than one-third of the population, being 37.4 per cent., which represents an increase from 33.5 per cent. at the previous census. The actual numbers and proportions of the population (exclusive of aboriginals), arranged in groups according to conjugal condition, at the census of 1921 were as follow:—

Conjugal condition.	Number.			Proportion per cent.		
	Males.	Females.	Total.	Males.	Females.	Total.
Never married—						
Under age 15 ...	343,979	334,385	678,364	32.19	32.56	32.37
Age 15 and over	302,574	237,693	540,267	28.32	23.14	25.78
Married ...	391,844	391,886	783,730	36.68	38.16	37.40
Widowed ...	27,851	60,701	88,552	2.60	5.91	4.23
Divorced ...	2,214	2,395	4,609	.21	.23	.22
Not stated ...	3,039	1,810	4,849	...	...	...
Total ...	1,071,501	1,028,870	2,100,371	100.00	100.00	100.00

The persons never married constitute 58.15 per cent. of the total population, but of these 678,364 (or 32.37 per cent. of the population) were under the age of 15 years. The number of males over the age of 15 years who have never been married was 302,574, and of females 237,693. The higher marriage rate of the decade 1911-1921 as compared with the preceding decade, coupled with the increasing proportion of persons of marriageable age, has had the effect of considerably raising the proportion of married persons in the population. The proportion of married to the number of persons over the age of 15 years rose from 49.2 per cent. in 1911 to 55.1 per cent. in 1921. The number of males never married is considerably greater than the number of females never married, because of the facts that women generally marry at earlier ages than men, and that there is an excess of males over females in the population.

The following table affords a comparison of the proportions of each of the principal groups to the total population where the necessary particulars were stated at each of the last seven censuses:—

Census.	Males.				Females.			
	Never married.	Married.	Widowed.	Divorced.	Never married.	Married.	Widowed.	Divorced.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
1861	69.34	28.23	2.43	*	61.09	35.14	3.77	*
1871	69.96	27.59	2.45	*	62.89	32.82	4.29	*
1881	70.64	26.94	2.42	*	63.52	31.75	4.73	*
1891	69.78	27.41	2.78	.03	62.87	32.11	5.00	.02
1901	68.46	28.69	2.75	.10	62.43	32.00	5.46	.11
1911	65.00	32.18	2.67	.15	59.30	35.03	5.52	.15
1921	60.51	36.68	2.60	.21	55.70	38.16	5.91	.23

\* Divorce proceedings were first permitted under Matrimonial Causes Act, 1873.

There has been a steady decline since 1881 in the proportions of both sexes never married, and a corresponding increase in the proportions married. This is the result partly of the higher marriage rate since 1901, which in turn has been due in a large measure to the altered age-constitution of the population consequent on the declining birth-rate. The proportion of widowers has shown no appreciable increase during the period, although

the proportion of widows has constantly increased, attaining the high proportion of nearly 6 per cent. of the total female population in 1921. The increase in the proportion of divorced persons of both sexes has been relatively very rapid. The numbers and proportions of widowed and divorced persons shown are exclusive of those who had remarried.

MARRIAGES.

The number of marriages celebrated in New South Wales during 1927 was 20,052, corresponding to a rate of 8.45 per 1,000 of the population.

The following table shows the average annual number of marriages and the rates per 1,000 of the population during each quinquennium since 1880:—

Period.	Average Annual Number of Marriages.	Rate per 1,000 of Population.	Period.	Average Annual Number of Marriages.	Rate per 1,000 of Population.
1880-84	6,738	8.39	1919	15,818	7.91
1885-89	7,679	7.67	1920	20,183	9.76
1890-94	7,954	6.80	1921	18,518	8.79
1895-99	8,700	6.74	1922	17,583	8.17
1900-04	10,240	7.37	1923	17,507	7.99
1905-09	12,080	7.97	1924	18,077	8.11
1910-14	15,978	9.17	1925	18,522	8.14
1915-19	15,345	7.97	1926	19,219	8.28
1920-24	18,374	8.55	1927	20,052	8.45

A review of the marriage rates since 1880 shows that the rates declined steadily for ten years prior to 1894, when they reached the lowest point, being only 6.25 per 1,000 of population. After that year an improvement, remarkable for its regularity, was experienced, until in 1912 the rate (9.55 per 1,000) was the highest then recorded. In 1915 the rate was slightly higher, probably due in part to marriages contracted by soldiers prior to their departure for the war. Owing to the absence of many marriageable men the rates for the next three years showed a decline, but coincident with the return of men from active service the rate rose appreciably in 1919 and still more in 1920. The movement of the subsequent years shows a sharp decline followed by a recovery. The average for the last five years, though appreciably less than in the quinquennium immediately preceding the war was greater than for any similar period since 1880.

This survey of marriages, considered in conjunction with the industrial history of the State, shows that except for the war period the marriage rate has risen and fallen in fairly close sympathy with fluctuations in business conditions, indicating that it is normally a reliable reflex of the comparative prosperity of the State.

The following statement shows the marriage rate per 1,000 of the population in each State, the Commonwealth of Australia, and in New Zealand in 1927, compared with the rates of the previous five years:—

State.	1922.	1923.	1924.	1925.	1926.	1927.
New South Wales...	8.17	7.99	8.11	8.14	8.28	8.45
Victoria ...	8.27	8.16	8.10	8.00	7.90	7.88
Queensland ...	7.51	7.24	7.55	7.60	7.34	7.04
South Australia ...	8.19	7.92	7.78	7.82	8.06	7.88
Western Australia	7.21	6.82	7.22	7.46	7.58	8.07
Tasmania ..	7.79	7.39	7.12	7.05	6.79	6.82
Commonwealth ...	8.03	7.83	7.90	7.91	7.92	7.95
New Zealand ...	7.63	7.90	7.90	7.84	7.90	7.62

*Divorces.*

The number of marriages dissolved annually by divorce and decree of nullity has increased materially during recent years, and now they are of considerable magnitude in relation to the number of marriages celebrated annually. Particulars of the duration of such marriages and number of issue are shown in the chapter, "Law Courts," of this Year Book.

The number of marriages dissolved in New South Wales by decrees of divorce made absolute or by declarations of nullity, in 1926, was 934, being in the proportion of 4.9 per cent. to the number of marriages celebrated during the year. The corresponding numbers for 1925 were 1,071, equivalent to 5.8 per cent. of marriages.

*Condition before Marriage.*

During the year 1926, of the males married, 17,738 were bachelors, 1,109 were widowers, and 372 were divorced. Of the females, 17,836 were spinsters, 889 were widows, and 494 were divorced. The proportion of males re-married was 7.71 per cent., and of females 7.20 per cent.

The following table shows at quinquennial intervals since 1891 the proportion of first marriages and of re-marriages per 10,000 married:—

Period.	Bridegrooms per 10,000 married.		Brides per 10,000 married.	
	Bachelors.	Widowers and Divorced Men	Spinsters.	Widows and Divorced Women.
1891.	9,229	771	9,216	784
1896	9,184	816	9,172	828
1901	9,270	730	9,268	732
1906	9,262	738	9,352	648
1911	9,407	593	9,456	544
1916	9,377	623	9,362	638
1921	9,246	754	9,214	786
1926	9,229	771	9,280	720

The proportions of widows and divorced women who re-married in the years 1916 and 1921 were greater than in the case of widowers and divorced men, whereas the reverse has usually been the case; the variation is probably due to the loss of life among married men at the war.

The following table shows the number of males and females of each condition married in each of the last five years:—

Year.	Number of Males married who were —			Number of Females married who were—		
	Bachelors.	Widowers.	Divorced.	Spinsters.	Widows.	Divorced.
1922	16,269	1,045	269	16,175	1,072	336
1923	16,031	1,134	342	16,149	1,003	355
1924	16,640	1,095	342	16,656	1,001	420
1925	16,980	1,141	401	17,120	966	436
1926	17,738	1,109	372	17,836	889	494

The proportion of re-marriages has shown a tendency to increase during the past fifteen years, but latterly the increase has been due mainly to the re-marriages of divorced persons. The number of widows re-married increased from 950 in 1919 to 1,223 in 1920, but it has since decreased steadily.

*Age at Marriage.*

The numbers of brides and bridegrooms in age groups in each of the last six years are shown in the following table. The ages recorded are those stated at marriage by the contracting parties, without verification and they represent age last birthday.

Year.	Ages of Bridegrooms.				Ages of Brides.			
	Under 21 years.	21 to 29 years.	30 to 44 years.	45 and over.	Under 21 years.	21 to 29 years.	30 to 44 years.	45 and over.
1921 ...	833	11,105	5,516	1,064	3,850	11,031	3,142	495
1922 ...	921	10,519	5,202	941	3,842	10,334	2,952	455
1923 ...	950	10,517	5,038	1,002	3,977	10,085	2,980	465
1924 ...	1,144	10,778	5,165	990	4,389	10,132	3,106	450
1925 ...	1,291	11,036	5,112	1,083	4,645	10,341	3,017	519
1926 ...	1,380	11,679	5,085	1,075	4,985	10,647	3,027	560
1926	B. 1,379	11,552	4,344	463	S. 4,983	10,407	2,247	199
	W. ...	85	488	536	W. 2	97	476	314
	D. 1	42	253	76	D. ...	143	304	47

B, bachelors; S, spinsters; W, widowed; D, divorced.

Further details of the ages and condition of persons married each year are published in the Statistical Register of New South Wales.

In 1926 approximately 73 per cent. of first marriages among men and 86 per cent. among women were celebrated before attaining age 30, and the majority of marriages of persons over 45 years of age were re-marriages of one or both of the contracting parties.

The following statement shows the average age at marriage both of bridegrooms and of brides for each of the last ten years. The difference between the ages of marriage of males and females is now on the average about 3½ years, the males being the older.

Year.	Average Age of—		Average Age of—		Year.	Average Age of—		Average Age of—	
	All Bridegrooms.	Bachelors.	All Brides.	Spinsters.		All Bridegrooms.	Bachelors.	All Brides.	Spinsters.
1917	years. 29·7	years. 28·5	years. 26·0	years. 25·0	1922	years. 29·4	years. 28·4	years. 26·0	years. 25·0
1918	30·0	28·7	26·1	25·1	1923	29·5	28·2	26·0	25·0
1919	29·7	28·7	26·2	25·3	1924	29·4	28·1	25·9	24·8
1920	29·5	28·5	26·1	25·2	1925	29·4	28·1	25·8	24·8
1921	29·7	28·5	26·2	25·2	1926	29·2	28·0	25·8	24·7

The average age at marriage of both bridegrooms and brides has increased by nearly twelve months during the last twenty years and by three and a half years in the past forty years. This change has probably contributed to the decline of the birth-rate.

*Marriages of Minors.*

The number of minors married at each individual age is shown annually in the Statistical Register. The number of brides at each age under 21 in 1926, were, 1 at 13, 11 at 14, 54 at 15, 274 at 16, 702 at 17, 1,169 at 18, 1,355 at 19, and 1,419 at 20. The corresponding number of bridegrooms were 9 at 16, 45 at 17, 222 at 18, 432 at 19, and 672 at 20.

The following are the numbers and proportions of brides and bridegrooms married under the age of 21 years:—

Year.	Minors.		Percentage of—	
	Bridegrooms.	Brides.	Bridegrooms.	Brides.
1881	149	1,660	2·37	26·42
1891	177	2,085	2·09	24·65
1901	351	2,546	3·33	24·15
1911	701	3,499	4·59	22·92
1921	833	3,850	4·50	20·79
1922	921	3,842	5·24	21·85
1923	950	3,977	5·43	21·35
1924	1,144	4,389	6·33	24·27
1925	1,291	4,645	6·97	25·08
1926	1,380	4,985	7·18	25·94
1927	1,405	5,285	7·01	26·35

The proportion of minors among bridegrooms increased over a long period of years up to the year 1912, when it was 4·62 per cent., fluctuating thence down and up to 4·68 per cent. in 1920. In the six years that have ensued there has been a sustained increase and over 7 per cent. of the bridegrooms married in 1927 were minors. Among brides the proportion of minors has always been much larger than among bridegrooms, but it decreased continuously, with irregular fluctuations until the low level of 20·79 per cent. was reached in 1921. Since that year there has been an appreciable increase, and the proportion in 1927 exceeded 26 per cent.

#### *Mark Signatures in Marriage Registers.*

In 1870 the proportion of signatures made in the marriage register with marks was as high as 188·8 per 1,000 of the whole, but in 1926 the number of persons who signed in this way was only 69, and, in 1927, 72; equal in both years to 1·8 for 1,000 persons married.

#### *Marriages according to Denomination.*

Of every 100 marriages performed in New South Wales, about 95 are celebrated by ministers of religion licensed under the authority of the Registrar-General. The number of marriages at which clergymen officiated during the year 1926 was 18,031, and the number contracted before District Registrars 1,188, or a proportion respectively of 93·8 and 6·2 per cent.

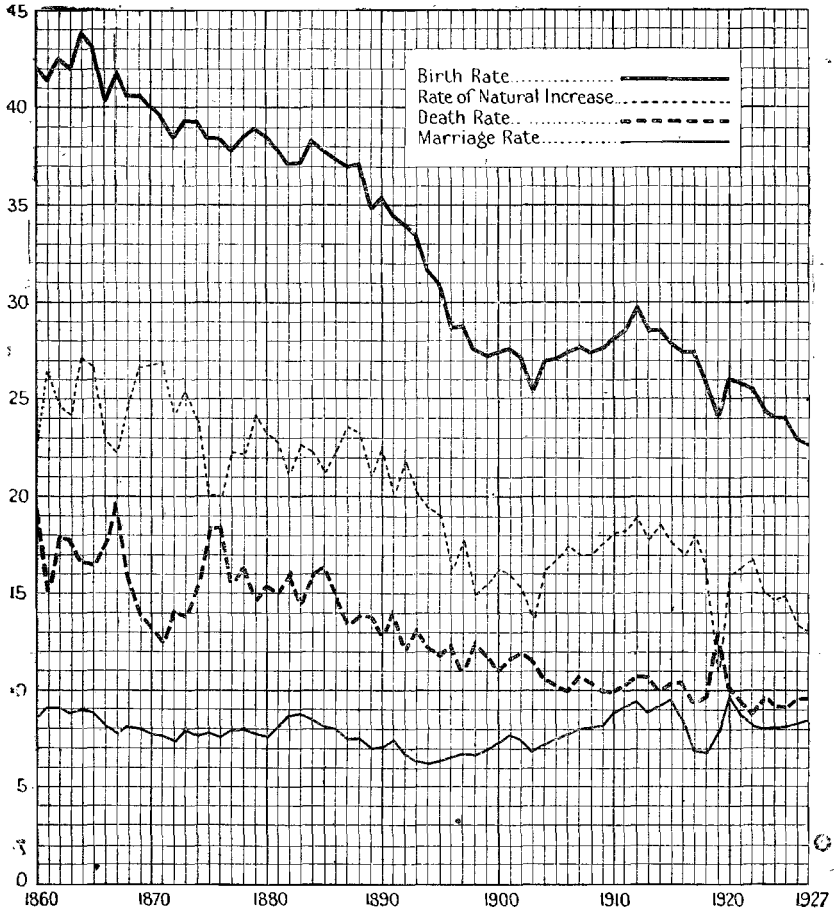
As compared with the preceding quinquennial period, the proportion of marriages solemnised by the Church of England, Congregational, and Methodist churches decreased in the year 1926. The following table gives the number and proportion per cent. of marriages registered by the several denominations during 1926 in comparison with the preceding quinquennium:—

Denomination.	1926.		1921-25.	
	Marriages.	Proportion per cent.	Marriages.	Proportion per cent.
Church of England ... ..	8,228	42·81	38,912	43·13
Roman Catholic ... ..	3,992	20·77	18,075	20·04
Presbyterian ... ..	2,540	13·23	12,175	13·50
Methodist ... ..	2,143	11·15	11,094	12·30
Congregational ... ..	474	2·47	2,020	2·24
Baptist ... ..	293	1·55	1,262	1·40
Hebrew ... ..	47	0·24	215	0·24
All Other Sects ... ..	309	1·61	1,735	1·92
District Registrars ... ..	1,188	6·18	4,719	5·23
<b>Total Marriages ... ..</b>	<b>19,219</b>	<b>100·00</b>	<b>90,207</b>	<b>100·00</b>

The proportion per cent. of the number of adherents of the principal denominations at the census of 1921 to the total population was—Church of England, 49.60; Roman Catholic, 24.27; Presbyterian, 10.62; and Methodist, 8.79.

Thus the proportion of marriages, according to the rites of the two principal churches, was considerably below the proportional number of their adherents, while in the case of the Presbyterian and Methodist churches, the position was the reverse.

**RATES OF BIRTHS, DEATHS, MARRIAGES, AND OF NATURAL INCREASE, 1860-1927.**



The numbers at the side of the Graph represent rates per 1000 of mean population.

**BIRTHS.**

The birth-rate appears to have moved in a general way in sympathy with the marriage rate, though its fluctuations have been more pronounced. It fell sharply after 1888, and declined continuously until 1903, but after that year there was an improvement, and the rate in 1912 was the highest since 1895. During the war years, coincident with the decline in the

marriage rate, there was a falling-off in the birth-rate, which reached its lowest point in 1919, perhaps partly in consequence of an epidemic of influenza. However, despite a slight revival in the marriage rate, the birth rate remained low and has continued to fall still further in the years succeeding the war. The birth rate of 1924 was lower than in any previous year, and there has since been a pronounced decline.

The following table shows the average annual number of births and the birth-rate per 1,000 of the total population in quinquennial periods since 1880:—

Period.	Average Annual Number of Births.	Birth-rate per 1,000 of Population.	Period.	Average Annual Number of Births.	Birth-rate per 1,000 of Population.
1880-84	30,417	37·89	1920	53,974	26·09
1885-89	36,877	36·85	1921	54,634	25·91
1890-94	39,550	33·80	1922	55,214	25·67
1895-99	37,042	28·68	1923	54,112	24·68
1900-04	37,498	26·99	1924	53,670	24·07
1905-09	41,788	27·56	1925	54,615	24·00
1910-14	50,190	28·79	1926	53,126	22·38
1915-19	51,331	26·64	1927	53,858	22·68
1920-24	54,321	25·27			

The rates shown above are calculated by the usual "crude" method of relating the births to the total population, which is not altogether satisfactory. A preferable method for purposes of strict analysis is to relate the number of mothers giving birth to children at various ages to the total number of women at corresponding ages, or to relate the annual number of births to the number of women of child-bearing ages living during the year. Unfortunately these methods can be followed with exactitude only at census dates, since at any other time it is very difficult to make a reliable estimate of the number living at various ages, on account of migration and other influences.

The birth-rate per 1,000 women living at various groups of reproductive ages, from 15 to 45 years, have been calculated for the last four census years, and are shown in the following table:—

Ages of Mothers (years).	1891.	1901.	1911.	1921.	Decrease per cent. in rates, 1891 to 1921.
15-19	35·30	30·87	33·75	32·72	7·3
20-24	170·90	134·65	141·45	146·57	14·2
25-29	247·48	177·95	187·35	169·99	31·3
30-34	238·81	168·42	161·20	140·18	41·3
35-39	196·15	136·60	122·27	101·71	48·1
40-44	96·61	70·79	54·51	43·78	54·7
15-44	161·74	117·46	118·50	109·84	32·1

The crude birth-rate for New South Wales was 9·5 per cent. lower in 1921 than in 1911. The rate, calculated on the basis of the number of women of reproductive age, was only 7·3 per cent. lower.

From the foregoing table it will be seen that the decline since 1891 has been general in all age-groups, although it is more marked at the later than at the earlier ages, and becomes increasingly pronounced as age advances. The contrast in experience in regard to the first and last quinquennia

of the normal years of child-bearing is particularly striking. Whereas the birth-rate for women in the last quinquennium of child bearing years in 1891 was 174 per cent greater than the rate for those in the first quinquennium of child bearing years the corresponding proportion in 1921 was only 34 per cent. The rate in age group 20-24 has shown a persistent improvements since 1901.

The crude birth-rates per 1,000 of the population of each State of the Commonwealth and of New Zealand in the last seven years are given in the following table:—

State.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
<i>New South Wales</i> ...	25·91	25·67	24·63	24·07	24·00	22·83	22·63
Victoria ...	23·16	23·10	22·31	22·01	21·49	20·84	20·30
Queensland ...	26·64	25·59	24·89	23·87	23·82	22·58	22·24
South Australia ...	24·08	23·71	22·60	21·88	21·06	20·55	20·12
Western Australia ...	23·39	23·94	22·55	23·09	22·23	22·14	22·03
Tasmania ...	26·98	27·08	26·27	25·07	24·44	23·62	23·01
Commonwealth ...	24·95	24·69	23·77	23·24	22·89	22·02	21·67
New Zealand ...	23·34	23·17	21·94	21·57	21·17	21·05	20·29

*Birth-Rates—Metropolis and Remainder of the State.*

An informative analysis of the birth rate of New South Wales is made below by distinguishing the births occurring in Sydney and suburbs from those in the remainder of the State. Prior to the year 1893 the metropolitan crude birth-rate was the higher, but since then, with the exception of the year 1913, the country has consistently shown a higher crude rate. The crude rate for the metropolis is declining faster than that of the remainder of the State.

Period.	Number of Births.			Births per 1,000 of Population.		
	Metropolis.	Remainder of State.	New South Wales.	Metropolis.	Remainder of State.	New South Wales.
1880-84	49,058	103,026	152,084	40·16	36·90	37·89
1885-89	65,866	118,517	184,383	41·59	34·69	36·95
1890-94	68,754	128,998	197,752	34·11	33·63	33·90
1895-99	61,224	123,986	185,210	26·73	29·75	28·68
1900-04	63,694	123,795	187,489	25·16	28·05	26·99
1905-09	72,409	136,529	208,938	25·50	28·60	27·56
1910-14	95,529	155,423	250,952	27·66	29·53	28·79
1915-19	100,216	156,439	256,655	25·02	27·81	26·64
1920-24	22,182	32,139	54,321	23·58	26·57	25·27
1920	22,352	31,622	53,974	25·26	26·73	26·09
1921	22,418	32,216	54,634	24·54	26·98	25·31
1922	22,090	33,124	55,214	23·47	26·55	25·67
1923	21,990	32,122	54,112	22·70	26·25	24·68
1924	22,058	31,612	53,670	22·18	25·58	24·07
1925	22,086	32,579	54,615	21·51	26·03	24·00
1926	21,487	31,639	53,126	20·40	24·94	22·88
1927*	20,688*	33,270*	53,958	18·98*	25·81*	21·68

\* From 1st January, 1927, births were allocated according to usual address of mother.

The age and sex constitution of the metropolitan population is considerably different from that of the remainder of the State, therefore, comparisons of crude birth-rates are to be taken with reserve. They indicate the direction of the general trend, but do not provide an accurate measure



of the extent of movement. Prior to 1927, the classification was according to place of registration of birth, but, from 1st January, 1927, the usual address of the mother was adopted as the basis of distribution. This change reduced the apparent number of metropolitan births.

#### *The Sexes of Children.*

Of the 53,858 children born during 1927 (exclusive of those still-born), 27,805 were males and 26,053 were females, the proportion being 107 males to 100 females. As far as observation extends, the number of female births has not exceeded that of males in any year, although the difference has sometimes been very small.

The excess of males over females born during the past sixty-four years has ranged from 2 per cent. in 1875, 1876, and 1901, to about 8·7 per cent. in 1864, the average being 5 per cent. The proportion of males born during the war years was very little different from that in the pre-war years.

Males have always been the more numerous among ex-nuptial births, save in the quinquennial period 1885-89 and in the year 1915, when the births of females predominated slightly.

The table below shows the number of males born to every 100 females born, both in nuptial and ex-nuptial births, during the last forty-seven years:—

Years.	Nuptial Births.	Ex-Nuptial Births.	All Births.	Years.	Nuptial Births.	Ex-Nuptial Births.	All Births.
1880-84	104·9	103·9	104·8	1910-14	105·2	105·1	105·2
1885-89	105·4	98·8	105·1	1915-19	105·3	104·0	105·2
1890-94	105·7	105·4	105·7	1920-24	104·6	107·3	104·8
1895-99	105·0	105·4	105·1	1926	105·3	101·9	105·1
1900-04	104·3	102·8	104·2	1927	106·6	108·1	106·9
1905-09	105·0	104·9	105·0				

#### *Plural Births.*

During the year 1926 there were 570 cases of plural births of which one or more child was registered. The live children thus born numbered 1,123 (exclusive of twenty still-births) and included 567 pairs of twins (551 males and 563 females), and 3 cases of triplets (7 males and 2 females). Of these 570 cases, 20 were classified as ex-nuptial.

The number of children born at plural births was 2.11 per cent. of the total births.

The following table shows the number of cases of twins and triplets born in New South Wales during the last ten years, excluding those cases in which all were still-born, and distinguishing nuptial and ex-nuptial:—

Cases of—	Nuptial.	Ex-Nuptial.	Total, 1917-26.
Twins ... ..	5,411	242	5,653
Triplets ... ..	40	3	43

The last instance of quadruplets was in 1913.

The total number of confinements recorded during the ten years was 525,394; hence the rates per million confinements were 10,760 cases of twins and 82 of triplets; otherwise stated, there were 11 plural births in every 1,000 confinements.

## EX-NUPTIAL BIRTHS.

The number of ex-nuptial births in 1926 was 2,748, equal to 5.17 per cent. of the total births and to 1.18 per 1,000 of population. A statement of the ex-nuptial births in New South Wales at intervals since 1900 is given below:—

Year.	Number of Ex-Nuptial Births.	Ratio per cent. to Total Births.	Crude Rate per 1,000 of Population.	Year.	Number of Ex-Nuptial Births.	Ratio per cent. to Total Births.	Crude Rate per 1,000 of Population.
1900	2,605	7.01	1.92	1921	2,673	4.89	1.27
1905	2,912	7.37	2.00	1922	2,700	4.89	1.26
1910	2,900	6.37	1.79	1923	2,698	4.99	1.23
1915	2,681	5.07	1.42	1924	2,580	4.81	1.16
1917	2,533	4.82	1.33	1925	2,756	5.05	1.21
1918	2,654	5.23	1.36	1926	2,748	5.17	1.18
1919	2,534	5.22	1.27	1927	2,693	5.00	1.13
1920	2,635	4.88	1.27				

Over the whole State the proportion of ex-nuptial to total births has declined in a marked degree since 1905. It rose gradually from 4.35 per cent. in 1880 to 7.37 per cent. in 1905, after which a rapid decline occurred to 4.80 per cent. in 1916. The ratio rose again during the years 1917 to 1919, when the number of legitimate births declined. It fell to 4.9 per cent. in 1920, and three years later it began to rise again as the total number of births decreased. The rise and fall of this proportion followed in a general way the same course as the ex-nuptial birth-rate per 1,000 inhabitants, which rose between 1884 and 1894 from 1.57 to 2.09 per 1,000 of population. It remained near that level until 1905, then commenced to decline slowly but continuously.

The most accurate test to the extent of ex-nuptial births is obtained by relating the total number of such births recorded to the number of unmarried women of child-bearing age. This can only be done satisfactorily at census periods, but it indicates that, though the proportion of such births was increasing up to about 1890, it has declined considerably in the past thirty years, the proportion of ex-nuptial children born, per 1,000 unmarried women, aged 15 to 45, having fallen from 18.41 in 1891 to 16.10 in 1901, 14.18 in 1911, and 12.49 in 1921, a decrease of 32 per cent., since 1891.

*The Legitimation Act, 1902.*

In 1902 an Act was passed to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Act, any child who comes within the scope of its intentions, born before or after the passing thereof, is deemed to be legitimised from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. The total number of registrations under the Act up to the end of the year 1926 was 8,413. The number in each of the last ten years is shown in the following table:—

Year.	Registrations.	Year.	Registrations.
1917	390	1922	371
1918	447	1923	397
1919	398	1924	396
1920	455	1925	414
1921	444	1926	532

## NATURAL INCREASE.

The excess of births over deaths, or "natural increase," during 1927 was 31,088, equal to 13.00 per 1,000 of the population.

The following table shows the natural increase of population since 1890 in the Metropolis, in the remainder of the State, and in the whole of New South Wales:—

Year.	Natural Increase.					Annual Rate of Natural Increase per 1,000 of Population.
	Metropolis.	Remainder of State.	Whole State.			
			Males.	Females.	Total.	
1890-94	38,859	82,787	57,233	64,413	721,646	20.79
1895-99	33,056	74,575	49,885	57,746	107,631	16.67
1900-04	34,470	73,377	49,695	58,152	107,847	15.52
1905-09	42,543	88,132	61,652	68,993	130,645	17.23
1910-14	58,969	101,216	75,648	84,539	160,187	18.38
1915-19	56,584	97,413	71,992	82,005	153,997	15.98
1920-24	65,737	103,822	80,484	89,075	169,559	16.63
1920	12,923	20,090	15,803	17,410	33,013	15.95
1921	13,728	26,875	16,489	18,111	34,600	16.41
1922	13,665	22,371	17,215	18,821	36,036	16.75
1923	12,600	20,461	15,751	17,310	33,061	15.08
1924	12,824	20,025	15,426	17,423	32,849	14.73
1925	12,488	21,304	15,934	17,858	33,792	14.35
1926	11,267	19,871	14,536	16,402	30,938	13.32
1927*	10,176*	20,918*	14,827	16,261	31,088	13.09

\* Since 1st January, 1927, births have been distributed according to usual address of mother, and deaths according to usual address of deceased.

Despite slight fluctuations the rate of natural increase is declining, and since 1922 the decline has been rapid. The change in the basis for distributing births and deaths in 1927, has materially altered the allocation between metropolis and remainder of State.

On account of the decrease in death-rates, the rate of natural increase prior to the war period had been improving slightly for about sixteen years. The increase per 1,000 of population for the five years, 1915-19, however, was 13 per cent. lower than that for the previous quinquennium; in 1922 it showed a slight improvement as compared with the years immediately preceding it, but the average for the five years ending 1927 show a decline of 29 per cent. below the pre-war average.

Although the number of males born is more numerous than that of females, the increase of population from the excess of births over deaths is greatly in favour of the latter, since there is a disproportionately large number of deaths among males. There is also a greater mortality among male than among female children, and by this cause alone the natural excess of male births is almost neutralised. During the ten years which closed with 1927, the number of females added to the population by excess of births over deaths exceeded the males by 18,416 or 12.2 per cent.

The respective increases from natural and migratory causes are shown in chapter "Population" of this Year Book.

Analyses of the natural and migratory increases in the population of the State since 1861 and of the various divisions of the State since 1891 are shown on pages 226 and 236 of the Year Book for 1922.

During the years 1926 and 1927, there was a decrease in the rates of natural increase in Australia and New Zealand, as will be seen from the table below. The rates are per 1,000 of population.

State.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
New South Wales...	16.41	16.75	15.08	14.73	14.85	13.32	13.09
Victoria ...	12.64	13.45	11.60	11.96	12.62	11.21	10.69
Queensland ...	17.28	16.43	15.06	14.99	14.96	13.09	13.18
South Australia ...	14.06	14.60	13.01	12.69	11.91	11.82	11.14
Western Australia	12.96	14.62	14.14	14.01	13.23	13.21	13.22
Tasmania ...	16.68	17.78	16.35	15.18	15.09	14.57	13.33
Commonwealth ..	15.04	15.47	13.88	13.77	13.09	12.60	12.22
New Zealand ...	14.61	14.40	12.91	13.28	12.88	12.31	11.84

DEATHS.

The deaths during 1927 numbered 22,770, equal to a rate of 9.59 per 1,000 of the mean population. Of the total, 12,978 were males and 9,792 females, the rate for the former being 10.81 and for the latter 8.41 per 1,000 living of each of the sexes. The average annual number of deaths from 1880, with the rate per 1,000 of population, in quinquennial periods, was as follows:—

Period.	Average Annual Number of Deaths.			Death-rate per 1,000 of Population.			Proportion per cent. of Males to Female Rate.
	Males.	Females.	Total.	Males.	Females.	Total.	
1880-84	7,286	5,124	12,410	16.55	14.14	15.46	117
1885-89	8,461	6,043	14,504	15.43	13.36	14.49	115
1890-94	8,877	6,544	15,221	14.06	11.77	13.01	119
1895-99	9,002	6,514	15,516	13.11	10.77	12.01	122
1900-04	9,195	6,733	15,928	12.65	10.17	11.47	124
1905-09	9,076	6,583	15,659	11.52	9.04	10.33	127
1910-14	10,598	7,555	18,153	11.50	9.11	10.41	126
1915-19	11,919	8,613	20,532	12.20	9.07	10.66	137
1920-24	11,696	8,713	20,409	10.67	8.27	9.49	129
1920	12,120	8,841	20,961	11.46	8.74	10.13	131
1921	11,496	8,538	20,034	10.70	8.26	9.50	130
1922	11,017	8,161	19,178	10.05	7.74	8.92	136
1923	11,978	9,073	21,051	10.72	8.45	9.60	127
1924	11,867	8,954	20,821	10.44	8.19	9.34	127
1925	11,944	8,879	20,823	10.29	7.96	9.15	129
1926	12,685	9,503	22,188	10.72	8.34	9.56	133
1927	12,978	9,792	22,770	10.81	8.41	9.59	128

The death-rate has fallen continuously for both sexes, but faster for females than for males. As shown above, the rate during the five years 1880-84 was over 64 per cent. higher than that experienced during the five years 1920-24. Many causes are responsible for this improvement, such as the enforcement of Health Acts, the advance of science, and the better education of the people. The remarkable effect of these factors on the death-rates of the population in the early years of life is dealt with later in connection with deaths of children under 1 year and under 5 years.

A table of the death-rates per 1,000 of general population in each of the Australian States and in New Zealand from 1921 to 1927 is shown below:—

State.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
New South Wales ...	9.50	8.92	9.60	9.34	9.15	9.56	9.59
Victoria ...	10.52	9.65	10.71	10.05	9.47	9.63	9.71
Queensland ...	9.36	9.16	9.83	8.88	8.86	9.39	9.06
South Australia ...	10.02	9.11	9.59	9.19	9.15	8.73	8.98
Western Australia ...	10.43	9.32	8.41	9.08	9.00	8.93	8.81
Tasmania ...	10.30	9.30	9.92	9.89	9.35	9.05	9.68
Commonwealth ...	9.91	9.22	9.89	9.47	9.20	9.42	9.45
New Zealand ...	8.73	8.77	9.03	8.29	8.29	8.74	8.45

The above comparison represents the respective crude death-rates of the States enumerated. The differences in the age and sex constitution of the individual populations have not been taken into account, therefore the rates are not strictly comparable with each other as showing the true incidence of mortality in the various States.

Such a comparison can be made by applying the rates of mortality in age and sex groups to a standard population embodying a fixed distribution according to age and sex. The resultant rates constitute an index of mortality or weighted average death-rate which, in effect, shows what would have been the death-rate if the age and sex distribution of the population compared each year had been in accordance with the standard adopted. The standard used is identical with that provided by the International Statistical Institute in Part II, p. viii of the *Annuaire International de Statistique*, 1917.

The index of mortality so calculated for each of the Australian States is shown below:—

State.	1921.	1922.	1923.	1924.	1925.	1926.
New South Wales ...	10.36	9.79	10.61	10.31	10.13	10.62
Victoria ...	10.79	9.85	10.97	10.31	9.74	9.91
Queensland ...	10.23	10.15	10.97	9.90	9.94	10.47
South Australia ...	10.38	9.39	9.90	9.50	9.43	9.02
West Australia ...	11.89	10.91	9.79	10.82	10.67	10.63
Tasmania ...	10.84	9.81	10.49	10.43	9.94	9.70
Commonwealth ...	10.58	9.89	10.64	10.20	9.93	10.20

It is necessary to emphasise that the above rates are hypothetical and are serviceable only for purposes of comparison *inter se* and with death-rates of other countries calculated on the same basis. The age and sex distribution in the standard population is supposititious, being based on an agglomeration of European populations.

#### *Death-rates—Age and Sex.*

The remarks already made regarding the limitations in the use of crude birth-rates apply also to the conclusions to be drawn from tables of crude death-rates published above. The age and sex distribution of a population are most important factors to be considered in comparing death-rates. In New South Wales usually more than half the deaths are of persons over 55 years of age, the rates of mortality below and above that age being roughly 5 and 45 per 1,000 respectively. It follows that any variation in the proportion of persons in the various age groups will have a considerable bearing on the death-rate of the whole population.

Again, as shown above, the death-rate of males during the same period was 29 per cent. more than that of females. Consequently an increase in the proportion of females will be reflected in a corresponding decrease in the general rate.

In the following table death-rates are given for each sex in the principal age-groups during the four decennial periods from 1881 to 1920:—

Age-Group, Years.	Deaths per 1,000 Living—All causes.				Reduction per cent., 1881-90 to 1901-10.
	1881-90.	1891-1900.	1901-10.	1911-20.	
Males.					
0-4 ... ..	44·57	37·65	27·90	23·28	37
5-9 ... ..	3·62	2·88	2·07	1·95	43
10-14 ... ..	2·44	2·08	1·78	1·52	27
15-19 ... ..	3·74	3·13	2·85	2·58	24
20-24 ... ..	5·83	4·38	3·67	3·83	37
25-34 ... ..	7·72	5·88	4·51	5·16	41
35-44 ... ..	10·92	9·13	7·46	7·07	32
45-54 ... ..	17·65	14·69	12·87	12·65	28
55-64 ... ..	30·46	29·05	24·95	23·91	17
65-74 ... ..	63·67	56·58	58·77	52·39	8
75 and over ... ..	149·36	148·98	142·43	147·36	4
Total... ..	15·62	13·43	11·77	11·81	24
Females.					
0-4 ... ..	40·47	32·98	24·21	19·61	40
5-9 ... ..	3·29	2·77	1·88	1·79	43
10-14 ... ..	2·18	1·77	1·58	1·25	28
15-19 ... ..	3·52	2·80	2·53	1·94	30
20-24 ... ..	5·40	4·12	3·59	3·20	33
25-34 ... ..	7·44	5·70	4·71	4·52	26
35-44 ... ..	9·95	8·04	6·82	5·61	32
45-54 ... ..	13·83	10·86	9·50	8·65	32
55-64 ... ..	23·12	21·16	18·24	16·43	21
65-74 ... ..	52·73	43·48	45·91	40·67	10
75 and over ... ..	135·66	134·14	123·05	127·15	9
Total... ..	13·47	11·02	9·47	8·96	30
Total.					
0-4 ... ..	42·56	35·35	26·08	21·49	39
5-9 ... ..	3·46	2·83	1·98	1·87	42
10-14 ... ..	2·32	1·93	1·68	1·39	28
15-19 ... ..	3·63	2·97	2·69	2·25	26
20-24 ... ..	5·63	4·25	3·63	3·50	36
25-34 ... ..	7·60	5·83	4·60	4·84	39
35-44 ... ..	10·53	8·67	7·17	6·37	32
45-54 ... ..	16·19	13·11	11·42	10·83	30
55-64 ... ..	27·62	25·83	22·04	20·62	20
65-74 ... ..	59·39	51·22	53·22	47·07	10
75 and over ... ..	144·15	142·68	133·72	137·81	7
Total... ..	14·65	12·31	10·67	10·42	27

Because of the incidence of the epidemic of influenza in 1919, comparison is made between the rates of the periods 1881-1890 and 1901-1910.

The death-rates for females were reduced 30 per cent., as against 24 per cent. in the case of those for males. As regards age, the improvement was fairly constant under 55. Above that age improved conditions naturally had less effect. The ages at which death-rates are most favourable are between 10 and 14 years, and between the ages of 5 and 45 years they are generally considerably below the average.

*Deaths—Metropolis and Remainder of the State.*

It is not possible to show the exact difference between urban and rural mortality in New South Wales, but an approximate idea may be obtained from a comparison of the experience of the metropolis with that of the remainder of the State, which is, of course, not entirely rural, as a few large industrial towns are contained therein, notably Newcastle, Broken Hill and Lithgow. A summary of the average annual number of deaths and the rate per 1,000 in each of these divisions since 1880 is given in the following table:—

Period.	Metropolis.		Remainder of the State.		New South Wales.	
	Average Number of Deaths.	Ratio per 1,000 Living.	Average Number of Deaths.	Ratio per 1,000 Living.	Average Number of Deaths.	Ratio per 1,000 Living.
1880-84	5,033	20·60	7,377	13·21	12,410	15·49
1885-89	6,181	19·47	8,323	12·18	14,504	14·46
1890-94	5,979	14·83	9,242	12·05	15,221	13·01
1895-99	5,624	12·30	9,882	11·86	15,516	12·01
1900-04	5,845	11·54	10,683	11·42	15,928	11·47
1905-09	5,979	10·52	9,680	10·21	15,659	10·33
1910-14	7,312	10·59	10,841	10·30	18,153	10·41
1915-19	8,727	10·89	11,805	10·49	20,532	10·66
1920-24	9,034	9·60	11,375	9·41	20,409	9·49
1920	9,429	10·66	11,532	9·75	20,961	10·14
1921	8,693	9·52	11,841	9·50	20,034	9·51
1922	8,425	8·95	10,753	8·89	19,178	8·92
1923	9,390	9·69	11,661	9·53	21,051	9·60
1924	9,234	9·29	11,587	9·38	20,821	9·34
1925	9,548	9·32	11,275	9·01	20,823	9·15
1926	10,220*	9·70*	11,968*	9·43*	22,188	9·56*
1927†	10,418†	9·62†	12,352†	9·66†	22,770	9·59

\* Revised since last issue. † From 1st January, 1927 deaths were distributed according to usual address of deceased, previously according to place of registration of death.

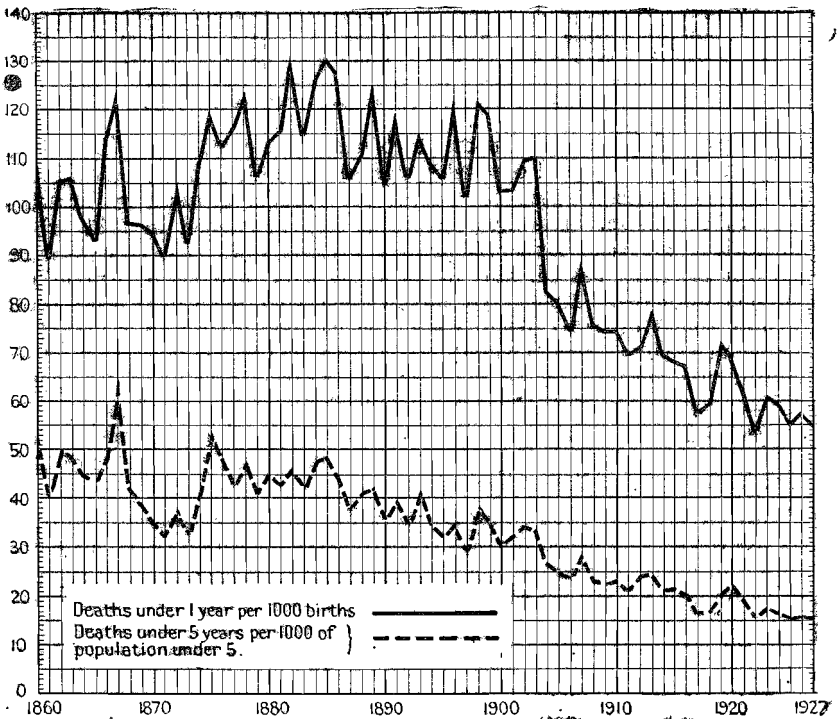
The death-rate has improved steadily both in the metropolis and in the remainder of the State, but notably so in the former, where it is now very little higher than in the latter, whereas forty years ago it was about 50 per cent. greater. The improvement dates from the quinquennium beginning

with the year 1890, and is coincident with the installation of the modern system of sewerage and the enforcement of the provisions of the Dairies Supervision Act of 1886. The marked decline in the crude rates for each division and for the State as a whole is evident from the fact that the metropolitan crude rate for the period 1880-84 was 20.6 per 1,000, and for the year 1927 it was 9.6, or an improvement of 53 per cent.; for the same periods the crude rates for the remainder of the State were respectively 13.2 and 9.7, or a difference of nearly 27 per cent., and for the whole State, 15.5 and 9.6, or an improvement of nearly 40 per cent. Crude rates of death, however, must be taken rather as an indication of the general trend than of the exact extent of the movement.

THE MORTALITY OF INFANTS.

A further and more sensitive comparison of the rates of mortality in the metropolis and in the remainder of the State may be obtained by considering the death-rates of infants.

INFANTILE MORTALITY, 1860-1927.



Deaths of Children under 1 Year.

During the year 1927, the children who died before completing the first year of life numbered 2,961, equivalent to a rate of 55.0 per 1,000 births. This rate is 4.4 per cent. less than the average for the previous five years.

The number of deaths of children under one year of age in the metropolis in 1927 was 1,161, or 56.4 per 1,000 births, and in the remainder of the State 1,800, or 54.1 per 1,000 births. The rate for the metropolis was lower than in any previous year.



The following table shows the average annual number of deaths of children under 1 year of age in the metropolis and in the remainder of the State, and the proportion per 1,000 births, in quinquennial periods since the year 1880:—

Period.	Metropolis.		Remainder of State.		New South Wales.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1880-84	1,707	174·0	1,956	94·9	3,663	120·4
1885-89	2,168	164·6	2,256	95·2	4,424	120·0
1890-94	1,908	138·8	2,471	95·8	4,379	110·7
1895-99	1,646	134·4	2,572	103·7	4,218	113·9
1900-04	1,416	111·2	2,399	96·9	3,815	101·7
1905-09	1,255	86·7	2,035	74·5	3,290	78·7
1910-14	1,437	75·2	2,211	71·1	3,648	72·7
1915-19	1,373	68·5	1,959	62·6	3,332	64·9
1920-24	1,404	63·3	1,932	60·1	3,336	61·4
1920	1,658	74·2	2,112	66·8	3,770	69·8
1921	1,414	63·1	2,022	62·8	3,436	62·9
1922	1,279	57·9	1,701	51·4	2,980	54·0
1923	1,405	63·9	1,897	59·1	3,302	61·0
1924	1,262	57·2	1,929	61·0	3,191	59·5
1925	1,255	57·0	1,744	53·5	2,999	54·9
1926	1,315	61·2	1,745	55·2	3,060	57·6
1927*	1,161*	56·4*	1,800*	54·1*	2,961	55·0

\* Classified according to place of usual residence of mother.

The remarkable improvement which has taken place in the infantile mortality rate in the period covered by the above table is due in a large degree to the measures adopted to combat preventable diseases by health laws and by education. The first important step was taken in 1881, when the Infectious Diseases Supervision Act became law. In 1896 the Public Health Act was passed, and in 1902 the acts relating to Public Health were consolidated. About this time a world-wide movement drew attention to the benefit of breast-feeding and the dangers attending the methods of artificial feeding then in vogue. A scheme for the preservation of infant health was formulated by the Sydney Municipal Council in 1903, and instructional pamphlets were circulated for the guidance of mothers in the care and feeding of young children. In the following year trained women inspectors were appointed to visit mothers in the populous parts of the city and in the surrounding suburbs.

During the year 1904 infantile mortality showed a marked improvement on the rates experienced for about thirty years. A reference to the principal causes of death during the years immediately prior to and after the year in question will show that a decrease was experienced in all causes in which care and knowledge could have effect. Thus the mortality from diarrhoea and enteritis dropped from 36.90 per 1,000 births in 1903 to 21.31 in 1904; tubercular diseases from 3.06 to 1.58; and congenital debility from 15.54 to 12.98.

Further efforts to reduce the rate of infantile mortality have been made since 1914 through the establishment in Sydney and in various country localities of baby health centres, and through the formation of a number of public bodies which are affiliated with the Royal Society for the Welfare of Mothers and Babies. Particulars relating to these institutions will be found in chapter "Social Condition" of this Year Book.

In 1926 the Senior Medical Officer of the Department of Public Health was appointed a Director of Maternal and Baby Welfare to supervise public activities relating to the health of women and children.

The decline in infantile mortality, especially in diarrhoeal diseases, is illustrated by the following table, which gives the mortality rate per 1,000 births in each year since 1903 from diarrhoeal diseases, and from all other causes:—

Year.	Deaths under 1 year of age per 1,000 Births.			Year.	Deaths under 1 year of age per 1,000 Births.		
	Diarrhoeal Diseases.	All other Diseases.	All causes.		Diarrhoeal Diseases.	All other Diseases.	All causes.
1903	36·90	73·45	110·35	1915	17·28	50·85	68·13
1904	21·31	61·11	82·42	1916	15·02	52·82	67·84
1905	18·76	61·79	80·55	1917	10·79	46·69	57·48
1906	21·39	53·14	74·53	1918	9·25	49·92	59·17
1907	21·23	67·41	88·64	1919	17·45	54·82	72·27
1908	21·89	53·90	75·79	1920	17·42	52·43	69·85
1909	21·86	52·42	74·28	1921	14·02	48·87	62·89
1910	20·54	54·07	74·61	1922	10·27	43·70	53·97
1911	16·82	52·67	69·49	1923	15·00	46·01	61·01
1912	22·37	48·93	71·30	1924	12·19	47·27	59·46
1913	23·27	55·07	78·34	1925	7·71	47·20	54·91
1914	19·88	49·84	69·72	1926	11·76	45·84	57·60

The incidence of diarrhoeal diseases in recent years has tended to fluctuate irregularly with seasonal conditions, being relatively high in dry seasons and low in years of bountiful rainfall. In 1926, when the rainfall was below normal during several months, diarrhoeal diseases caused 20·5 per cent. of the deaths of infants under 1 year of age, as compared with 14 per cent in 1925, when there were abundant rains. In this year the mortality from diarrhoeal diseases outside the metropolis reached the remarkably low proportion of 6 per 1,000 births.

The experience of all States of the Commonwealth was similar to that of New South Wales, in that the reduction in infantile mortality rates which occurred in 1904 has been maintained through a large falling-off in the number of deaths from diarrhoeal diseases.

*Infantile Mortality by Sex.*

The death-rate is higher for male infants than for females, the rates in 1927 being 58·3 and 51·5 per 1,000 births respectively. The rates for each sex are shown in the following table in quinquennial periods since 1880:—

Period.	Males.		Females.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1880-84	1,992	127·9	1,671	112·5
1885-89	2,405	127·2	2,019	112·3
1890-94	2,413	118·7	1,966	102·3
1895-99	2,304	121·4	1,914	105·9
1900-04	2,077	108·5	1,738	94·6
1905-09	1,832	85·6	1,458	71·5
1910-14	2,037	79·2	1,611	65·8
1915-19	1,892	71·9	1,440	57·6
1920-24	1,900	68·4	1,436	54·1
1920	2,153	77·7	1,617	61·0
1921	1,942	69·4	1,494	56·1
1922	1,749	62·0	1,231	45·6
1923	1,881	67·8	1,421	53·9
1924	1,776	65·1	1,415	53·6
1925	1,640	58·8	1,359	50·8
1926	1,750	64·3	1,310	50·6
1927	1,620	58·3	1,341	51·5

During the period reviewed, the excess of the male infantile death-rates per 1,000 births fluctuated from 16.4 in the quinquennium 1890-94 and in the year 1922 to a minimum of 6.8 in 1927.

*Infantile Mortality by Age.*

Of the total number of deaths of infants under 1 year of age, about 40 per cent. occur within a week of birth; within the first month the proportion is over one-half, and within three months about two-thirds. The following statement shows the number and proportion of deaths at various ages under one year in the metropolis and in the whole State.

Age at Death.	1925.				1926.			
	Metropolis.		State.		Metropolis.		State.	
	Number of Deaths.	Deaths per 1,000 Births.	Number of Deaths.	Deaths per 1,000 Births.	Number of Deaths.	Deaths per 1,000 Births.	Number of Deaths.	Deaths per 1,000 Births.
Under 1 week ...	510	23.1	1,264	23.1	532	24.8	1,288	24.3
1 week ... ..	68	3.1	180	3.3	71	3.3	165	3.1
2 weeks ... ..	37	1.7	96	1.8	45	2.1	103	1.9
3 ,, ... ..	33	1.5	87	1.6	37	1.7	79	1.5
Under 1 month, Total	648	29.4	1,627	29.8	685	31.9	1,635	30.8
1 month ... ..	110	5.0	238	4.4	76	3.5	184	3.5
2 months ... ..	75	3.4	187	3.4	82	3.8	166	3.1
3 ,, ... ..	86	3.9	169	3.1	68	3.2	144	2.7
4 ,, ... ..	58	2.6	132	2.4	50	2.3	130	2.5
5 ,, ... ..	50	2.3	105	1.9	58	2.7	140	2.6
6 ,, ... ..	41	1.8	104	1.9	53	2.5	140	2.6
7 ,, ... ..	37	1.7	103	1.9	55	2.6	117	2.2
8 ,, ... ..	30	1.4	76	1.4	43	2.0	90	1.7
9 ,, ... ..	39	1.8	94	1.7	44	2.0	102	1.9
10 ,, ... ..	39	1.8	81	1.5	56	2.6	103	1.9
11 ,, ... ..	42	1.9	83	1.5	45	2.1	109	2.1
Under 1 year, Total	1,255	57.0	2,999	54.9	1,315	61.2	3,060	57.6

A similar table relating to the five years, 1919-23, was published in the Year Book for 1924 at page 120.

As stated above, more than half the deaths of children under one year of age occur in the first month of life, but in the second month the rate of mortality falls rapidly, and thereafter gradually. The rate of infantile mortality is generally higher in the metropolis than in the remainder of the State.

A further dissection of the experience in regard to infantile mortality discloses the fact that, despite the marked decline in infantile mortality, the proportion of deaths of children under 1 week old has actually increased in the past twenty-five years, while at all other ages under one year there had been a sustained improvement.

This may be illustrated strikingly by the statement that, whereas the rate of mortality among children within one week of birth was 20.5 per 1,000 births in 1901 and 24.3 per 1,000 births in 1926, the corresponding rates among children over one week and under twelve months old were 83.2 per

1,000 in 1901, and 33.3 per 1,000 in 1926—a decline of 60 per cent. It is shown on a later page that the principal causes of death among children in their first week of life were premature birth, congenital debility, malformation and injury at birth, which in 1926 were responsible for nearly 85 per cent. of the deaths of children during the first week of life, causing 20.5 deaths per 1,000 births out of the total rate of 24.3. These causes are not generally connected with post-natal care of children, and they tend, when considered as an integral part of the rate of mortality, to obscure the remarkable improvement which has been effected by the dissemination of knowledge and the promotion of health measures for the care of infants. Although more skilful attention after birth may be able to save a number of infants who die from pre-natal causes, the indications are that a general improvement in the rate of mortality among infants in the first week of life will not be attained except through increased pre-natal care.

The following table shows the rates of mortality among infants in age groups during the first year of life for each year since 1901:—

Year.	Rate of Mortality per 1,000 Births among Children aged—						
	Under 1 week.	1 week and under 1 month.	1 month and under 3 months.	Total under 3 months.	3 months and under 6.	6 months and under 12.	Total under 1 year.
1901	20.5	12.3	22.1	54.9	22.4	26.5	103.7
1902	21.3	12.3	22.2	55.8	24.8	29.1	109.7
1903	21.2	11.3	19.5	52.0	26.3	32.1	110.4
1904	21.8	9.7	14.9	46.4	15.8	20.2	82.4
1905	24.3	10.9	13.0	48.2	15.9	16.5	80.6
1906	21.8	9.0	11.8	42.6	14.3	17.6	74.5
1907	23.1	11.3	17.8	52.2	15.8	20.6	88.6
1908	21.5	9.5	11.9	42.9	15.9	17.0	75.8
1909	21.3	9.8	11.6	42.7	14.9	16.7	74.3
1910	21.1	9.2	13.4	43.7	14.3	16.6	74.6
1911	22.3	9.9	11.9	44.1	11.7	13.7	69.5
1912	21.5	8.4	10.6	40.5	13.1	17.7	71.3
1913	22.9	9.5	11.8	44.2	14.7	19.4	78.3
1914	23.5	8.8	10.1	42.4	11.6	15.7	69.7
1915	23.1	7.6	9.4	42.1	9.3	16.7	68.1
1916	23.5	8.3	10.3	42.1	10.0	15.7	67.8
1917	22.9	7.4	8.5	38.8	7.6	11.1	57.5
1918	25.1	7.8	8.0	40.9	7.9	10.4	59.2
1919	26.2	9.0	9.6	44.8	11.5	16.0	72.3
1920	23.9	8.4	10.8	43.1	11.5	15.2	69.8
1921	23.4	7.4	10.2	41.0	9.6	12.3	62.9
1922	22.2	7.6	7.5	37.3	6.7	10.0	54.0
1923	22.8	7.5	7.7	38.0	9.2	13.8	61.0
1924	23.2	7.4	8.5	39.1	8.4	12.0	59.5
1925	23.1	6.7	7.8	37.6	7.4	9.9	54.9
1926	24.3	6.5	6.6	37.4	7.8	12.4	57.6

Allowing for the operation of pre-natal causes upon the mortality in the first week of life, it is evident that pronounced improvements took place in the rates of infantile mortality immediately after the adoption of special educative measures in 1904 and 1914, and that, although special factors have operated to increase infantile mortality in certain years there has been a steady and sustained improvement. It is particularly noteworthy that the improvement is greatest among children aged one month and over. Up to that age the operation of pre-natal causes produces the majority of deaths.

The following statement furnishes a comparison of the rates of infantile mortality in the Australian States, in New Zealand, and in various other countries. The rates indicate the deaths under 1 year per 1,000 births. As the rates quoted are for a single year only and fluctuate from year to year, they do not show the permanent relativity between the rates prevailing in the countries named.

State.	Year.	Rate.	Country.	Year.	Rate.
New Zealand ...	1926	39·8	Sweden ...	1926	57
South Australia ...	„	44·3	Switzerland ...	1926	57
Tasmania ...	„	46·7	Netherlands ...	1926	60
Western Australia ...	„	49·3	South Africa...	1926	63
Queensland ...	„	50·6	England and Wales..	1926	70
Commonwealth ...	„	54·0	*United States ...	1926	73
Victoria ...	„	55·7	Irish Free State ...	1926	74
<i>New South Wales</i> ...	„	57·6	Denmark ...	1925	81
			Scotland ...	1926	83
			Northern Ireland ...	1925	86
			Belgium ...	1925	94
			France ...	1926	97
			Canada ...	1926	102
			Prussia ...	1925	104
			Germany ...	1925	105
			Finland ...	1925	107
			Italy ...	1925	119
			Austria ...	1925	119
			Japan...	1925	142
			Spain ...	1924	143

\* Registration Area.

The rate of infantile mortality in New Zealand is the lowest of the rates shown in the foregoing table, and the rates for Australasia generally are greatly superior to those prevailing in most other countries for which comparable records are available. Wide differences between climatological and economic conditions should be allowed for in considering the relationship between the rates shown for the various countries.

#### *Causes of Infantile Mortality.*

A table published on page 86 of the Statistical Register for 1926-27 shows the rates of infantile mortality for each of the principal causes in each year since 1896. This indicates that there has been a heavy decline in the mortality from diarrhoea, enteritis, and other digestive diseases, congenital debility, nervous diseases, tubercular diseases, and bronchitis. A

smaller decline has occurred in deaths from minor causes, such as meningitis, diseases of the stomach, accident, and general diseases. On the other hand, deaths from malformation, premature birth, and diseases of early infancy have become proportionately larger. The mortality from epidemic diseases fluctuates considerably with a tendency to decline.

The following table shows the incidence of mortality caused by the principal diseases among infants at various periods during the first year of life in 1926, showing the experience in the metropolis in comparison with that in the whole State:—

Cause of Death.	Deaths of Children under one year of age per 1,000 Births (1926).							
	Metropolis.				State.			
	Under 1 week.	1 week and under 1 month.	1 month and under 1 year.	Total.	Under 1 week.	1 week and under 1 month.	1 month and under 1 year.	Total.
Epidemic Diseases ...	·05	·32	3·49	3·86	·03	·21	2·92	3·16
Tuberculosis ...	...	...	·46	·46	...	...	·34	·34
Syphilis ...	...	...	·33	·33	...	·05	·21	·26
Meningitis ...	...	·05	·79	·84	·02	·07	·57	·66
Convulsions ...	·56	·18	·42	1·16	·43	·21	·41	1·05
Bronchitis ...	·05	·09	·32	·46	·04	·17	·66	·87
Pneumonia ...	·19	·70	4·00	4·89	·10	·43	4·01	4·54
Diarrhœa and Enteritis ...	...	·33	12·75	13·08	·04	·24	11·48	11·76
Malformation ...	2·47	·79	1·16	4·42	2·45	·68	·90	4·03
Congenital Debility ...	1·39	·98	1·82	4·19	1·86	1·06	1·73	4·65
Premature Birth ...	14·89	2·33	·84	18·06	14·02	2·20	·64	16·86
Injury at Birth ...	2·37	·28	·05	2·70	2·15	·21	·07	2·43
Other Diseases of early Infancy ...	2·09	·47	·14	2·70	2·51	·45	·15	3·11
All Other Causes ...	·70	·60	2·75	4·05	·60	·55	2·73	3·88
<b>Total ...</b>	<b>24·76</b>	<b>7·12</b>	<b>29·32</b>	<b>61·20</b>	<b>24·25</b>	<b>6·53</b>	<b>26·82</b>	<b>57·60</b>

On the whole there is little difference between the rates of mortality in the metropolis and those for the whole State, but deaths from premature birth and deaths from diarrhœa and enteritis are normally rather more numerous in the metropolis than in the whole State. The deaths from these two causes combined represent nearly 50 per cent. of the deaths of infants during 1926.

Approximately 85 per cent. of the deaths during the first week after birth and 49 per cent. of the deaths which occurred during the first year after birth were due to exclusively pre-natal causes or accident, viz., premature birth, congenital debility, malformation, injury at birth, or syphilis. Deaths from these causes during the first year of life represented 2·8 per cent. of the births during the year. The incidence of diarrhœa and enteritis was comparatively light among children under the age of one month.

*Infantile Mortality in Divisions.*

The following table shows the number of deaths of infants under 1 year of age from principal diseases per 1,000 births in the principal divisions of the State, based on the experience of the years, 1915-24, being the first ten years for which the data are available. The variation shown in the mortality-rate is from 49.7 in the Northern Tableland to 103.4 in the Western Division.

Cause of Death.	Metropolis.	Balance of Cumberland.	North Coast.	Hunter and Manning.	South Coast.	Northern Tableland.	Central Tableland.	Southern Tableland.	North-Western Slope.	Central-Western Slope.	South-Western Slope.	North-Central Plain.	Central Plain.	Riverina.	Western Division.	Total Country.	Whole State.
Epidemic Diseases ..	3.5	3.3	2.3	3.1	2.7	4.2	4.2	5.2	3.2	3.4	3.1	3.2	2.4	3.2	6.8	3.4	3.5
Tubercular Diseases ..	.4	.3	.3	.3	.3	.3	.4	.3	.5	.2	.3	.3	.3	.6	.3	.3	.4
Veneral Diseases ..	.6	.5	.3	.3	.1	.2	.2	.1	.1	.2	.1	.1	.2	.2	.5	.3	.4
Meningitis ..	.5	.2	.5	.7	.4	.3	.7	.6	.6	.5	.7	1.0	.7	.4	.5	.6	.6
Convulsions ..	1.0	2.0	2.0	1.8	2.1	1.7	2.1	1.8	2.4	2.4	1.9	.9	2.6	1.1	3.1	2.0	1.6
Bronchitis ..	1.1	1.2	.9	1.9	1.9	2.5	2.4	2.6	2.1	2.2	1.4	2.9	1.6	1.3	1.9	1.8	1.5
Pneumonia and Pleurisy	5.7	4.6	4.6	4.6	5.1	4.0	5.6	4.4	4.7	3.8	4.1	4.1	5.7	5.6	4.5	4.7	5.1
Gastritis and Diarrhoea	16.4	10.6	7.8	10.1	9.8	9.0	13.9	14.1	10.9	12.7	10.4	13.5	12.1	10.5	13.0	13.0	14.3
Hernia ..	.5	.3	.5	.4	.7	.4	.5	.6	1.1	.6	.4	.3	.9	.6	1.0	.5	.5
Congenital Malformations	4.4	3.7	3.9	3.3	3.0	4.0	4.4	2.8	4.1	2.6	3.7	2.5	2.4	2.6	4.5	3.5	3.9
Congenital Debility and Prematurity ..	24.5	20.6	19.5	25.8	22.2	19.3	25.5	26.8	25.0	23.3	20.8	24.1	29.0	17.7	32.0	23.2	23.7
Other Developmental Diseases ..	4.4	3.7	5.6	4.6	6.1	4.9	4.9	6.3	4.6	4.6	4.6	5.5	5.2	5.7	4.0	4.9	4.7
Accident ..	.5	.8	.6	.7	.7	.3	.6	.8	1.1	.7	1.2	1.5	1.1	1.5	.8	.8	.6
All other Diseases ..	2.3	1.8	2.4	2.1	2.7	2.5	2.6	2.9	1.7	3.1	2.5	1.6	3.1	2.7	2.7	2.4	2.3
Total ..	65.8	53.6	61.2	65.7	57.8	53.6	68.0	69.4	61.4	60.7	54.7	61.2	67.7	53.3	99.8	61.4	63.1

Medical opinion is that a favourable summer rainfall reduces the liability to infantile diarrhoea, that premature birth and congenital debility are more prevalent in industrial districts than elsewhere, and that rural districts are most favourable to the rearing of children.

These opinions are borne out in a general way by the experience in New South Wales, although the wide range of geographical conditions and the variableness of the seasons intrude irregular factors affecting infantile mortality. The highest rate is that of the Western Division, the greater part of whose population lives in the mining district of Broken Hill, while the remainder is scattered over extensive plains which receive a low rainfall. The most favourable rates are those of the North Coast, Riverina, Northern Tablelands and South-western Slopes, where the population is engaged largely in rural pursuits. On the North Coast and Northern Tableland the rainfall is copious, especially during the summer. The rates of infantile mortality in the North Coast division present a striking contrast with those of the other coastal divisions, where large industrial and mining centres exist, and the rainfall is less favourable in the summer. The low rate for balance of Cumberland is probably due in a small measure to the removal of sick children to hospital or other accommodation in the metropolis, where an appreciable proportion of the deaths occur.

It is difficult to explain the high average rate of mortality in the Southern Tableland, which is due mainly to deaths from congenital debility, prematurity and other developmental diseases, gastritis and diarrhoea. Perhaps some part of the mortality may be attributable to the greater cold experienced in winter, the comparative lowness of the summer rainfall and the presence of a considerable proportion of the population in urban centres.

A further dissection of the proportion of deaths in 1925 from principal causes in geographical and industrial divisions gave the following interesting results.

Divisions.	Deaths of Children under 1 year of Age per 1,000 Births (1925).								
	Epi- demic Diseases	Bran- chitis.	Pneu- monia.	Diarrhea and Enteritis.	Malfor- mations	Con- genital Debility	Prema- ture Birth.	All other Diseases.	All Diseases.
Metropolis... ..	4.81	.82	6.40	9.57	4.22	3.95	16.11	11.07	56.95
Country Muni- cipalities ... ..	4.46	.98	6.46	6.78	3.86	4.88	15.06	10.32	52.80
Country Shires ... ..	5.79	1.61	6.96	5.79	3.52	5.33	15.64	10.12	54.96
New South Wales... ..	4.87	1.08	6.54	7.71	3.94	4.60	15.60	10.57	54.91
Industrial ... ..	4.68	.93	6.22	9.55	4.36	4.29	15.95	10.62	56.60
Non Industrial ... ..	5.07	1.24	6.87	5.78	3.49	4.91	15.24	10.54	53.14

*Deaths of Ex-nuptial Children under 1 year.*

During 1926 there were born 50,378 nuptial and 2,748 ex-nuptial children. During the same period the deaths of nuptial children under 1 year of age numbered 2,758 and of ex-nuptial children 302.

During the first year of life the death rate of ex-nuptial children was double the rate for nuptial children, partly owing to premature birth, infantile debility and inherited diseases, but to an equally great extent to causes arising from neglect.

How these combined causes operate to produce a comparatively high death rate among ex-nuptial children is shown in the following tables which relate to the years 1925 and 1926:—

Age at Death.	Deaths per 1,000 Births, 1925.				Deaths per 1,000 Births, 1926.			
	Nuptial.	Ex-nuptial.		Total.	Nuptial.	Ex-nuptial.		Total.
		Rate.	Per cent. of Legiti- mate Rate.			Rate.	Per cent. of Legiti- mate Rate.	
Under 1 week...	23.0	26.9	117	23.1	23.3	42.2	181	24.3
1 week ... ..	3.3	2.5	76	3.3	2.9	6.2	214	3.1
2 weeks ... ..	1.7	2.5	148	1.8	1.9	2.9	153	1.9
3 ,, ... ..	1.5	3.3	220	1.6	1.5	1.5	100	1.5
Total— under 1 month	29.5	35.2	119	29.8	29.6	52.8	178	30.8
1 month ... ..	4.1	9.4	229	4.4	3.3	6.2	188	3.5
2 months ... ..	3.3	6.2	188	3.4	2.5	13.8	552	3.1
3 ,, ... ..	2.8	8.4	300	3.1	2.5	7.3	292	2.7
4 ,, ... ..	2.2	6.5	295	2.4	2.2	6.6	300	2.5
5 ,, ... ..	1.8	4.7	261	1.9	2.3	8.4	365	2.6
6 ,, ... ..	1.8	2.9	157	1.9	2.6	2.5	96	2.6
7 ,, ... ..	1.9	2.2	116	1.9	2.1	3.6	171	2.2
8 ,, ... ..	1.3	3.6	277	1.4	1.6	2.9	181	1.7
9 ,, ... ..	1.7	1.8	106	1.7	1.9	2.5	132	1.9
10 ,, ... ..	1.5	1.5	100	1.5	2.0	1.8	90	1.9
11 ,, ... ..	1.4	2.9	207	1.5	2.1	1.5	71	2.1
Total— under 1 year...	53.3	85.3	160	54.9	54.7	109.9	201	57.6



The number of ex-nuptial children who die during one year is comparatively small, consequently the annual rates of mortality for such children in age groups under one year are unstable.

The largest proportional excess of deaths of ex-nuptial children over those of nuptial children is not immediately after birth, but usually one month or more later. During the year 1926, the mortality of ex-nuptial children exceeded that of other children by 81 per cent. during the first week of life, by 78 per cent. in the first month, and by 88 in the second. In the third month the rate was  $5\frac{1}{2}$  times, and in the three succeeding months 3 or  $3\frac{3}{4}$  times, the rate for legitimate children.

The following table shows the causes of death of ex-nuptial as compared with those of nuptial children. The figures represent the number of deaths of children under 1 year of age per 1,000 births in New South Wales during the year shown.

Cause of Death.	Deaths of Children under 1 year of age per 1,000 Births, 1925.			Deaths of Children under 1 year of age per 1,000 Births, 1926.		
	Nuptial.	Ex-nuptial.	Total.	Nuptial.	Ex-nuptial.	Total.
Infectious Diseases ...	5.40	7.98	5.53	3.69	5.82	3.80
Broncho-pneumonia ...	4.49	12.34	4.89	3.12	2.55	3.09
Pneumonia ... ..	1.70	0.72	1.65	1.41	2.19	1.45
Diarrhoea and Enteritis ...	7.14	18.51	7.71	10.60	33.11	11.76
Congenital Malformations	3.95	3.63	3.94	3.89	6.55	4.03
„ Debility ... ..	4.49	6.53	4.59	4.39	9.46	4.65
Premature Birth ... ..	15.43	18.87	15.60	16.16	29.84	16.86
Injury at Birth ... ..	2.04	1.81	2.03	2.48	1.46	2.43
Other Developmental Diseases.	3.34	3.63	3.35	2.86	7.64	3.11
Violence ... ..	0.77	5.08	0.99	0.63	4.73	0.85
All other Causes ... ..	4.55	6.17	4.63	5.52	6.55	5.57
Total ... ..	53.30	85.27	54.91	54.75	109.90	57.60

The annual rates of mortality from specific diseases among ex-nuptial children fluctuate violently largely because of the small numbers involved. However, the foregoing table reflects approximately the difference—first in the care exercised by the mothers in either group, and then in their respective condition. Thus the rate of mortality from infectious diseases, respiratory diseases, diarrhoea and enteritis, and violence in 1926 was 150 per cent. higher for ex-nuptial children than for nuptial, while from congenital causes the excess was 85 per cent.

#### *Deaths of Children under 5 years.*

The improvement in rates of mortality has not been confined to children under 1 year of age, as there has been a general improvement in the death-rate of all groups of children under 5 years of age.

The following table shows the mortality of children under 5 years of age:—

Period.	Metropolis.		Remainder of State.		New South Wales.	
	Average Annual Number of Deaths.	Rate per 1,000 Living.	Average Annual Number of Deaths.	Rate per 1,000 Living.	Average Annual Number of Deaths.	Rate per 1,000 Living.
1890-94	2,674	48·5	3,546	32·1	6,220	37·5
1895-99	2,206	40·8	3,487	31·0	5,693	34·2
1900-04	1,846	35·2	3,210	29·6	5,056	31·4
1905-09	1,612	27·6	2,723	23·4	4,335	24·8
1910-14	1,895	26·1	2,986	21·5	4,881	23·1
1915-19	1,905	21·5	2,771	17·8	4,676	19·1
1920-24	1,887	20·3	2,631	17·2	4,518	18·4
1920	2,341	26·5	2,981	19·8	5,322	22·3
1921	1,886	21·0	2,790	18·5	4,676	19·5
1922	1,609	17·6	2,286	15·0	3,895	16·0
1923	1,930	20·2	2,514	16·1	4,444	17·7
1924	1,668	16·8	2,585	16·5	4,254	16·6
1925	1,651	16·3	2,309	14·6	3,960	15·3
1926	1,783	17·7	2,336	14·7	4,119	15·8

At every period shown in the table the metropolitan rate was higher than that of the remainder of the State. The excess was very small in 1924, when there was a marked improvement in the metropolitan rate. In 1925 the rates in both divisions were the lowest on record. In the following year the country rate remained low and the metropolitan rate increased by 8·6 per cent. and was 22 per cent higher than the country rate.

On the whole the improvement in the metropolis has been greater than in the remainder of the State, the rate having decreased since 1890 by 64 per cent. in the former, and in the latter by 54 per cent. Outside the metropolis the rate did not vary until 1904, when there was a marked decline, which has been continuous. The rate of mortality in 1926, compared with that of the quinquennium 1890-94, represents a saving of 36 lives in every 1,000 children under 5 years of age in the metropolis, and of 17 in the remainder of the State.

Children are more susceptible to the attacks of disease in the earliest years of life than later, and the death rate decreases steadily until the age of 10 years is reached. Since the rate for preventable diseases is high, there is no doubt that many children succumb through parental ignorance of the proper food or treatment required.

In the following statement the principal causes of death among children, and the rates under 1 year of age per 1,000 births and under 5 years of age per 1,000 living, are shown for a period of five years, viz., 1919-1923, embracing the census year and two years on either side of it:—

Causes of Death.	Deaths of children under 1 year of age.				Deaths of children aged 1 year and under 5.			
	Metropolis.		State.		Metropolis.		State.	
	Average Annual Number.	Per 1,000 Births.	Average Annual Number.	Per 1,000 Births.	Average Annual Number.	Per 1,000 Living.	Average Annual Number.	Per 1,000 Living.
Measles .. .. .	6	·3	13	·2	28	·40	66	·24
Scarlet Fever .. .. .	..	..	..	..	2	·03	5	·02
Whooping-cough .. .. .	43	2·0	110	2·1	34	·48	71	·37
Diphtheria and Croup .. .. .	10	·5	20	·4	56	·79	147	·77
Influenza .. .. .	13	·6	31	·6	24	·35	51	·27
Epidemic Cerebro-Spinal Meningitis.	2	·1	3	·1	2	·03	6	·03
Tuberculosis—Meninges .. .. .	5	·2	10	·2	18	·26	26	·13
"  Abdominal.. .. .	..	..	2	·1	2	·03	5	·02
"  Other Organs	2	·1	5	·1	7	·10	12	·06
Syphilis .. .. .	13	·6	20	·4	1	·01	2	·01
Meningitis .. .. .	12	·6	31	·6	4	·20	28	·15
Convulsions .. .. .	18	·8	71	1·3	7	·09	24	·12
Bronchitis .. .. .	23	1·1	72	1·3	4	·06	21	·11
Broncho-pneumonia .. .. .	84	3·9	189	3·5	53	·76	116	·61
Pneumonia .. .. .	38	1·8	97	1·6	38	·55	82	·43
Diarrhoea and Enteritis .. .. .	381	17·7	786	14·8	121	1·72	326	1·70
Congenital Malformations.. .. .	100	4·6	209	3·9	..	..	..	..
Infantile Debility .. .. .	123	5·7	337	6·3	..	..	..	..
Premature Birth .. .. .	394	18·3	917	17·2	102	1·45	281	1·47
All Others .. .. .	181	8·4	486	9·1	..	..	..	..
Total .. .. .	1,448	67·3	3,899	63·8	513	7·81	1,349	6·51

The high mortality of infants, especially in the first week of life, during this period was largely due to the deaths of children who, either from immaturity or inherited debility, are born unfit for the struggle for existence. Of children under 1 year of age, the deaths from these causes during the period 1919-23 were equal to 27·4 per 1,000, or 43 per cent. of the total deaths of children under 1.

Among children under 1 year, diarrhoea and enteritis were responsible for 14·3 deaths per 1,000 births, and infectious diseases for 3·4, of which whooping-cough caused 2·1. Respiratory diseases are especially fatal to infants; among children under 1 year of age bronchitis caused 1·3, broncho-pneumonia 3·5, and pneumonia 1·6 deaths per 1,000 births. The death-rate from convulsions in the same group was 1·3, from tuberculous diseases 0·4, and meningitis (not tuberculous), 0·7 per 1,000 births.

The rate of mortality among children between 1 and 5 years of age is only about one-tenth of the rate among children under one year of age, but in both cases the largest individual cause of death among post-natal causes is diarrhoea and enteritis. Among the older group of children the next most prominent causes of death are epidemic diseases, notably diphtheria, croup, whooping-cough, influenza and measles, while diseases of the respiratory system, such as pneumonia and bronchitis, cause rather more than one-sixth of the deaths.

#### CAUSES OF DEATH.

The system of classification adopted in this section of vital statistics is in accordance with the International List of Causes of Death, based on the third decennial revision by the International Commission at Paris in 1920.

The complete list of causes of death grouped as arranged by the International Commission is published in the Statistical Register of New South Wales, which shows the number of deaths from each cause according to age, sex, and month of occurrence.

The table published below is a summary of the principal individual causes of death in 1926 compared with the average annual number in the period 1921-25 adjusted to the population of the year 1926. The diseases are arranged in order of numerical importance, distinguishing those which occur exclusively or almost exclusively at ages under 5 years from those of general incidence.

Causes of Death.	Number, 1926.	Adjusted Average, 1921-25.		Causes of Death.	Number, 1926.	Adjusted Average, 1921-25.	
		Number.	Proportion.			Number.	Proportion.
<i>General Causes—</i>			Per cent.	<i>General Causes contd.—</i>			Per cent.
Diseases of the Heart ...	3,230	2,865	13·27	Lethargic Encephalitis ...	33	28	·13
Cancer ... ..	2,157	2,072	9·60	Scarlet Fever ... ..	53	18	·08
Pneumonia ... ..	1,608	1,583	7·33	Plague ... ..	...	2	·01
Tuberculosis, Respiratory System ...	1,144	1,168	5·41	<i>Diseases of Childhood—</i>			
Senility ... ..	1,073	1,126	5·21	Diarrhoea and Enteritis (under 2 years) ...	801	875	4·05
Bright's Disease (Acute and Chronic) ...	1,108	1,093	5·06	Prematurity ... ..	897	921	4·27
Accident ... ..	1,255	1,071	4·96	Congenital Debility ...	247	318	1·47
Cerebral Haemorrhage	1,027	743	3·44	Other Developmental Diseases ... ..	295	302	1·40
Diseases of the Arteries, Atheroma, etc. ...	379	573	2·65	Malformations ... ..	229	249	1·15
Bronchitis ... ..	410	462	2·14	Whooping Cough ...	132	178	·82
Influenza ... ..	317	325	1·51	Convulsions of Infants... ..	67	74	·34
Puerperal Diseases ...	276	309	1·43	Measles ... ..	90	55	·26
Diabetes ... ..	263	279	1·29	Infantile Paralysis ...	14	10	·05
Suicide ... ..	293	248	1·15	Minor Diseases of the Nervous System ...	717	600	2·78
Diarrhoea and Enteritis*	259	240	1·11	Minor General Diseases ...	523	479	2·22
Hernia, Intestinal Obstruction ... ..	209	221	1·02	Minor Genito-Urinary Diseases ... ..	359	373	1·73
Diphtheria ... ..	147	220	1·02	Minor Diseases of the Digestive System ...	351	309	1·43
Leucæmia, Anæmia, Chlorosis ... ..	235	218	1·01	Minor Diseases of the Respiratory System ...	253	284	1·31
Appendicitis ... ..	187	183	·85	Minor Diseases of the Circulatory System ...	80	111	·51
Meningitis ... ..	179	159	·74	Minor Tuberculous Diseases ... ..	79	79	·37
Insanity ... ..	92	148	·69	Minor Epidemic Diseases	87	49	·23
Diseases of the Stomach	178	147	·68	All other Causes of Death	477	493	2·28
Cirrhosis of the Liver ...	122	109	·51				
Typhoid Fever ... ..	80	108	·50				
Tuberculous Meningitis..	63	55	·25				
Brysipelas ... ..	35	33	·15				
Epidemic Cerebro-spinal Meningitis ... ..	23	29	·13				
				Grand Total ...	22,183	21,594	100·00

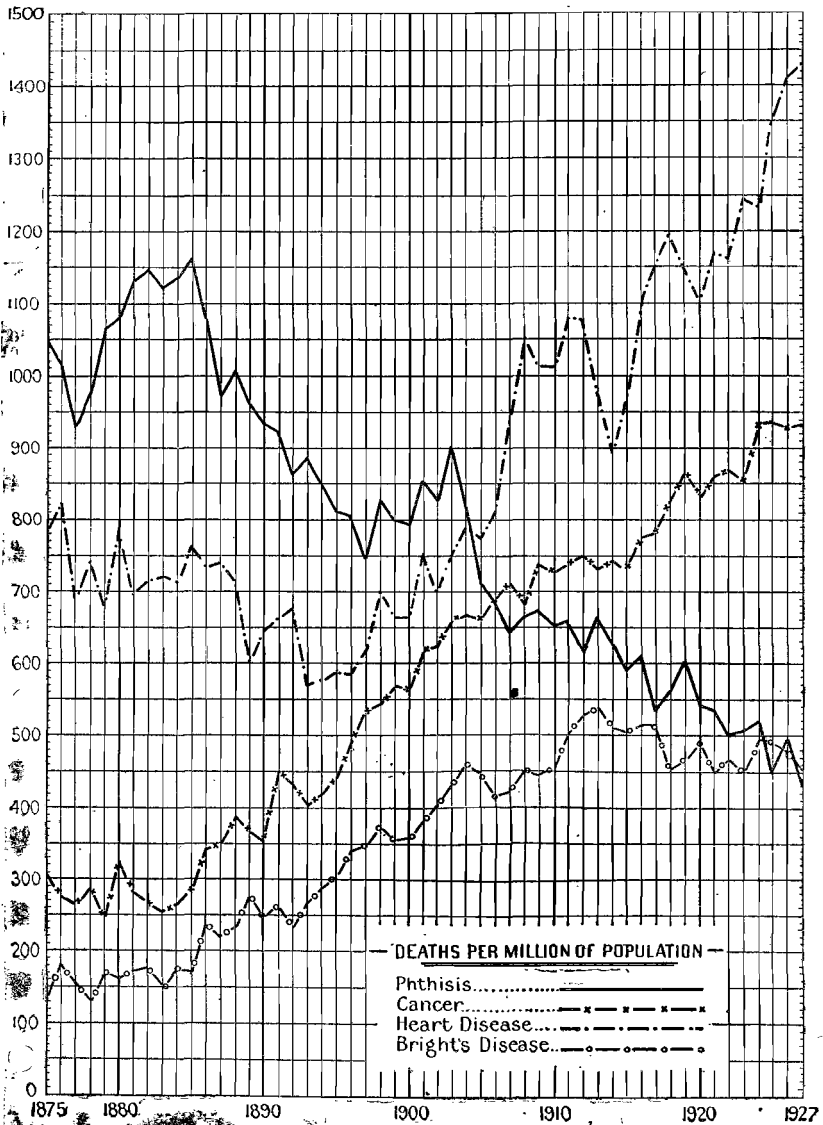
\* Deaths of persons over 2 years of age.

Generally speaking, the mortality from tuberculosis of the respiratory system, bronchitis, diarrhoea and enteritis, diphtheria and typhoid fever is decreasing, while that from diseases of the heart, cancer, and accidents is increasing. The mortality from Bright's disease increased steadily until 1917, from 1918 to 1924 there appeared to have been a slight decline, but in 1925 and 1926 there was an appreciable increase. In the case of cerebral hæmorrhage the apparent increase above the average of the preceding quinquennium, was due to the additional weight given to the disease in the revised manual of joint causes of death brought into operation in 1925, which gave priority to cerebral hæmorrhage when stated as a cause of death in combination with diseases of the arteries, atheroma, etc.

The figures in the above table cannot be compared as absolute numbers of the same relative importance because of the limitations of a system of classification depending upon a large number of independent observers with varying degrees of diagnostic equipment, and again because the age

incidence is very different for the several diseases. Some, diseases of the heart and diseases of the arteries, etc., affect persons of advanced years, and from the standpoint of rate of natural increase are relatively less important

**DEATH RATES—PRINCIPAL DISEASES—1875-1927.**



than are diseases like tuberculosis and pneumonia, which cause heavy mortality between ages 20 and 65. Some causes of death, such as pneumonia and senility, are not clearly defined. It is believed that, while pneumonia is the real cause of death in many cases, it is in some instances wholly or partly a consequence of some other disease which initiated the train of events leading to death, and therefore is the true cause. The heading senility is unsatisfactory, as it embraces mainly the deaths of aged persons

in respect of whom the cause of death is not definitely stated in the returns. Many deaths of aged persons formerly attributed to senility are now ascribed to some form of heart failure, with the result that deaths from senility, so described, have shown a considerable decrease.

Interesting features of the table are that 14 per cent. of all deaths in the quinquennium 1921-25 were due to diseases whose incidence is entirely or almost entirely limited to early childhood. Of the remaining deaths, more than half are due to a limited number of major causes, of which cancer, pneumonia, tuberculosis, and Bright's disease are most prominent.

In the pages which follow the experience in respect of a number of individual diseases is traced. Where the period covered is of considerable length, due allowance must be made for the effect of improvements in methods of diagnosis and classification and the general advance of medical knowledge. In some cases these factors have exercised a considerable influence upon the trend of the figures.

Reliable statistics are not available to show the number of cases of the various diseases occurring annually, but statistics have been collected of the occurrence of communicable diseases among school children since 1913. These show that epidemics of such diseases as measles, whooping-cough, scarlet fever, and diphtheria are of periodical recurrence, and, from time to time, assume large proportions. Although approximately 80 per cent. of the deaths from these diseases are among children under school age, it is observed that the rate of mortality from these diseases rises and falls with the recurrence of epidemics among school children. Statistics of the occurrence of infectious diseases among school children are collected quarterly, with the object of facilitating steps towards preventive and remedial measures.

#### *Typhoid Fever.*

Typhoid fever is a preventable disease, and does not obtain a foothold where a proper system of sanitation has been installed and ordinary health precautions have been taken; a great improvement has been attained in these respects during the last four decades, and the mortality from typhoid, which was formerly heavy, has been reduced to very small proportions. A steady improvement is still apparent.

The number of deaths from typhoid fever, and the equivalent annual rates of mortality per 10,000 of population since 1884, are stated below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	1,356	5·12	1,115	5·13	2,471	5·13
1889-93	959	3·11	714	2·74	1,673	2·94
1894-98	1,107	3·27	731	2·46	1,838	2·89
1899-1903	1,054	2·93	733	2·25	1,787	2·61
1904-08	748	1·93	507	1·42	1,255	1·69
1909-13	773	1·75	464	1·15	1,237	1·47
1914-18	569	1·17	330	0·71	899	0·95
1919-23	353	0·66	241	0·47	594	0·55
1920-24	334	0·61	228	0·43	562	0·52
1920	81	0·77	51	0·50	132	0·64
1921	76	0·71	53	0·51	129	0·61
1922	63	0·58	37	0·35	100	0·47
1923	57	0·51	47	0·44	104	0·47
1924	57	0·57	40	0·32	97	0·43
1925	58	0·50	22	0·20	80	0·35
1926	43	0·36	37	0·32	80	0·34
1927	47	0·38	21	0·18	68	0·29

The rate of mortality from typhoid fever in 1927 represents only 29 persons per million living. This rate is 44 per cent. below that of the quinquennium 1920-24.

The decrease in the number and proportion of deaths due to this disease after 1888 was very marked, and may be traced to the operation of the Dairies Supervision Act, which became law in 1889. The rates show a further marked improvement as from 1903, and have dropped regularly, until that for 1926 was only 6·6 per cent. of the rate for the period 1884-88. The rate is considerably higher than that experienced in England and Wales, where during 1926 only 10 persons died per million living.

Owing to a superior system of sewage, and to the greater attention given to sanitary inspection and garbage disposal, the rate of mortality from typhoid fever in the metropolis has almost invariably been very much lower than that of the remainder of the State, though it was higher during 1919, and only slightly lower in 1922. The following table provides a comparison of the experience in the metropolis and remainder of the State since 1894. Owing to the incidence of mild epidemics the rates of mortality fluctuate from year to year, and though both are improving, the improvement is more marked outside the metropolis.

Period.	Metropolis.		Remainder of State.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894-98	507	2·26	1,331	3·24
1899-1903	426	1·72	1,361	3·12
1904-08	334	1·21	921	1·97
1909-13	363	1·10	874	1·70
1914-18	319	0·81	580	1·04
1919-23	233	0·51	361	0·61
1920-24	194	0·41	368	0·61
1920	48	0·54	84	0·71
1921	49	0·54	80	0·67
1922	43	0·46	57	0·47
1923	32	0·33	72	0·59
1924	22	0·22	75	0·61
1925	32	0·31	48	0·38
1926	23	0·22	57	0·44
1927	19	0·18	49	0·38

Most deaths from typhoid fever occur during the summer and autumn. In 1926 there were 31 deaths during the summer months of December, January, and February, and 27 during the autumn months of March, April, and May; making a total of 58 out of 80 in the whole year.

#### *Smallpox.*

There has been no death from smallpox in New South Wales since the year 1915.

Vaccination is not compulsory in this State, and the precaution is rarely adopted unless epidemics threaten.

During the year 1913 about 425,000 persons voluntarily submitted themselves to vaccination.

*Measles.*

Although measles is a common complaint, the resultant mortality is comparatively very small. The following statement shows the deaths from this cause, and the rate per 10,000 living, for each sex.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	166	0·63	165	0·76	331	0·69
1889-93	393	1·28	369	1·41	762	1·34
1894-98	338	1·00	324	1·09	662	1·04
1899-1903	160	0·44	219	0·67	379	0·55
1904-08	82	0·21	107	0·30	189	0·25
1909-13	309	0·70	267	0·66	576	0·68
1914-18	301	0·62	221	0·48	522	0·55
1919-23	207	0·39	183	0·35	390	0·37
1920-24	222	0·40	196	0·37	418	0·39
1920	95	0·90	94	0·93	189	0·91
1921	21	0·17	18	0·20	39	0·19
1922	6	0·05	10	0·09	16	0·07
1923	81	0·72	57	0·53	138	0·63
1924	19	0·17	17	0·16	36	0·16
1925	13	0·11	17	0·15	30	0·13
1926	49	0·41	41	0·36	90	0·39
1927	8	0·07	12	0·10	20	0·09

The high rates during the second and third quinquennial periods were due to severe outbreaks in 1893 and 1898.

Measles is a disease chiefly affecting children, and is periodically epidemic. It was epidemic in 1898-9, when 719 deaths were recorded; in 1912, when there were 371 fatal cases; and in 1915, when there were 324. Of the number first cited, 233 were deaths of children under 5 years of age, and 54 were those of children under 1 year of age. During the year 1926 deaths from measles among children under 1 year of age numbered 16, and among children under 5 years of age 60.

According to returns obtained by the Department of Education, there were extensive epidemics of measles among school children in 1918, 1920, and 1923, and although these epidemics (particularly that of 1923) were more widespread than the outbreak of 1915, the mortality recorded was very much less.

*Scarlet Fever.*

In 1927 the number of deaths from this disease was 112, equivalent to a rate of 0·47 per 10,000 of the population. In 1926 the corresponding numbers and rates were 53 and 0·23 respectively. Of these there occurred in the



metropolis 42, and in the remainder of the State 11, showing rates of 0·41 and 0·9 per 10,000 for the respective divisions. The rate of mortality from this cause during 1926 was nearly double, and during 1927 nearly four times, the rate during the preceding quinquennium, which was a period of very favourable experience. Since 1884 the deaths from scarlet fever and the rates for each sex have been as follow:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	287	1·08	342	1·57	629	1·30
1889-93	185	0·60	236	0·90	421	0·74
1894-98	162	0·48	218	0·73	380	0·60
1899-1903	84	0·23	114	0·35	198	0·29
1904-08	88	0·23	91	0·26	179	0·24
1909-13	41	0·09	57	0·14	98	0·12
1914-18	112	0·23	161	0·35	273	0·29
1919-23	34	0·06	38	0·07	72	0·07
1920-24	38	0·07	46	0·09	84	0·08
1920	14	0·13	10	0·10	24	0·12
1921	3	0·03	5	0·05	8	0·04
1922	5	0·05	5	0·05	10	0·05
1923	5	0·04	8	0·07	13	0·06
1924	11	0·10	18	0·16	29	0·13
1925	9	0·08	18	0·16	27	0·12
1926	28	0·24	25	0·22	53	0·23
1927	47	0·38	65	0·56	112	0·47

Like measles, scarlet fever is an epidemic disease which mainly affects children, the rate generally being somewhat higher for females than for males. During 1926, 39 of the 53 deaths were of children under 10 years of age, and of these 24 were males and 15 females. Though not nearly so fatal as formerly, its sporadic recrudescence demands constant vigilance on the part of the authorities responsible for the health of the State. The death-rate from this cause of mortality has fluctuated since the year 1884, when it was very heavy, the rate per 10,000 inhabitants having ranged from 2·59 in that year to 0·04 in 1921.

Scarlet fever was epidemic among school children in 1915 and 1916, in which years 205 deaths were recorded in the State from this disease. Rather more extensive outbreaks occurred among school children in 1923 and 1924, but the total number of deaths from scarlet fever in these two years was only 42.

*Whooping-cough.*

Whooping-cough is another disease which mainly affects children, and to which, like scarlet fever, females are more susceptible than males. The number of deaths and rates of mortality for each sex since 1884, are shown below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	327	1.24	472	2.17	799	1.66
1889-93	495	1.61	666	2.55	1,161	2.04
1894-98	343	1.01	502	1.69	845	1.33
1899-1903	573	1.59	726	2.23	1,299	1.90
1904-08	369	0.95	445	1.25	814	1.10
1909-13	377	0.86	436	1.09	813	0.97
1914-18	335	0.69	382	0.82	717	0.75
1919-23	440	0.82	497	0.96	937	0.89
1920-24	422	0.77	465	0.88	887	0.83
1920	167	1.58	202	2.00	369	1.78
1921	126	1.17	131	1.27	257	1.22
1922	43	0.39	49	0.46	92	0.43
1923	44	0.39	42	0.39	86	0.39
1924	42	0.37	41	0.38	83	0.37
1925	138	1.19	185	1.66	323	1.42
1926	67	0.57	65	0.55	132	0.57
1927	96	0.79	115	0.99	211	0.89

Whooping-cough may justly be regarded as a permanent menace and a constantly recurring ailment of infancy and childhood, for the table shows that periods of decline have generally been followed by increases in the death-rate, which is maintained by epidemic outbreaks, one such occurring in 1907, when 594 cases proved fatal, and the death-rate was the highest since 1878. An examination of the table on a later page showing the seasonal prevalence of diseases indicates that whooping-cough is most fatal during the months of December, January, and February.

Epidemics of whooping-cough among school children are only second in magnitude to those of measles. The records show that, during the past twelve years, this disease has affected large numbers of school children every year and that virulent epidemics occurred in 1913, 1920, 1921, and 1925. The total number of deaths from whooping-cough in these years was 344, 369, 257, and 323 respectively.

*Diphtheria and Croup.*

As causes of death these diseases decreased in importance between 1884 and 1904. During the next ten years there was a slight increase in mortality, but the ten years which have since elapsed have shown an appreciable decline.

Diphtheria and croup, under which heading membranous laryngitis is included, caused 179 deaths in 1927. Deaths from these diseases in the metropolitan area numbered 67, and those in the remainder of the State 112, the respective corresponding rates per 10,000 living for each division being 0·62 and 0·87. The following table shows the number of deaths and the rates in quinquennial periods since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	1,069	4·04	980	4·51	2,049	4·25
1889-93	1,433	4·65	1,399	5·36	2,832	4·98
1894-98	712	2·10	710	2·39	1,422	2·24
1899-1903	310	0·86	299	0·92	609	0·89
1904-08	367	0·95	338	0·95	705	0·95
1909-13	604	1·37	640	1·59	1,244	1·48
1914-18	659	1·36	682	1·47	1,341	1·41
1919-23	583	1·09	509	0·99	1,092	1·04
1920-24	613	1·13	564	1·07	1,182	1·10
1920	138	1·31	126	1·25	264	1·28
1921	157	1·46	149	1·44	306	1·45
1922	111	1·01	100	0·95	211	0·98
1923	111	0·99	65	0·61	176	0·80
1924	101	0·89	124	1·13	225	1·01
1925	61	0·53	58	0·52	119	0·52
1926	87	0·74	60	0·53	147	0·64
1927	99	0·82	80	0·69	179	0·75

Mortality from diphtheria was heaviest during two lengthy periods, viz., from 1881 to 1898, and omitting the year 1919, from 1909 to 1921, although the rate was much lower in the latter period than in the former. During the past twelve years diphtheria was most prevalent among school children in 1913 and 1921, but considerable numbers of cases were recorded in other years, the numbers fluctuating from year to year in close sympathy with those of whooping-cough.

The experience of the quinquennial period 1922-26 shows the disease to be most fatal during the months of April, May, and June. Ninety-six per cent. of the persons who died from diphtheria during 1926 were under 10 years of age, and about 80 per cent. were under 5 years of age.

Since the year 1923 the Department of Public Health has investigated the Schick test for determining susceptibility to diphtheria. At 2 years of age, about 70 per cent. of children are liable to contract the disease, the susceptibility diminishing with age. Roughly, 30 per cent. of children tested between ages 5 and 15 were found to be susceptible. It is claimed that lasting immunity can be achieved by a simple and inexpensive inoculation, and

that diphtheria can be eradicated by the properly enforced application of this provision. Although, as noted above, considerable improvement in the rate of mortality from diphtheria and croup has been effected since 1898, it still remains high.

*Influenza.*

During 1927 there were 231 deaths due to influenza, the rate of mortality being below the average of the previous quinquennium. Prior to 1891 the average annual number of deaths was 44, but during that year 988 deaths occurred from this cause. From 1892 to 1917 the average number of deaths was 198, but in 1918 an outbreak resulted in 372 deaths. This was completely overshadowed by the disastrous epidemic in 1919, when 6,387 persons died from the disease. An examination of the experience of that year will be found in the 1920 issue of this Year Book.

In the following table the deaths at each outbreak are shown together with those in the intervening periods:—

Period.	Deaths.			Annual Rate per 10,000.
	Male.	Female.	Total.	
1875-1890	388	322	710	0.52
1891	549	439	988	8.65
1892-1917	2,799	2,397	5,196	1.27
1918	218	154	372	1.91
1919	3,851	2,536	6,387	31.93
1920	132	127	259	1.25
1921	204	195	399	1.89
1922	124	98	222	1.03
1923	263	243	511	2.33
1924	136	125	261	1.17
1925	76	67	143	0.63
1926	172	145	317	1.37
1927	136	105	231	0.97

Prior to 1919 influenza was essentially a disease fatal to young children and persons past 45 years of age, but in the severe world-wide epidemic of that year the disease was most fatal to persons in the prime of life (25 to 44 years). Comparing the deaths since 1921 with those of 1918 and 1919 in age groups representing approximately the different stages of life, it will be seen that the character of the disease is reverting to the type experienced prior to 1919.

Age Group.	Deaths per cent. of Total					
	1918.	1919.	1921.	1924.	1925.	1926.
Under 10 ... ..	13	6	11	10	19	6
10-24 ... ..	8	12	6	5	9	8
25-44 ... ..	15	53	27	18	19	16
45-64 ... ..	17	22	27	25	24	24
65 and over ... ..	47	7	29	42	29	46
Total... ..	100	100	100	100	100	100

*Tuberculous Diseases.*

The number of deaths ascribed to the several classified forms of tuberculous diseases during 1927 was 1,187, of 5.2 per cent. of the actual mortality in the State, and equal to 5.0 per 10,000 living—a rate slightly below the average for the preceding quinquennium.

A comparison of death-rates from tuberculous diseases in the Australian States and New Zealand for the last five years is given below. The rates are stated per 1,000 of the total population, and do not take account of differences in the distribution of age and sex in the respective populations, which have a material influence on the rates.

State.	Death-rate from tuberculous diseases per 1,000 of Total Population.					
	1921.	1922.	1923.	1924.	1925.	1926.
New South Wales ...	0.59	0.56	0.56	0.56	0.51	0.55
Victoria ...	0.80	0.68	0.74	0.70	0.66	0.63
Queensland ...	0.48	0.42	0.46	0.42	0.42	0.45
South Australia ...	0.79	0.74	0.71	0.72	0.70	0.70
Western Australia ...	0.85	0.83	0.66	0.68	0.78	0.72
Tasmania ...	0.72	0.68	0.75	0.76	0.64	0.62
Commonwealth ...	0.68	0.61	0.62	0.61	0.58	0.59
New Zealand ...	0.65	0.64	0.62	0.57	0.51	0.54

Mortality from tuberculous diseases is usually lower in New South Wales than in any other Australian State except Queensland.

#### *Tuberculosis of the Respiratory System.*

Tuberculosis of the respiratory system, or phthisis, was the cause of 1,056 deaths, or 89 per cent. of the number due to tuberculosis during the year 1927, being third in the order of magnitude among the fatal diseases of the State. The mortality rate per 10,000 living was lower than in any previous year. The male rate in 1927 was 5.36 and the female rate 3.49.

The following table shows the number of deaths from tuberculosis of the respiratory system and the rates for each sex since 1884. This cause of death was formerly designated tuberculosis of the lungs:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,132	11.83	2,022	9.30	5,154	10.69
1889-93	3,269	10.61	1,925	7.38	5,194	9.13
1894-98	3,191	9.43	1,983	6.68	5,174	8.15
1899-1903	3,322	9.24	2,304	7.08	5,626	8.21
1904-08	2,985	7.72	2,184	6.13	5,169	6.96
1909-13	3,220	7.31	2,286	5.69	5,506	6.54
1914-18	3,373	6.95	2,194	4.72	5,567	5.86
1919-23	3,484	6.50	2,173	4.21	5,657	5.38
1920-24	3,442	6.28	2,164	4.11	5,606	5.21
1920	700	6.62	418	4.13	1,118	5.40
1921	703	6.54	426	4.12	1,129	5.35
1922	678	6.19	402	3.81	1,080	5.02
1923	659	5.90	455	4.24	1,114	5.08
1924	702	6.17	463	4.24	1,165	5.22
1925	614	5.29	409	3.67	1,023	4.49
1926	691	5.84	453	3.98	1,144	4.93
1927	649	5.36	407	3.49	1,056	4.45

The general rate has decreased more than 50 per cent. in the period under review, that for females slightly more than that for males. The female rate ranges from 62 per cent. of the male rate in the year 1922 to 79 per cent. during the periods 1904-08 and 1884-88.

The improvement in the death-rate is due to many factors, such as the regulation of immigration, conditions of employment, etc., and the enforcement of the various Health Acts, but principally to the adoption of improved methods of medical treatment.

The table below shows the death-rates from tuberculosis of the respiratory system or phthisis according to age and sex in decennial periods since 1891.

Age Group. Years.	Deaths per 10,000 living—Phthisis.								
	Males.			Females.			Persons*		
	1891-1900.	1901-1910.	1911-1920.	1891-1900.	1901-1910.	1911-1920.	1891-1900.	1901-1910.	1911-1920.
0-4 .. ..	1.06	1.17	.68	.97	.97	.62	1.01	1.07	.66
5-9 .. ..	.94	.81	.18	.57	.89	.25	.45	.35	.21
10-14 .. ..	.54	.52	.28	1.08	1.07	.59	.81	.79	.43
15-19 .. ..	3.57	2.86	2.24	4.71	5.30	3.25	4.14	4.07	2.75
20-24 .. ..	10.69	7.97	6.67	9.64	8.94	6.88	10.17	8.45	6.78
25-34 .. ..	15.68	11.35	9.85	13.75	11.16	8.61	14.81	11.28	9.23
35-44 .. ..	13.28	14.79	12.08	13.39	11.90	7.70	16.22	13.48	10.00
45-54 .. ..	19.04	16.56	14.34	10.64	9.76	6.94	15.67	13.63	10.97
55-64 .. ..	21.98	17.44	14.75	11.17	10.15	6.71	17.60	14.28	11.21
65-74 .. ..	17.09	17.02	13.00	7.02	9.07	6.85	12.97	13.59	10.21
75 and over ..	4.67	7.45	6.19	2.44	4.64	4.01	3.73	6.19	5.16
All ages..	9.63	8.06	7.00	6.77	6.48	4.81	8.30	7.31	5.94

The decrease shown in female rates is slightly greater than that in male rates. The rates according to age, however, show a remarkable difference when the sexes are compared. For males the rates increase steadily until age 60 is approached, after which a rapid decrease is shown.

For females the rates reach their highest point in the age group 25-34, and do not decline in after life in any marked degree.

The rates for the whole population, while negligible under the age of 15 years, increase from that age to 25 years, and then remain practically constant until 75 is reached, after which age the rate drops quickly.

Pulmonary tuberculosis is a notifiable disease within the metropolis, in the area controlled by the Hunter District Water Supply and Sewerage Board, and in the Katoomba Municipality and Blue Mountains Shire.

*Other Tuberculous Diseases.*

Of the 1,286 deaths during 1926 from tuberculosis, only 142 were from tuberculosis of organs other than the lungs. Of the latter, 47 equivalent to 33 per cent., were of children under 5 years of age. Taking the age group 0-4 years, and all ages, the following table shows the distinct improvement in the death-rates since the decennium 1891-1900:—

Period.	Deaths per 10,000—Tuberculosis other than Phthisis.					
	Ages 0 to 4 Years.			All Ages.		
	Males.	Females.	Total.	Males.	Females.	Total.
1891-1900	15.93	13.41	14.69	2.76	2.62	2.69
1901-1910	7.11	5.98	6.55	1.70	1.51	1.61
1911-1920	3.13	2.96	3.06	1.00	.86	.93
1921	2.29	1.96	2.16	.83	.58	.71
1922	1.36	2.39	1.87	.72	.57	.65
1923	1.72	1.29	1.51	.67	.51	.59
1924	1.62	0.95	1.29	.39	.43	.41
1925	1.29	1.64	1.47	.55	.56	.56
1926	1.97	1.64	1.85	.67	.55	.61

*Cancer.*

In 1927 the deaths from cancer numbered 2,212, equal to a rate of 9.32 per 10,000 living. The rate of mortality ruling since 1924 has been much higher than in any preceding period, the average for these four years being 9.32 per 10,000 living as compared with 3.30 for a similar period forty years previously. The total for 1927 included 1,169 males and 1,043 females, the rates being 9.66 and 8.97 per 10,000 living of each sex respectively.

Classified according to the parts of the body affected and arranged in order of fatality, cancer caused the following deaths in 1926:—Stomach and liver, 775; peritoneum, intestines, and rectum, 313; female genital organs, 244; buccal cavity, 156; breast, 144; skin, 69, and other organs, 456.

The following table shows the deaths and rates per 10,000 living of each sex since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	959	3.25	732	3.37	1,591	3.30
1889-93	1,262	4.10	1,038	3.96	2,300	4.04
1894-98	1,719	5.09	1,387	4.68	3,106	4.89
1899-1903	2,295	6.38	1,877	5.77	4,172	6.09
1904-08	2,671	6.91	2,418	6.78	5,089	6.85
1909-13	3,362	7.63	2,860	7.12	6,222	7.39
1914-18	3,886	8.00	3,458	7.44	7,344	7.73
1919-23	4,738	8.84	4,292	8.32	9,030	8.58
1920-24	4,889	8.92	4,485	8.52	9,374	8.72
1920	922	8.72	807	7.98	1,729	8.36
1921	939	8.74	878	8.50	1,817	8.62
1922	962	8.78	909	8.62	1,871	8.70
1923	979	8.76	900	8.38	1,879	8.57
1924	1,087	9.56	991	9.07	2,078	9.32
1925	1,163	10.02	970	8.70	2,133	9.37
1926	1,175	9.93	982	8.62	2,157	9.29
1927	1,169	9.66	1,043	8.97	2,212	9.32

In New South Wales the crude male rate is usually the higher, which is contrary to the experience of England and Wales, where the crude female rate is usually the higher. In the period 1911-1914 the standardised female rate in England was nearly 9 per cent. higher than the standardised male rate, but in 1922 and 1923 the standardised rates for both sexes were practically equal, and in 1924 the male rate was greater than the female rate for the first time on record. This change is attributed by the Registrar-General in his Annual Review to the operation of two factors which probably exercise some influence in New South Wales, viz.—(i) The success of operations upon the relatively more accessible cancers of females, and (ii) the better diagnosis of the less accessible cancers of females as a consequence of improved medical appliances and knowledge. In England and Wales, also, the combined crude rate is usually much higher, and is increasing more rapidly than in New South Wales. However, the standardised rate in England has shown only a slight increase since pre-war years.

The ages of the 2,157 persons who died from cancer in New South Wales during 1926 ranged from one month to 97 years, but the disease is one of advanced age, 97 per cent. of the persons who died from cancer in 1926 being 35 years and over.

In the following table are shown the death-rates from cancer for each sex in age groups above 25 years, in decennial periods since 1891:—

Age Group. Years.	Deaths per 10,000 Living—Cancer.								
	Males.			Females.			Persons.		
	1891- 1900.	1901- 1910.	1911- 1920.	1891- 1900.	1901- 1910.	1911- 1920.	1891- 1900.	1901- 1910.	1911- 1920.
25-34	·94	·86	1·09	1·24	1·37	1·47	1·07	1·12	1·28
35-44	3·63	3·93	3·52	6·79	7·10	6·34	4·96	5·39	4·86
45-54	12·13	12·53	13·55	17·93	19·21	17·35	14·52	15·41	15·23
55-64	30·36	34·96	35·43	33·20	36·54	33·50	31·52	35·65	34·59
65-74	51·32	72·00	69·19	43·00	62·06	59·07	47·18	67·71	64·60
75 and over ..	63·78	86·36	105·94	62·95	79·96	93·55	63·43	83·49	100·08
All Ages ....	4·99	6·90	8·06	4·77	6·62	7·37	4·88	6·77	7·72

Prior to the 1911-20 decennium the female rates were consistently higher than the male up to and including the age group 55-64 years, after which the position was reversed. After 1910 the female rate was lower than the male in age groups 55-64.

Cancer is probably the most feared of all diseases, inasmuch as no specific remedy is known, and in all countries for which records are kept the death-rate is increasing. Steps have been taken by the University of Sydney to organise research work in relation to the disease. Laboratories have been equipped within the University, and research workers have been engaged to conduct investigations locally and abroad. As a result of a public appeal for funds to aid cancer research and treatment the sum of £120,000 was collected in 1926.

In the following table the rates of mortality from cancer are given for the Australian States and New Zealand. The comparison is upon the crude basis of total population and is uncorrected for age and sex incidence.

State.	Cancer Death-rate per 1,000 of Total Population.					
	1921.	1922.	1923.	1924.	1925.	1926.
<i>New South Wales</i> ...	0·86	0·87	0·86	0·93	0·94	0·93
Victoria ...	0·95	1·00	1·02	1·00	0·98	1·01
Queensland ...	0·79	0·86	0·83	0·79	0·81	0·88
South Australia ...	0·92	0·95	0·95	0·94	0·93	0·95
Western Australia ...	0·83	0·89	0·76	0·91	0·81	0·90
Tasmania ...	0·83	0·87	0·77	0·92	0·92	0·88
Commonwealth ...	0·87	0·91	0·89	0·93	0·92	0·94
New Zealand...	0·85	0·85	0·83	0·96	0·91	0·99

#### Diabetes.

The proportion of deaths due to diabetes has been growing steadily during the past twenty years and now it ranks thirteenth in the list of individual causes arranged in order of number of deaths. Although the disease is responsible for little more than 1 per cent. of the annual number of deaths the average rate of mortality from diabetes has increased by approximately 57 per cent. during the past twenty years.



The deaths due to diabetes in 1926 numbered 263, equal to a rate of 1.19 per 10,000 living. The rate for males was 0.79 and for females 1.48 per 10,000 living of each sex. Most of the deaths occurred after middle life, 231 out of 263 deaths in 1926 being persons over 45 years of age.

The number of deaths in 1927 was 318.

#### *Meningitis.*

The diseases included under the above heading—encephalitis, simple meningitis, and non-epidemic cerebro-spinal meningitis—caused 157 deaths during 1927, the corresponding rate being 0.66 per 10,000 living. Of this number 90 were males and 67 females, equivalent to rates per 10,000 living of each sex of 0.74 and 0.58 respectively. The deaths in the metropolis and country were 78 and 79, with corresponding rates per 10,000 living of 0.72 and 0.74.

Of those who died during 1926, 67, or 35 per cent., were under 5 years of age.

#### *Hæmorrhage of the Brain.*

Mortality from this cause showed a slow but sustained increase for twenty years prior to the quinquennium 1909-13, then there was an appreciable decline until 1924. In the following year, however, the revised manual of causes of death was utilised, giving greater preference to cerebral hæmorrhage as cause of death when found in combination with diseases of the arteries, arterioma, etc. Therefore the rates in 1925 and subsequent years are not strictly comparable with those of earlier years.

The number of deaths due to cerebral hæmorrhage and apoplexy, during the year 1927 was 1,067, of which 525 were those of males and 542 those of females. The rate was 4.49 per 10,000 living, or 4.33 for males and 4.66 for females.

The following table shows the number of deaths and the rates for both sexes from cerebral hæmorrhage and apoplexy in quinquennial periods since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000
1884-88	778	2.97	467	2.15	1,245	2.58
1889-93	796	2.58	618	2.37	1,414	2.48
1894-98	943	2.79	710	2.39	1,653	2.60
1899-1903	1,050	2.92	788	2.42	1,838	2.68
1904-08	1,303	3.31	1,039	2.91	2,342	3.15
1909-13	1,627	3.69	1,439	3.58	3,066	3.64
1914-18	1,693	3.49	1,431	3.08	3,124	3.29
1919-23	1,735	3.24	1,587	3.08	3,322	3.16
1920-24	1,729	3.15	1,602	3.04	3,331	3.10
1925	430	3.78	434	3.80	872	3.64
1926	539	4.56	488	4.29	1,027	4.42
1927	525	4.33	542	4.66	1,067	4.49

*Convulsions of Children.*

Convulsions of children (under 5 years of age) caused 67 deaths during 1926, or 0.29 per 10,000 living at all ages, which is 9 per cent. below the rate for the previous quinquennium. The corresponding number of deaths in 1927 was 47.

The following table shows the number of deaths and the rates from convulsions of children for both sexes at intervals since 1875:—

Year.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1875	297	9.34	205	7.69	502	8.59
1880	388	9.75	297	8.98	685	9.40
1885	428	8.38	392	9.41	820	8.84
1890	328	5.47	274	5.45	602	5.46
1895	280	4.19	243	4.17	523	4.18
1900	203	2.84	168	2.63	371	2.74
1905	119	1.57	92	1.32	211	1.45
1910	103	1.23	71	0.91	174	1.08
1915	91	0.93	67	0.74	158	0.84
1920	57	0.47	39	0.33	96	0.40
1923	39	0.35	39	0.36	78	0.36
1924	35	0.31	21	0.19	56	0.25
1925	33	0.28	20	0.18	53	0.23
1926	42	0.35	25	0.22	67	0.29
1927	31	0.26	16	0.14	47	0.20

The rates of mortality show a remarkably steady decline. The disease, once of formidable importance, is now only a minor cause of death. Being limited to children under 5 years of age, the rates are better stated proportionately at that age-period. On this basis the death-rate in 1926 was 2.57 as compared with 2.78 of the previous quinquennium. Of the total deaths during 1926, 56 occurred during the first year of life, the equivalent rate being 1.05 per 1,000 births. The deaths of males were more numerous than of females, the numbers during the first year of life being 34 and 22 respectively, for all children under 5 years of age, 42 males and 25 females. The continuous decline shown in this cause of infantile mortality is more apparent than real, being due largely to increasing skill in diagnosing the diseases of children. Numerous deaths having convulsions as their immediate cause are now ascribed to some other cause which led to convulsions.

*Insanity.*

Classed as a distinct disease of the nervous system, insanity causes death from general paralysis of the insane and from other forms of mental alienation. Practically all the persons in New South Wales coming within this classification are under treatment in the various mental hospitals. On the 30th June, 1926, there were 8,436 persons under official cognisance, including 39 patients from the Broken Hill district who were under treatment in South Australian hospitals. The proportion per 1,000 of the population was 3.64, or about 4 per cent. less than the average five years ago.

The number of deaths from this cause was 92 in the year 1926. The death-rate per 10,000 living was 0.65 for males and 0.27 for females.

In England and Wales the corresponding figures in 1926 were 0.85 and 0.45.

In the year 1925-26 there were 660 deaths in mental hospitals, equivalent to 83.9 per 1,000 of the average number of patients in residence. This rate of mortality, however, is not comparable with that of the general population, because the proportion of mental patients under the age of 20 years is very small, due, doubtless, to the facts that many children mentally afflicted are cared for in their homes and that mental alienation frequently does not become manifest until middle or advanced age is reached.

The following statement provides a comparison of the mortality of the adult patients in mental hospitals with that of the general population in age groups:—

Age Group. Years.	Deaths per 1,000—Period 1911-1920.					
	Patients in Mental Hospitals.			General Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
20-29 ... ..	39.4	38.3	38.9	4.4	4.0	4.2
30-39 ... ..	57.0	41.7	50.8	5.7	4.8	5.2
40-49 ... ..	71.9	53.0	63.8	9.5	6.5	8.1
50-59 ... ..	93.0	67.3	82.5	17.2	11.3	14.5
60-69 ... ..	134.4	117.2	123.5	30.2	22.9	28.3
70 and over ... ..	312.9	261.4	293.1	111.1	88.7	100.3
20 and over ... ..	90.8	70.6	82.7	14.3	10.5	12.1

The rates shown above are rendered somewhat abnormal by the inclusion of deaths due to influenza during the epidemic of 1919, but at all ages the rate of mortality among mental patients is very much higher than among the general population. In the earlier years the ratio of the disparity is nearly 10 to 1, but it diminishes as age increases, and after age 70 is passed it is about 3 to 1.

#### *Diseases of the Heart.*

For reasons stated below, statistics of mortality from this cause are of limited value, there being important factors connected with the mode of classification which affect the numbers from year to year.

The ages of persons who died from diseases of the heart during 1926 ranged between 1 week and 102 years, and 89 per cent. of those who succumbed were 45 years or over.

The deaths and the death-rates of each sex since 1884 are shown below:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,149	8.12	1,390	6.39	3,539	7.34
1889-93	2,250	7.30	1,357	5.20	3,607	6.34
1894-98	2,434	7.19	1,478	4.98	3,912	6.16
1899-1903	2,917	8.11	1,932	5.94	4,849	7.08
1904-1908	3,791	9.81	2,727	7.65	6,518	8.77
1909-1913	5,054	11.47	3,633	9.04	8,687	10.31
1914-1918	5,950	12.26	4,168	8.97	10,118	10.65
1919-1923	6,901	12.87	5,384	10.44	12,285	11.68
1924	1,498	13.17	1,258	11.51	2,756	12.36
1925	1,760	15.17	1,307	11.72	3,067	13.48
1926	1,805	15.26	1,475	12.95	3,280	14.13
1927	2,163	17.87	1,622	13.93	3,785	15.94

The classified causes of the total number of deaths include pericarditis, endocarditis and acute myocarditis, angina pectoris and other diseases of the heart. The apparent increase in mortality due to diseases of the heart is probably the result more of specialised biological knowledge, and of the greater attention given to pathological diagnoses, than to any real cause. Many deaths formerly recorded as being caused by senile decay would now doubtless be assigned to some cardiac trouble.

In the following table are shown the death-rates for each sex in the principal age groups in decennial periods since 1891.

Age Groups. Years.	Deaths per 10,000 living—Diseases of the Heart.								
	Males.			Females.			Persons		
	1891- 1900.	1901- 1910.	1911- 1920.	1891- 1900.	1901- 1910.	1911- 1920.	1891- 1900.	1901- 1910.	1911- 1920.
0-4 .. ..	1.14	1.13	.85	.89	.97	.49	1.02	1.05	.42
5-9 .. ..	.99	1.10	.94	.98	1.16	.95	.99	1.13	.94
10-14 .. ..	1.28	1.49	1.13	1.31	1.84	1.49	1.30	1.66	1.30
15-19 .. ..	1.40	1.92	1.78	1.46	1.98	1.75	1.53	1.95	1.76
20-24 .. ..	1.42	1.55	2.18	1.33	1.94	2.02	1.62	1.74	2.09
25-34 .. ..	2.66	2.15	2.88	2.53	2.53	2.70	2.80	2.34	2.79
35-44 .. ..	5.81	5.46	5.67	5.63	6.13	5.00	5.74	5.77	5.35
45-54 .. ..	13.36	13.79	15.01	11.20	11.80	11.90	12.47	12.93	13.59
55-64 .. ..	36.56	35.37	38.52	25.29	28.72	28.47	31.96	32.48	34.09
65-74 .. ..	69.40	91.84	99.07	54.65	78.67	81.78	62.37	86.15	91.21
75 and over ..	104.74	178.83	237.73	89.34	141.23	201.76	98.30	161.94	220.73
All ages .. ..	7.31	9.60	12.03	5.20	7.51	9.09	6.33	8.60	10.60

Although the apparent rate for all ages has nearly doubled during the period reviewed, the increase is practically confined to ages 65 and over, due, as explained in the previous paragraph, to more correct diagnosis in assigning the cause of death.

Under the age of 45 there is very little difference between the rates of males and of females, but thereafter the male rate is distinctly higher, the result, no doubt, of the more strenuous life of males than of females.

*Bronchitis.*

Bronchitis caused 410 deaths during 1926 equal to a rate of 1.77 per 10,000 living. Of the total, 231 were males and 179 females, the corresponding rates per 10,000 of each sex being 1.95 and 1.57. The rate for the State was 11 per cent. lower than that experienced during the previous five years. Deaths in the metropolis numbered 158, and there were 252 in other parts of the State. The corresponding rates were 1.52 and 1.96 per 10,000 living. Of the total deaths, 131 were caused by acute bronchitis, the remainder being due to the disease in its chronic form. Of those persons who died of acute bronchitis, 44 per cent. were under 5 years of age, and 88 per cent. of those who succumbed to chronic bronchitis were 55 years of age and over. Experience shows the disease to be most prevalent during the months of June, July, August, and September.

In 1927 there were 470 deaths from bronchitis.

*Pneumonia.*

It is believed that some deaths attributed to this disease are primarily due to some other cause upon which pneumonia supervened. Pneumonia, including broncho-pneumonia, was the cause of 1,608 deaths during 1926, the equivalent rate per 10,000 living being 6.93, which was 2 per cent.

above the average for the preceding quinquennium. Of the total 928 were males and 680 females. The male and female rates per 10,000 living were 7.84 and 5.97 respectively. The deaths in the metropolis numbered 825, and those in the remainder of the State 783. The rate in the remainder of the State was 23 per cent. lower than that in the metropolis. An analysis of the deaths according to age shows that pneumonia is most destructive in its attacks on children under 5 years of age and adults who have passed the age of 55. The rate of mortality from pneumonia is lowest among children between 10 and 14 years of age, but from then on it increases with advancing age.

Of the persons who died from pneumonia during 1926, 28 per cent. were under 5 years of age and 46 per cent. 50 years of age and over. The following table gives deaths and rates, according to sex, since the year 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,032	7.68	1,301	5.98	3,333	6.91
1889-93	2,158	7.00	1,373	5.26	3,531	6.21
1894-98	2,514	7.43	1,528	5.15	4,042	6.37
1899-1903	3,191	8.87	2,000	6.15	5,191	7.58
1904-1908	2,816	7.28	1,824	5.12	4,640	6.24
1909-1913	2,983	6.77	1,931	4.81	4,914	5.83
1914-1918	3,779	7.78	2,402	5.17	6,181	6.50
1919-1923	4,217	7.87	3,042	5.90	7,259	6.90
1924	892	7.84	619	5.66	1,511	6.78
1925	868	7.48	677	6.07	1,545	6.79
1926	928	7.84	680	5.97	1,608	6.93
1927	1,144	9.45	786	6.75	1,930	8.13

The greatest mortality from pneumonia occurs in the cold weather, and in 1926 there were in the four months, June to September, 710 deaths, or 44 per cent. of the total number from this cause.

The following table shows the death-rates for each sex in the principal age groups, in decennial periods since 1891:—

Age Group. Years.	Deaths per 10,000 living—Pneumonia.								
	Males.			Females.			Persons.		
	1891-1900.	1901-1910.	1911-1920.	1891-1900.	1901-1910.	1911-1920.	1891-1900.	1901-1910.	1911-1920.
0-4 .. ..	21.08	21.19	20.80	17.16	17.70	18.00	19.15	19.48	19.43
5-9 .. ..	1.29	1.31	1.48	1.20	1.27	1.41	1.25	1.29	1.45
0-14 .. ..	.56	.95	.64	.93	1.10	.76	.74	1.02	.70
15-19 .. ..	2.01	2.29	1.69	1.26	1.49	.88	1.64	1.90	1.28
20-24 .. ..	3.08	3.00	2.90	1.90	1.54	1.44	2.50	2.28	2.13
25-34 .. ..	3.91	3.67	3.55	2.60	2.80	2.09	3.32	3.01	2.82
35-44 .. ..	6.69	6.96	5.01	3.97	3.92	2.72	5.55	5.09	3.92
45-54 .. ..	9.61	9.47	8.76	5.38	4.78	4.19	7.85	7.45	6.68
55-64 .. ..	16.96	16.15	12.58	10.78	10.19	8.13	13.92	13.58	10.62
65-74 .. ..	28.21	28.47	23.99	18.68	22.98	19.19	23.89	26.10	21.81
75 and over ..	42.40	46.54	55.56	35.38	50.32	52.19	39.42	48.24	53.97
All ages .. ..	7.46	7.68	7.49	5.22	5.50	5.20	6.42	6.64	6.42

As in most diseases affecting adults, the death-rates are higher for males than for females. About 25 per cent. of deaths occur between the ages of 5 and 45 years. In the age group 0-4 years a slight increase is shown, but between the ages of 20 and 74 the rates have been slowly but steadily decreasing. The increase shown in the age group 75 and over is due probably to more information being now available as to cause of death.

*Diseases of the Digestive System.*

Diseases of the digestive system caused the deaths of 1,166 males and 941 females during 1926, the respective rates per 10,000 living being 9.85 and 8.26. The rate corresponding to the total deaths from these diseases in the State was 9.07 per 10,000 living, and was slightly higher than that experienced during the previous five years. Deaths resulting from diseases of the digestive system were caused in the main by diarrhœa and enteritis, with hernia and intestinal obstruction, appendicitis, and cirrhosis of the liver next in order of fatality.

*Diarrhœa and Enteritis.*

The incidence of these diseases is mainly upon young children, and the pronounced effect of seasonal conditions upon the mortality from this cause is dealt with in discussing deaths of children under 1 year of age. In 1927 there were 730 deaths from these causes, equivalent to a rate of 3.07 per 10,000 of the general population, the rates for males being 3.33 and for females 2.81. The combined rate was over 30 per cent. below the average for the preceding quinquennium. The following table shows the number of deaths and the rates since 1884, distinguishing between the sexes:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,412	12.89	3,048	14.02	6,460	13.40
1889-93	3,451	11.20	2,851	10.92	6,302	11.07
1894-98	4,042	11.94	3,638	12.26	7,680	12.09
1899-1903	4,422	12.29	3,901	11.99	8,323	12.15
1904-1908	3,714	9.61	3,000	8.41	6,714	9.03
1909-1913	4,257	9.66	3,471	8.64	7,728	9.18
1914-1918	3,622	7.46	2,957	6.36	6,579	6.92
1919-1923	3,813	7.11	3,039	5.89	6,852	6.51
1920-1924	3,500	6.38	2,802	5.32	6,302	5.86
1920	919	8.69	795	7.86	1,714	8.29
1921	779	7.25	571	5.52	1,350	6.40
1922	553	5.05	398	3.77	951	4.42
1923	691	6.18	558	5.19	1,249	5.70
1924	558	4.91	480	4.39	1,038	4.65
1925	374	3.22	298	2.67	672	2.95
1926	588	4.97	472	4.14	1,060	4.57
1927	403	3.33	327	2.81	730	3.07

There was a considerable drop in the rate after 1888, due probably to the beneficial operations of the Dairies Supervision Act. During the next fifteen years there was a gradual increase, followed by a marked improvement in 1904, an improvement which was maintained consistently until the years 1919 and 1920, when an upward tendency was manifested. During the last six years the general trend has been downward, though the rate has fluctuated. The unusually low mortality in 1925 was probably due in a large measure to the bountiful rainfall.

Of the total deaths from diarrhœa and enteritis during 1926, 433, or 41 per cent., occurred in the three summer months of January, February, and December; and 64, or 6 per cent., in the months of July, August and September. As a rule, nearly 50 per cent. of the deaths occur in the summer.

Deaths from these diseases are classified into two groups, one including children under 2 years of age, and the other all persons 2 years of age and over. In the first group there were 801, or 76 per cent. of the total, and in the second 259. Additional particulars are shown on page 291.

Since such a large proportion of the deaths is contained in this first group, it is interesting to consider the improvement in the rate shown by the following table, in which the deaths of children under 2 years from diarrhoea and enteritis are related to the total number of children in that age group:—

Year.	No.	Rate per 1,000.	Year.	No.	Rate per 1,000.
1881	733	33·50	1921	988	10·08
1891	985	14·76	1925	532	5·11
1901	1,165	18·10	1926	801	7·67
1911	963	11·21	1927	513	4·96

Although the rate of mortality from these causes is still comparatively heavy, there has been a very marked improvement. The proportion of deaths in 1926 was less than one-fourth of the rate in 1881.

#### *Appendicitis.*

To this cause 187 deaths were ascribed in 1926, the rate being 0·81 per 10,000 living, which is 2 per cent. above the average of the preceding quinquennium. Appendicitis is more fatal to males than to females, the rate for the former in 1926 being 0·98, and for the latter 0·62 per 10,000 living. The number of deaths from appendicitis in 1927 increased to 201.

#### *Cirrhosis of the Liver.*

Information relating to mortality from cirrhosis of the liver is of interest in connection with alcoholism. For a number of years the rate fluctuated, and a slow downward tendency was evident until 1923 when there was a marked increase. During the last three years there has been an increase notwithstanding the fact that the revised classification of joint causes of death adopted in 1925 gives this cause less weight than formerly when it occurs in conjunction with certain other causes of death.

Deaths from cirrhosis of the liver in 1926 numbered 122, the rate being 0·53 per 10,000 living—12 per cent. above the average for the previous quinquennial period. This disease is more prevalent among males than females—the rate for the former in 1926 being 0·74, and for the latter 0·30 per 10,000 living in each sex.

The number of deaths from this cause in 1927 was 116.

#### *Bright's Disease or Nephritis.*

Bright's disease or nephritis has grown in the past forty years from a relatively infrequent cause of death to a prominent position among the major causes, and now it ranks sixth in order of importance amongst those causes of death whose incidence falls upon the general population. From 1884 to 1913 the number of deaths due to the disease gradually increased, and the rate of mortality caused by it more than doubled. A definite retardation in the increase then set in, and the annual average rate of mortality in 1914-18 was 501 per million of population, as against 497 in the preceding quinquennium. This check upon the increase in mortality

from the disease was followed after 1918 by an appreciable decrease, and the average annual rate for the next five years fell to 456 per million inhabitants. In 1924 and 1925, however, the rates exceeded 490.

During 1926 there were 1,467 deaths due to diseases of the genito-urinary system, of which 1,108 were caused by Bright's disease, acute and chronic. The rate was 4.77 per 10,000 living, and for males and females 5.31 and 4.22 respectively, the general rate being 1 per cent. above that experienced during the previous quinquennium. The deaths due to these diseases in the metropolis were 549, and in the rest of the State 559, the corresponding rates per 10,000 living being 5.28 and 4.36. Experience shows that the fatality of these diseases increases slightly during the winter months.

The number of deaths and the rates of mortality due to Bright's disease are shown below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000
1884-88	626	2.37	386	1.78	1,012	2.10
1889-93	907	2.94	570	2.18	1,477	2.60
1894-98	1,291	3.81	821	2.77	2,112	3.33
1899-1903	1,659	4.61	996	3.06	2,655	3.88
1904-1908	2,056	5.32	1,199	3.36	3,255	4.38
1909-1913	2,649	6.01	1,539	3.83	4,188	4.97
1914-1918	3,080	6.34	1,682	3.62	4,762	5.01
1919-1923	2,914	5.44	1,886	3.66	4,800	4.56
1924	683	6.01	420	3.84	1,103	4.95
1925	692	5.96	427	3.83	1,119	4.92
1926	628	5.31	480	4.22	1,108	4.77
1927	671	5.54	469	4.03	1,140	4.80

During the whole period covered by the foregoing table the rate of mortality both for males and for females has more than doubled. The rate for males is about 25 per cent. higher than that for females. Comparatively few persons under 35 years of age die from nephritis, the proportion in 1926 being 11 per cent. of the total.

The following table shows the death-rates for each sex in the principal age groups in decennial periods since 1891:—

Age Group. Years.	Deaths per 10,000 living—Bright's Disease.								
	Males.			Females.			Persons.		
	1891-1900.	1901-1910.	1911-1920.	1891-1900.	1901-1910.	1911-1920.	1891-1900.	1901-1910.	1911-1920.
0-4 .. ..	1.31	1.52	.87	1.44	1.23	.81	1.37	1.38	.84
5-9 .. ..	.44	.48	.33	.44	.50	.27	.44	.49	.30
10-14 .. .	.26	.49	.28	.38	.53	.48	.32	.51	.38
15-19 .. .	.76	.72	.67	.61	.77	.60	.68	.74	.63
20-24 .. .	1.01	1.04	1.33	1.26	1.07	1.20	1.13	1.05	1.31
25-34 .. .	1.80	1.85	1.88	2.38	1.74	1.73	2.06	1.80	1.81
35-44 .. .	4.48	4.96	3.54	4.52	4.12	3.32	4.50	4.25	5.43
45-54 .. .	8.40	9.92	10.73	6.65	7.98	6.65	7.68	9.08	8.87
55-64 .. .	15.39	20.17	22.91	10.47	12.83	12.92	13.39	16.98	18.51
65-74 .. .	26.47	40.87	45.24	15.77	25.06	28.12	21.71	34.05	37.46
75 and over..	29.29	59.12	75.56	16.59	29.65	41.64	23.90	45.89	59.53
All ages ..	3.62	5.16	6.12	2.63	3.33	3.67	3.16	4.29	4.93

Although the total rates show a decided increase during the period reviewed, those for males under 45 and for females under 55 have decreased. The male rate at practically every age is higher than the female. For each sex the rate depends entirely upon the age; a slow increase is noted till the age of 45 is reached, after which the increase is rapid.



*Deaths in Childbirth.*

Details of the deaths in child birth according to age, duration of marriage, previous issue, cause, locality and conjugal condition are shown in the Statistical Register.

The incidence of deaths from puerperal causes falling only upon women of child-bearing ages, and mainly upon married women of these ages, the rates of mortality are not quoted as a proportion of general population, but are generally stated at per thousand births. Such rates show a persistent though fluctuating decline during the past three decades. During the period 1895-1904 the annual average number of deaths of mothers in childbirth was 268, equal to 7.1 deaths per 1,000 births. The corresponding number for the period 1905-1914 was 284, and the rate 6.2, compared with 289 and 5.2 respectively for the period 1915-1924. The decreased proportion of unmarried mothers has contributed slightly to this decline; but the rates quoted represent very closely the improvement that has occurred in mortality in childbirth among married mothers. A comparison of deaths in childbirth in this State with those of other countries must be made with caution. In England they are classified so as to show the total puerperal mortality and total maternal mortality; from the former are excluded deaths from albuminaria and nephritis. In the international list of causes of death criminal abortion is classified with homicide. In the table given below deaths from this cause are included to show the total deaths incidental to childbirth.

The number of deaths of women resulting from various diseases and casualties incident to childbirth was 276 in 1926, as compared with 352 in 1927, equivalent to a rate of 5.2 in 1926 and 6.5 in 1927, per 1,000 births. The causes of deaths in 1926 with the corresponding total for 1927 shown in brackets were:—Puerperal septicæmia 67 (103) deaths, puerperal hæmorrhage 27 (34), accidents of pregnancy 33 (13), albuminaria and eclampsia 59 (69), phlegmasia alba dolens, embolus, sudden death, 22 (24). The experience of the five years 1922-26 shows that the average number of fatal cases per 1,000 births for married and for single women, are 5.2 and 9.0 respectively. Plural births are reckoned as single confinements.

Cause of Death in Childbirth.	Number of Deaths, 1922-26.			Proportion per cent. due to each Cause.	
	Married.	Single.	Total.	Married.	Single.
Accidents of Pregnancy ... ..	142	9	151	10.6	7.4
Illegal Operations ... ..	132	45	177	9.9	37.2
Puerperal Hæmorrhage ... ..	170	6	176	12.8	5.0
Puerperal Septicæmia ... ..	365	26	391	27.4	21.5
Albuminuria and Eclampsia ... ..	270	23	293	20.3	19.0
Phlegmasia Alba Dolens, Embolus, Sudden Death.	103	4	107	7.7	3.3
Other Casualties of Childbirth ... ..	151	8	159	11.3	6.6
<b>Total ... ..</b>	<b>1,333</b>	<b>121</b>	<b>1,454</b>	<b>100.0</b>	<b>100.0</b>

Of the 1,333 married women who died in childbirth, 646 or 48 per cent. gave birth to still-born children, and of the 121 single women, 72 or 60 per cent. Illegal operations caused over 37 per cent. of the puerperal deaths of single women.

More than any other cause of death during childbirth, puerperal septicaemia can be classed as a preventable disease. Over 25 per cent. of the deaths are due to this cause, but the proportion has declined appreciably in recent years. During the last ten years the annual rates of mortality of mothers in childbirth per 1,000 births were as follow:—

Year.	Deaths from Puerperal Septicaemia per 1,000 Births.			Total Deaths of Mothers in Childbirth per 1,000 Births.		
	Metropolis.	Remainder of State.	State.	Metropolis.	Remainder of State.	State.
1917	1·6	2·1	1·9	6·4	6·1	6·2
1918	2·6	1·4	1·8	6·5	4·5	5·3
1919	2·4	·9	1·4	6·6	4·7	5·4
1920	2·7	1·5	2·0	7·6	5·1	6·1
1921	1·9	1·4	1·6	5·8	4·7	5·1
1922	1·6	1·6	1·6	5·9	4·6	5·1
1923	1·6	1·2	1·4	6·7	4·2	5·2
1924	1·7	1·2	1·4	6·4	4·7	5·4
1925	1·6	1·6	1·6	7·2	5·1	6·0
1926	1·4	1·2	1·3	6·6	4·3	5·2
1927*	2·0*	1·9*	1·9	7·9*	5·7*	6·5

\* Classified according to usual address of deceased mother.

The above table shows that the incidence of deaths of mothers in childbirth is considerably heavier in the metropolis than elsewhere in the State, despite the better hospital, medical and nursing facilities available in the city. The explanation of this apparent anomaly is suggested by the following table, which shows the incidence of deaths from childbirth on an industrial and geographical basis during the period 1915-24:—

Division.	Deaths from Puerperal Septicaemia per 1,000 Births.		Total Deaths of Mothers in Childbirth per 1,000 Births.	
	Married.	Single.	Married.	Single.
Metropolis ... ..	2·03	3·32	5·96	11·63
Country Municipalities ... ..	1·74	2·26	5·49	7·66
Shires ... ..	·95	1·82	3·55	6·08
New South Wales ... ..	1·68	2·71	5·23	9·62
Industrial Centres ... ..	2·02	3·26	5·91	11·16
Non-Industrial Centres ... ..	1·35	1·77	4·61	6·98

The metropolis includes a very large proportion of the industrial population, and embraces practically the whole of that proportion of the population living under the conditions of modern city life. Here the maternal mortality in childbirth is considerably higher than in any other part of the State. The country municipalities include only one large town—Newcastle—but they embrace considerable mining populations in the northern, southern, and western coal-fields and the silver-lead mines of Broken Hill. Although the shires embrace a number of coal mining towns, their population consists for the most part of the dwellers in small towns and on farms and, among these, deaths of mothers in childbirth are far less extensive than in industrial and urban districts.

*Deaths from Violence.*

This category includes deaths from accident, suicide, homicide, and other deaths not classified in respect of which "open verdicts" were recorded at coroners' inquests. Owing to the decline in the proportion of deaths due to accident, the rate of mortality due to violence has diminished slightly during the past thirty-five years. The annual number of suicides has increased, but their proportion to the population has not shown any marked variation. Deaths from homicide and those classed as "open verdicts" have remained fairly constant in number, and their proportion to the population has, therefore, decreased.

Deaths from violence in 1926 numbered 1,663, or 7 per cent. of the total deaths of the year. This number includes 293 suicides, 1,255 accidents, 33 homicides, and 82 classified as other external violence. The rate, 7.16 per 10,000 living, was 16 per cent. higher than the rate for the preceding quinquennium, which was 6.17. In the year 1926 the males numbered 1294, or 10.94 per 10,000 living, and the females 369, or 3.24 per 10,000, or 30 per cent. of the male rate.

The number of deaths from violence in 1927 was 1,717, comprising 1,415 from accidents, 262 suicides, and 40 homicides.

*Deaths from Suicide.*

The number of persons who took their own lives in 1926 was 293, or a rate of 1.26 per 10,000 living, and about 18 per cent. above the average for the preceding quinquennium. The number of male suicides was 236, or a rate of 1.99 per 10,000 living, and of female 57, or a rate of 0.50 per 10,000 living—the male rate thus being nearly four times that of the females.

The number of deaths from suicide and the rates per 10,000 living since 1884 are shown in the following table:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	428	1.62	96	0.44	524	1.09
1889-93	519	1.68	110	0.42	629	1.11
1894-98	679	2.01	169	0.57	848	1.34
1899-1903	651	1.81	142	0.44	793	1.16
1904-1908	719	1.86	160	0.49	879	1.18
1909-1913	857	1.95	238	0.59	1,095	1.30
1914-1918	888	1.83	223	0.48	1,111	1.17
1919-1923	887	1.65	244	0.47	1,131	1.08
1924	205	1.80	50	0.46	255	1.14
1925	209	1.80	54	0.48	263	1.16
1926	236	1.99	57	0.50	293	1.26
1927	209	1.73	53	0.45	262	1.10

The means usually adopted for self-destruction by men are either shooting, poisoning, cutting, or hanging. Women, as a general rule, avoid weapons, and resort mostly to poison. Of every 100 cases of suicide during the five years 1922-26, 27 were by the agency of poison, 20 by shooting, 21 by cutting, 15 by hanging, and 7 by drowning. The proportion of suicides by shooting during the five years 1917-21 was 28 per cent., and the decrease since that period is probably the result of the introduction in 1921 of regulations regarding the possession of firearms.

Experience indicates that the suicidal tendency is probably influenced by the seasons. During the last ten years the proportion of male suicides per 1,000 was approximately as follows:—In spring 258, summer 265, autumn 233, and winter 244. The number of suicides is usually greater in January than in any other month.

Female suicides, being numerically small, give variable results as regards seasonal influence, and, contrary to the experience of males, no particular month showed any preponderance.

#### *Deaths from Accident.*

During the year 1926 the number of fatal accidents was 1,255, viz., 975 of males and 280 of females, or equal to rates of 8.24 and 2.46 per 10,000 living of each sex, and the general rate was 5.41 per 10,000 living. Accidental deaths have always been numerically greater in the extra-metropolitan area. Of those registered during 1926, deaths from accident in the metropolis numbered 492, and in the remainder of the State 763. As a general rule, about two-thirds of the accidents occur in the latter division, which contains about 55 per cent. of the total population.

The number of deaths from accident and the rates per 10,000 since 1884 are shown in the table below:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,550	13.41	944	4.34	4,494	9.32
1889-93	3,666	11.90	966	3.70	4,632	8.14
1894-98	3,498	10.33	1,095	3.69	4,593	5.23
1899-1903	3,432	9.54	1,103	3.39	4,535	6.62
1904-1908	3,143	8.13	1,055	2.96	4,198	5.65
1909-1913	3,891	8.83	1,114	2.77	5,005	5.94
1914-1918	3,814	7.86	1,075	2.31	4,889	5.14
1919-1923	3,656	6.82	1,080	2.09	4,736	4.50
1924	833	7.33	239	2.19	1,072	4.31
1925	873	7.52	248	2.22	1,121	4.93
1926	975	8.24	280	2.46	1,255	5.41
1927	1,117	9.22	298	2.56	1,415	5.96

Although the death-rate from accidents is still high compared with that of more closely settled countries, it has decreased, the lowest rate being in the year 1923. During the last three years there has been a fairly steady increase. For the years prior to 1894 the rates were really slightly lower than those shown in the table, because certain causes formerly classed as accidents now fall into different categories.

The experience of the quinquennium ended 1926 shows that out of every 1,000 accidents 265 are due to vehicles and horses, 129 to drowning, 135 to falls, 116 to burns or scalds, 96 to railways and tramways, 33 to mines and quarries, and 24 to weather agencies, *i.e.*, excessive cold or heat, and lightning. Among males the greatest number of deaths are due to vehicles and horses, and among females to burns and scalds.

Out of 357 deaths caused by accidents with vehicles and horses, 256 were due to motor vehicle accidents, viz., 157 in the metropolitan area and 99 in other districts. Accidents of this class are increasing annually; there were 111 in 1923, 127 in 1924, 227 in 1925, 256 in 1926, and 335 in 1927.

## THE SEASONAL PREVALENCE OF DISEASES.

The following table shows for each month of the year the proportion of deaths due to each of nine principal causes. The figures are based on the experience of the five years 1922-26, and in order to make the results of the computation comparable, adjustments have been made to correct the inequality of the number of days in each month:—

Month.	Typhoid Fever.	In- fluenza.	Diph- theria and Group.	Whoop- ing- Cough.	Phthisis.	Pneu- monia.	Bron- chitis.	Diarrhœa, Enteritis, and Dysentery.	Bright's Disease.
January ...	142	26	77	130	79	55	33	179	79
February ..	127	22	98	95	76	53	50	137	69
March ...	132	30	86	55	80	46	42	118	66
April ...	115	29	106	56	80	57	56	100	74
May ...	81	71	122	92	82	74	79	83	86
June ...	59	166	111	84	92	113	137	42	91
July ...	25	188	95	69	97	120	162	33	96
August ...	25	195	78	82	87	138	149	24	97
September.	51	106	66	74	84	111	110	22	86
October ...	47	83	63	91	83	98	81	37	88
November.	81	43	48	71	87	74	55	79	93
December..	115	36	50	101	73	61	46	146	75
	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

In interpreting the above table comparison should be made vertically and not horizontally, the figures representing proportions per thousand and not absolute numbers.

The chief features of the above table are exhibited in the contrast between the figures relating to typhoid fever, diarrhœa and enteritis on the one hand, and to influenza, pneumonia, and bronchitis on the other. In the first group the influence of the hot weather is the controlling factor; in the second, the cold. The warmest months in the year are January, February, and December; the coldest, June, July, and August. The morbidity from phthisis varies little throughout the year, but the rates show that it is more fatal in the colder months. Bright's disease shows likewise a higher mortality during the cold weather.

## FACTORIES.

THE manufacturing industries of New South Wales are expanding rapidly, signs of progress being apparent in all phases of factory production. The records show a steady increase in the number of employees, in the use of machinery, in the amount of capital invested in premises and equipment, and in the value of the output. Reliable testimony of progress is apparent in the establishment of many new industries, as well as the development of existing industries into new branches of production, in the introduction of scientific processes requiring a high standard of technical skill and of organisation and a large capital outlay. The progress in regard to production has been attended by steady improvement in the conditions of industrial employment.

At the beginning of the twentieth century very few of the factories in New South Wales were concerned in the production of the higher classes of manufactures, notwithstanding the immense quantities of raw materials, such as wool, minerals, etc., readily available. The great majority of the establishments were engaged in the production for local use of food commodities, furniture and bricks; in making clothing from imported materials; in printing; in the repair rather than the manufacture of machinery; or in the preliminary treatment of primary products, such as wool-scouring or saw-milling.

After the federation of the Australian States a protective customs tariff was introduced in order to encourage local manufactures, with the object of rendering the Commonwealth self-contained for purposes of defence, and for other national reasons. Assistance for some industries is provided in the form of bounties on the products.

During the decade which preceded the outbreak of war the secondary industries expanded steadily. Such development was then almost world-wide, as the demand for manufactured products grew apace by reason of increasing population and changing conditions of life, while the progress of science assisted producers to increase their output. In New South Wales economic conditions were especially favourable for the growth of secondary production. The State was prosperous, primary production was increasing, and the population was being augmented by immigration as well as by natural increase. The outbreak of war, which occurred at a time when the primary industries were affected by adverse seasonal conditions, caused a measure of disorganisation in the factories. But the set-back was temporary, and recovery was rapid in consequence of the demand for products for war purposes and the increase in the spending power of the people by reason of the circulation of war moneys and the returns received from high-priced exports. Moreover, the curtailment or cessation of supplies of many imported articles caused greater attention to be directed towards local resources.

Under these conditions the manufacturing industries entered upon a more advanced stage of development. Iron and steel works, and many subsidiary industries were established on a sound basis, the manufacture of various classes of machinery was undertaken, large ocean steamers were built, and many other high-grade products were added to the list of commodities made in New South Wales.

The products of the factories are used for the most part for local consumption, those which are exported in large quantities being flour, butter, frozen meat, wool-tops, and leather, and—in smaller, but appreciable quantities—biscuits, confectionery, tobacco, sulphate of ammonia, and medicines.

## SCIENTIFIC RESEARCH AND STANDARDISATION.

Organisations have been formed on a federal basis to promote scientific research and standardisation in the industries of Australia.

The Commonwealth Council of Scientific and Industrial Research was created in 1916, in the form of a temporary Advisory Council. It prepared the way for a permanent body, which was appointed in 1921, and reorganised in 1926 in terms of the Science and Industry Research Act, 1920-26. There is a central council and a committee in each State to advise the Council as to the problems to be investigated. The Council consists of three members appointed by the Commonwealth Government, who form the executive committee, the chairman of each State committee, and other persons with scientific knowledge co-opted by the Council.

The Council is empowered to conduct scientific researches in connection with primary and secondary industries, to train research workers, to make grants in aid of scientific research, to test and standardise scientific apparatus, to conduct investigations in reference to standardisation of machinery and materials used in industry, and to establish a bureau of information relating to scientific and technical matters.

A sum of £100,000 has been appropriated out of the revenue of the Commonwealth and vested in the executive committee of the Council as an endowment fund. The income arising from the fund is used to assist persons engaged in scientific work and students in training as research officers.

The Australian Commonwealth Engineering Standards Association was founded in 1922 to prepare standards in connection with engineering structures and materials, to promote their general adoption, and to co-ordinate efforts for their improvement. The main committee includes members representing the Governments of the Commonwealth and of the States and various technical associations. Sectional committees prepare the specifications for standardisation, which are published in a tentative form, to be revised twelve months later, with view to adoption as Australian standards. The specifications are based, to a large extent, upon those of the British Engineering Standards Association.

Another organisation for the improvement of industry has been formed to eliminate waste by simplified practice. Its work is conducted in co-operation with the Engineering Standards Association.

The activities of the Tariff Board, which is described in the chapter "Commerce," have an important bearing on the manufacturing industries. The Board investigates proposals for altering the tariff and for granting bounties, and considers the effect of the tariff and customs laws and of bounties on the industries of Australia.

## BOUNTIES.

A brief summary of the bounties provided by the Government of the Commonwealth for the encouragement of manufacturing in Australia is shown hereunder. Particulars of bounties on primary products are shown also in order to complete the list of bounties available during the past three years.

Under the Iron and Steel Products Bounty Act, 1922, the following bounties were provided:—Fencing wire and galvanised sheets, 52s. per ton; wire netting, 68s. per ton; traction engines, £40 to £90 each, according to capacity. The bounty on galvanised sheets was increased to 72s. per ton, as from 1st January, 1928. It is provided also that the bounty on traction engines is to be reduced in respect of engines containing materials or parts not

produced in Australia, no bounty being payable where the cost of imported materials or parts represents more than 40 per cent. of the total factory cost.

On sulphur from Australian pyrites and other sulphide ores or concentrates, bounty is payable at the rate of 45s. per ton, and on crude shale oil produced from Australian kerosene shale the bounty is at the rate of 3½d. per gallon up to 3,500,000 gallons, decreasing to 1½d. per gallon on quantities exceeding 8,000,000 gallons.

Bounty at the rate of 4s. per gallon was provided in respect of fortified wine containing not less than 34 per cent. of proof spirit exported before 31st August, 1927; the bounty was reduced to 1s. 9d. per gallon from 1st September, 1927, and to 1s. from 8th March, 1928.

For certain kinds of canned fruit, viz., apricots, peaches, pears, and pine-apples, canned between 1st November, 1923, and 30th September, 1924, bounties ranging, according to the kind of fruit, from 6d. to 1s. per doz. tins, were paid on production, and bounties ranging from 1s. to 1s. 9d. per doz. tins, on export before 1st February, 1925.

The Meat Export Bounties Acts of 1922 and 1923 authorised the payment of bounties, at the rate of ¼d. per lb., on canned beef and on frozen beef, and 10s. per head of live cattle for slaughter, if exported within prescribed dates in those years. The bounty on cattle was granted also in respect of exports during the year ended 30th June, 1925, in terms of the Cattle Export Bounty Act, 1924.

During 1926 Acts were passed to grant bounties in respect of seed cotton and cotton yarn, and on power alcohol made from cassava, sweet potatoes, arrowroot and other cultivated starch-bearing plants approved by the Minister for Trade and Customs. The cotton bounties vary according to the grade of the product. On seed cotton it is ¾d. or 1½d. per lb., and on cotton yarn from ¼d. to 1s. per lb., according to "count." The rate of bounty on power alcohol is 4d. per gallon.

Product.	1924-25.		1925-26.		1926-27.	
	Quantity on which Bounty was Paid.	Amount of Bounty.	Quantity on which Bounty was Paid.	Amount of Bounty.	Quantity on which Bounty was Paid.	Amount of Bounty.
Iron and Steel Products—		£		£		£
Fencing Wire ... ..ton	27,672	71,949	37,274	96,912	37,549	97,626
Galvanised Sheets ... ..,	17,133	44,545	18,931	49,221	26,121	67,915
Wire Netting ... ..,	26,571	90,340	27,979	95,127	26,559	100,299
Shale Oil ... ..gal.	23,000	335	...	...	...	...
Sulphur ... ..ton	10,746	24,178	8,357	18,802	7,229	16,266
Beef Exported ... ..lb.	...	31	...	...	...	...
Fortified Wine ... ..gal.	29,538	5,908	163,045	32,609	247,853	49,572
Canned Fruit ... doz. tins	...	12,016	...	4,594	...	...
Cotton Yarn ... ..lb.	...	...	...	...	1,273,686	£0,002
Total, New South Wales...	...	249,202	...	297,265	...	351,680



## PROGRESS OF FACTORIES SINCE 1901.

The statistics shown in this chapter relate only to the establishments which may be included in the definition of a factory, as shown on page 331. The figures are not a complete record of either the income or expenditure of the undertakings concerned, and are not intended to show their financial position collectively or individually. The following summary indicates the progress of the factories in New South Wales since 1901:—

Particulars.	1901.*	1911.	1920-21.	1926-27.
Number of Establishments ...	3,367	5,039	5,837	8,222
Average Number of Em- ployees. { Male ...	54,556	82,083	112,187	138,309
{ Female ...	11,674	26,541	32,824	44,884
{ Total ...	66,230	108,624	145,011	183,193
Salaries and Wages paid to Employees. † { Male £	‡	8,917,583	22,766,216	32,319,649
{ Female £	‡	1,130,079	2,852,375	4,772,547
{ Total £	4,952,000	10,047,662	25,618,591	37,092,196
Capital Value of Land, Buildings, and Fixtures (owned and rented) £	7,838,628	13,140,207	28,428,917	46,950,706
Value of Plant and Machinery... £	5,860,725	12,510,600	31,115,444	48,659,375
Machinery—Average Horse-power in use ... .. h.p.	44,595	148,218	312,309	558,845
Value of Materials and Fuel used £	15,637,611	34,913,564	94,713,249	109,433,402
Value added to Raw Materials in process of Manufacture ... .. £	10,010,860	19,432,447	43,128,137	69,849,044
Total Value of Output ... .. £	25,648,471	54,346,011	137,841,386	179,302,446
Average per Factory—				
Employees ... .. No.	19·7	21·6	24·8	22·3
Horse-power of Machinery ... h.p.	13·2	29·4	53·5	68·0
Land and Buildings... .. £	2,328	2,608	4,870	5,710
Plant and Machinery... .. £	1,740	2,483	5,331	5,918
Material and Fuel ... .. £	4,644	6,928	16,226	13,312
Value added in process of Manu- facture ... .. £	2,973	3,856	7,389	8,495
Total Output ... .. £	7,617	10,784	23,615	21,808
Average Time Worked months	11·32	11·55	11·52	11·75
Average per Employee—				
Salaries and Wages †... { Males £	‡	114	211	245
{ Females £	‡	43	88	107
{ Total £	81	96	182	209
Value of Materials and Fuel... .. £	236	321	653	598
Value added in Manufacture... .. £	151	179	298	381
Total Output ... .. £	387	500	951	979

\* Excluding a number of small establishments in country districts (see Year Book, 1907-8, page 448).  
 † Excluding drawings of working proprietors. ‡ Information not available.

Since 1901 the number of establishments has increased by 144 per cent., and the number of employees by over 176 per cent. In 1901 the capital value of land, buildings, fixtures, plant, and machinery amounted to £13,699,353, and in 1926-27 it had increased to £95,610,081, or by over 598 per cent. The value of the output in the latter year was almost seven times as great as in 1901. The amount paid in wages has increased by 649 per cent., and the expenditure on materials and fuel by 600 per cent.

## GOVERNMENT FACTORIES AND WORKSHOPS.

The foregoing statement includes particulars of a number of factories and workshops under Government control in New South Wales.

The results shown by Government establishments, however, are not comparable with those of other establishments, because in cases where the former are not conducted for profit the value of the output has been estimated on the basis of the results shown by private establishments of similar type. Moreover, in Government establishments the profit would

appear in reducing the price of the product rather than in showing a large margin over cost. Another fact which militates against comparison is that repair work constitutes a large proportion of the work done in these factories.

The following table shows the details of the operations of the establishments under the control of the State and Commonwealth in 1926-27, separately from those conducted by private enterprise:—

Particulars.	Government Workshops, etc.	Other Establishments.	Total.
Number of Establishments* ... ..	88	8,134	8,222
Average Number of Em- ployees. { Male ... ..	18,972	119,337	138,309
{ Female ... ..	719	44,165	44,884
{ Total ... ..	19,691	163,502	183,193
Salaries and Wages paid to Employees. † { Male ... ..	£ 4,948,570	27,371,079	32,319,649
{ Female ... ..	£ 52,207	4,720,340	4,772,547
{ Total ... ..	£ 5,000,777	32,091,419	37,092,196
Capital value of Land, Buildings, and Fix- tures, owned by occupier... ..	£ 5,545,155	25,187,986	30,733,141
Rent paid ... ..	£ 4,908	1,076,263	1,081,171
Value of Plant and Machinery ... ..	£ 6,757,175	41,902,200	48,659,375
Machinery—Average Horse-power in use ..	174,903	383,942	558,845
Value of Materials and Fuel used... ..	£ 4,680,589	104,772,813	109,453,402
Value added to Raw Materials in process of Manufacture ... ..	£ 6,713,692	63,135,352	69,849,044
Total Value of Output ... ..	£ 11,394,231	167,908,165	179,302,446

\* Each railway workshop is counted as a separate establishment.  
† Excluding drawings of working proprietors.

The Government establishments include railway and tramway workshops, electric light and power works, dockyards, printing works and factories for the production of bricks, monier pipes, meat products, canned fruits, small arms, and clothing.

CLASSIFICATION OF FACTORIES.

The statistics relating to factories, as shown in this chapter, have been compiled from returns supplied by manufacturers in terms of the Census Act of 1901. A return must be supplied in respect of every factory where four or more persons are employed or where power is used—including educational or charitable institutions, reformatories and other public institutions, except penitentiaries. Returns have not been collected in respect of bread-baking, smallgoods-making, and farriery, but arrangements are being made to collect returns from bakeries in future.

In a few industries returns are collected from all establishments, even if they have less than four employees and manual labour only is used, and the particulars of such factories are included in the statistics with the object of ascertaining the total output of the products, viz., aerated waters, bacon, butter, cheese, bricks, gas, lime, soap and candles, boots, also tanneries.

For statistical purposes a standard classification of the manufacturing industries was formulated at a conference of Australian statisticians in 1902 and revised at more recent conferences. This classification is used in the compilation of the statistics relating to factories in New South Wales.

If a manufacturing business is conducted in conjunction with an import-**ing** or a retail business particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment a separate return is obtained for each industry. If power from the same generating plant is used for more than

one industry the cost is distributed proportionately amongst such industries. The generation of electric light and power for use in other manufacturing operations, even if generated on the premises, is treated as an independent industry.

The classes are as follow:—

**CLASS I.—TREATING RAW MATERIALS, THE PRODUCT OF AGRICULTURAL AND PASTORAL PURSUITS ETC.**

Boiling-down, Tallow Refining, etc.  
Sausage Skins, etc.  
Tanneries.  
Wool-scouring, Fellmongering.  
Chaff-cutting, Corn-crushing, etc.

**CLASS II.—OILS AND FATS, ETC.**

Oil and Grease.  
Soap and Candles.

**CLASS III.—STONE, CLAY, GLASS, ETC.**

Bricks.  
Tiles.  
Pipes (Earthenware and Cement).  
Glass (including Bottles).  
Glass (Ornamental).  
Lime, Plaster, Cement, and Asphalt.  
Marble, Slate, etc.  
Modelling.  
Pottery and Earthenware.

**CLASS IV.—WORKING IN WOOD.**

Boxes and Cases.  
Cooperage.  
Joinery.  
Saw-mills.  
Wood-turning, Wood-carving, etc.

**CLASS V.—METAL WORKS, MACHINERY, ETC.**

Agricultural Implements.  
Art Metal Works.  
Brass and Copper.  
Cutlery.  
Engineering.  
Galvanized Iron-working.  
Ironworks and Foundries.  
Nails.  
Railway Carriages, Rolling-stock, etc.  
Railway and Tramway Workshops.  
Metal Extraction and Ore Reduction.  
Stoves and Ovens.  
Tinsmithing.  
Wire-working.  
Gas Fittings and Meters.  
Other Metal Works (including Lead Mills).  
Electric Apparatus.  
Lamps and Fittings.  
Sewing Machines.

**CLASS VI.—FOOD, DRINK, ETC.**

Bacon-curing.  
Butter Factories, Creameries, etc.  
Butterine and Margarine.  
Cheese Factories.  
Condensed Milk.  
Meat and Fish Preserving.  
Biscuits.  
Confectionery.  
Cornflour, Oatmeal, etc.  
Flour-mills.  
Jam, Fruit and Vegetable-canning.  
Dried Fruits.  
Pickles, Sauces, and Vinegar.  
Sugar Mills.  
Sugar Refining.  
Aerated Waters, Cordials, etc.  
Breweries.  
Condiments, Coffee, Spices, etc.  
Distilleries.  
Bottling.  
Wine Making.  
Cider.  
Ice and Refrigerating.  
Malting.  
Tobacco, Cigars, etc.  
Animal Poultry, and Stock Foods.

**CLASS VII.—CLOTHING, AND TEXTILE FABRICS, ETC.**

Woollen and Tweed Mills.  
Sik Weaving.  
Knitting Factories.  
Cotton Mills.  
Boots and Shoes.  
Boot and Shoe Repairing.  
Clothing (Slop).  
Clothing (Tailoring).  
Clothing (Waterproof and Oil-skin).  
Dressmaking and Millinery (Makers' Material).  
Dressmaking and Millinery (Customers' Material).  
Dyeworks and Cleaning.  
Furriers.  
Hats and Caps.  
Shirts, Ties, and Scarfs.  
Underclothing, Whitework, Corsets.  
Rope and Cordage.  
Sailmaking.  
Tents and Tarpaulins.  
Bags and Sacks.

**CLASS VIII.—BOOKS, PAPER, PRINTING, ETC.**

Electrotyping and Stereotyping.  
Paper-making, Paper Boxes, Bags, etc.  
Photo-engraving.  
Printing and Binding.  
Newspapers, Magazines and Journals.  
Die Sinking, Engraving, etc.

**CLASS IX.—MUSICAL INSTRUMENTS, ETC.**

Musical Instruments.

**CLASS X.—ARMS AND EXPLOSIVES, ARMS AND AMMUNITION. INDUSTRIAL EXPLOSIVES.**

**CLASS XI.—VEHICLES, SADDLERY, HARNESS, ETC.**  
Coach and Waggon Building.  
Motor Car Assembling and Repairing.  
Motor Body Building and Repairing.  
Motor Cycle and Bicycle Building and Repairing.  
Perambulators.  
Saddlery, Harness, etc.  
Spokes, etc.  
Whips.

**CLASS XII.—SHIP, BOAT, AND AIRCRAFT BUILDING AND REPAIRING. DOCKS AND SLIPS, SHIP AND BOAT BUILDING AND REPAIRING. AIRCRAFT BUILDING AND REPAIRING.**

**CLASS XIII.—FURNITURE, BEDDING, ETC.**  
Bedding, Flock, and Upholstery.  
Billiard Tables.  
Furnishing, Drapery, etc.  
Furniture and Cabinet-making.  
Picture Frames.  
Window Blinds.  
Sea Grass, Wicker and Bamboo Furniture.  
Baskets, Wickerware, and Matting.  
Drooms and Brushware.  
Carpets and Linoleums.

**CLASS XIV.—DRUGS AND CHEMICALS.**

Chemicals, Drugs, and Medicines.  
Paints and Varnishes.  
Inks, Polishes, etc.  
Fertilisers.  
Essential Oils.

**CLASS XV.—SURGICAL AND OTHER SCIENTIFIC INSTRUMENTS.**

Surgical Instruments.  
Optical Instruments.  
Other Scientific Instruments.

**CLASS XVI.—JEWELLERY, TIME-PIECES, AND PLATED-WARE. ELECTRO-PLATING. MANUFACTURING JEWELLERY, ETC. WATCH AND CLOCK MAKING AND REPAIRING.**

**CLASS XVII.—HEAT, LIGHT, AND POWER.**

Coke-works.  
Electric-light and Power.  
Gas-works.  
Kerosene.  
Matches.  
Carbide.  
Hydraulic Power.

**CLASS XVIII.—LEATHERWARE (N.E.L.).**

Leather Belting, Fancy Leather Portmanteaux, and Bags.

**CLASS XIX.—MINOR WARES (N.E.L.).**

Rubber Goods.  
Toys.  
Umbrellas.  
Other Industries.

The following table shows in respect of each class the number of the factories in New South Wales and in the metropolitan district, also particulars relating to the labour employed and the machinery used during the year 1926-27.

Class of Industry.	Establishments.	Average Number of Employees.			Average Time worked.	Horse-power of Machinery—Average used.	Value of Machinery, Tools, and Plant.	Total Salaries and Wages, exclusive of Drawings of Working Proprietors.
		Males.	Females.	Total.				
<b>NEW SOUTH WALES.</b>								
Treating Raw Materials, &c. ...	12)	3,488	110	3,698	11-03	8,033	922,488	868,624
Oils, Fats, &c. ...	39	1,097	98	1,495	11-84	2,305	610,228	299,020
Stone, Clay, Glass, &c. ...	403	13,285	208	10,493	11-67	29,415	3,077,130	2,419,319
Working in Wood ...	949	10,007	229	10,236	11-09	26,325	1,690,652	2,093,941
Metal Works, Machinery, &c. ...	1,001	46,377	1,561	47,938	11-94	100,435	12,933,103	11,480,258
Food, Drink, &c. ...	970	14,712	6,652	20,964	11-48	47,944	8,216,397	4,193,046
Clothing, Textile Fabrics, &c. ...	1,832	11,089	16,987	28,076	11-82	14,176	2,736,524	5,112,628
Books, Paper, Printing, &c. ...	600	9,098	4,015	13,713	11-94	15,255	3,893,767	2,899,595
Musical Instruments, &c. ...	29	977	307	1,284	11-97	1,585	148,685	296,341
Arms and Explosives ...	3	387	9	396	12-00	525	55,931	176,822
Vehicles, Saddlery, Harness, &c.	1,072	9,276	364	9,640	11-52	5,611	7,073,394	1,721,001
Ship and Boat-building, &c. ...	43	5,401	56	5,457	12-00	10,460	1,872,209	1,416,397
Furniture, Bedding, &c. ...	455	5,662	189	5,851	11-83	6,324	410,007	1,242,281
Drugs and Chemicals ...	150	2,192	1,170	3,362	11-94	4,782	873,564	709,614
Surgical and other Scientific Instruments.	30	243	41	284	12-00	113	15,975	56,078
Jewellery, Timepieces, and Plated-ware.	54	701	97	798	12-00	487	53,521	159,216
Heat, Light, and Power ...	187	4,550	111	4,661	11-95	280,556	9,490,277	1,321,524
Leatherware, n.e.i. ...	47	667	613	1,280	11-35	256	48,932	203,197
Minor Ware, n.e.i. ...	93	1,810	967	2,777	11-87	4,238	462,591	567,281
<b>Total ...</b>	<b>8,222</b>	<b>138,009</b>	<b>44,884</b>	<b>183,193</b>	<b>11-75</b>	<b>558,845</b>	<b>48,659,375</b>	<b>37,021,196</b>
<b>METROPOLITAN DISTRICT.</b>								
Treating Raw Materials, &c. ...	113	2,720	207	2,933	11-58	6,362	768,824	679,113
Oils, Fats, &c. ...	25	887	327	1,214	12-00	1,849	516,039	247,321
Stone, Clay, Glass, &c. ...	191	6,024	174	6,198	11-94	11,725	1,389,371	1,457,670
Working in Wood ...	353	5,014	153	5,167	11-77	13,813	690,743	1,183,971
Metal Works, Machinery, &c. ...	737	30,347	1,433	31,770	11-65	32,921	5,996,837	7,236,677
Food, Drink, &c. ...	389	9,665	5,905	15,570	11-91	27,968	5,490,649	3,121,219
Clothing, Textile Fabrics, &c. ...	1,415	9,332	24,337	33,719	11-81	10,583	2,046,263	4,553,604
Books, Paper, Printing, &c. ...	318	8,239	3,834	12,093	11-94	13,774	3,353,846	2,581,457
Musical Instruments, &c. ...	28	905	307	1,272	11-98	1,585	148,685	292,526
Arms and Explosives ...	3	400	10	410	12-00	530	57,000	176,822
Vehicles, Saddlery, Harness, &c.	395	6,070	258	6,328	11-47	2,947	3,495,594	1,216,734
Ship and Boat-building, &c. ...	44	4,150	55	4,225	12-00	7,423	1,673,651	1,108,765
Furniture, Bedding, &c. ...	384	5,177	864	6,041	11-94	5,223	321,782	1,154,556
Drugs and Chemicals ...	150	2,192	1,170	3,362	11-93	3,657	615,268	593,718
Surgical and other Scientific Instruments.	30	243	41	284	12-00	113	25,975	56,078
Jewellery, Timepieces, and Plated-ware.	50	683	97	780	12-00	476	52,244	156,720
Heat, Light, and Power ...	31	2,192	80	2,272	12-00	199,277	5,463,385	607,902
Leatherware, n.e.i. ...	47	667	613	1,280	11-35	256	48,932	203,197
Minor Wares, n.e.i. ...	63	1,659	956	2,615	11-90	4,111	425,511	545,482
<b>Total ...</b>	<b>4,922</b>	<b>95,877</b>	<b>40,813</b>	<b>136,690</b>	<b>11-88</b>	<b>344,076</b>	<b>29,391,403</b>	<b>26,946,912</b>

The most important group of secondary industries in the State consists of metal and machinery works, in which the number of employees, the value of machinery and plant, the amount of salaries and wages, and the value added to raw materials are greater than in any other group. The value of raw materials used and the value of the output are greatest in factories connected with food and drink, and in other respects this class ranks second in importance, though the clothing factories give employment to a greater number of employees.

The metropolitan area contains the majority of the factories. Other important manufacturing centres are in proximity to the coalfields, viz., at Newcastle in the Hunter and Manning division, at Port Kembla in the South Coast division, and at Lithgow in the Central Tablelands division. In the Western division the mining of the silver-lead deposits at Broken Hill has given rise to a number of subsidiary factories.

In the metropolitan district, clothing factories and metal and machinery workshops give employment to a much greater number of workers than any other group, next in order being food and drink factories. In the Hunter and Manning and in the South Coast divisions, metal and machinery workshops give employment to the greatest number of employees. In the northern coastal districts butter and bacon factories are most prominent. In all the coastal areas there are many sawmills and other wood-working establishments.

Beyond the coastal belt there are few large groups of establishments. The Central Tableland is the most important division, as it contains the Lithgow ironworks and the principal cement works.

The number of factories of each class and the number of persons employed in the various divisions of the State in 1926-27 were as follows:—

Division,	Raw Material, etc.	Stone, Clay, etc.	Wood.	Metals and Machinery.	Food, Drink, etc.	Clothing, etc.	Books, Printing.	Vehicles, Saddlery.	Furniture, etc.	Heat, Light, Power.	Other Classes.	Total.
<b>NUMBER OF ESTABLISHMENTS.</b>												
Cumberland—												
Metropolis ... ..	118	191	355	797	389	1,415	388	395	384	31	464	4,922
Balance of ... ..	20	40	23	30	32	51	16	44	9	6	6	282
North Coast ... ..	1	7	98	22	97	34	24	74	13	16	4	390
Hunter and Manning... ..	11	37	136	72	87	111	31	103	29	23	26	669
South Coast ... ..	8	11	49	8	86	24	13	37	...	19	3	253
Tablelands—												
Northern ... ..	11	6	38	2	23	17	9	36	2	8	4	162
Central ... ..	11	30	24	15	56	46	18	59	6	22	3	295
Southern ... ..	5	20	19	5	18	14	11	31	...	6	3	132
Western Slopes—												
North ... ..	5	11	34	5	30	12	7	35	...	7	2	148
Central ... ..	3	9	31	6	29	16	13	46	2	7	2	164
South ... ..	9	26	48	10	47	42	29	83	4	15	6	319
Plains—												
Northern ... ..	3	2	26	2	12	6	6	14	2	2	2	77
Central ... ..	3	...	19	1	8	3	5	12	...	3	...	54
Bliverina ... ..	15	9	35	3	33	25	18	79	...	10	...	227
Western Division ... ..	7	4	9	17	23	16	9	24	4	12	3	128
<b>Total... ..</b>	<b>220</b>	<b>408</b>	<b>949</b>	<b>1,001</b>	<b>970</b>	<b>1,852</b>	<b>600</b>	<b>1,072</b>	<b>455</b>	<b>187</b>	<b>533</b>	<b>8,222</b>

<b>AVERAGE NUMBER OF EMPLOYEES.</b>												
Cumberland—												
Metropolis ... ..	2,937	3,168	5,167	31,770	15,570	33,719	12,093	6,328	5,971	2,272	14,669	136,690
Balance of ... ..	203	1,483	276	3,211	432	1,250	110	402	133	110	132	7,742
North Coast ... ..	1	45	1,158	210	1,257	173	192	332	43	99	25	3,535
Hunter and Manning... ..	88	581	1,471	7,647	1,170	1,066	392	555	269	938	1,658	15,865
South Coast ... ..	12	197	414	935	382	91	70	144	...	445	86	2,776
Tablelands—												
Northern ... ..	49	41	189	92	102	121	61	161	7	39	29	891
Central ... ..	67	1,368	105	1,582	343	459	161	243	36	257	405	5,034
Southern ... ..	19	274	176	445	84	383	80	152	...	50	17	1,680
Western Slopes—												
North ... ..	13	46	140	147	139	44	66	140	...	40	7	832
Central ... ..	22	63	220	118	172	69	74	217	9	41	6	1,011
South ... ..	90	124	319	283	333	435	187	411	27	79	44	2,332
Plains—												
Northern ... ..	16	8	218	40	56	19	29	72	14	13	6	491
Central ... ..	30	...	123	7	49	22	26	58	...	12	...	327
Bliverina ... ..	114	45	248	52	724	88	81	308	...	52	...	1,712
Western Division ... ..	41	20	102	1,399	101	137	88	112	12	214	49	2,275
<b>Total ... ..</b>	<b>3,698</b>	<b>10,493</b>	<b>10,526</b>	<b>47,938</b>	<b>20,964</b>	<b>38,076</b>	<b>13,713</b>	<b>9,640</b>	<b>6,551</b>	<b>4,661</b>	<b>17,133</b>	<b>183,193</b>

Particulars relating to a number of classes of factories are grouped with miscellaneous industries under the heading "other classes." All the factories connected with the manufacture of surgical instruments and leather-ware, n.e.i., are located in the metropolitan district. Of the establishments in which oil and fats are treated, 25, with 1,214 employees are in the metropolis; 1 with 56 employees is in the extra metropolitan portion of the county of Cumberland; 4 with 191 employees are in the Hunter and Manning division; and there are 9 small factories in other divisions. Ship-building and repairing is conducted in two divisions only, viz., Metropolis, 44 establishments, 4,225 employees; and Hunter and Manning, 4 with 1,232 employees. The factories producing drugs and chemicals etc., are distributed as follows:—Metropolis, 135, with 2,975 employees; other parts of the county of Cumberland, 4 establishments, 70 employees; and 11 with 317 employees in other divisions. Of 94 jewellery establishments, 90 with 780 employees are in the metropolitan area.

The extent of the operations of the factories in each division is indicated in the following table:—

Division,	No. of Estab- lishments.	Average Number of Persons employed.	Value of Lands and Buildings and Fixtures.	Rent paid.	Value of Plant and Machinery.	Salaries and Wages paid.	Materials used.	Fuel and power consumed.	Value of Goods Manufactured or Work done.
	No.	£	£	£	£	£	£	£	
Metropolis ...	4,922	133,690	22,400,447	910,527	29,394,403	26,946,912	66,428,018	2,871,406	119,984,461
Balance of Cumberland	232	7,742	1,306,690	14,039	1,955,455	1,622,075	3,430,246	202,080	6,232,051
North Coast...	390	3,535	652,687	16,277	1,516,460	728,357	4,925,792	96,023	6,812,078
Hunter and Manning	669	15,865	2,985,396	43,729	7,879,763	3,821,341	14,952,533	1,488,126	22,291,775
South Coast ...	253	2,776	637,066	15,040	1,057,043	610,220	2,900,724	117,723	4,588,349
North Tableland	162	891	119,218	6,782	221,736	142,137	365,778	20,582	664,239
Central Tableland	295	5,034	1,023,465	15,302	3,070,745	1,160,308	2,827,343	756,327	5,697,053
Southern Tableland	132	1,680	202,968	6,878	398,246	333,280	404,847	77,388	977,573
North-western Slopes	148	832	131,746	6,907	273,469	155,100	507,486	23,457	820,033
Central-western Slopes	164	1,011	150,521	9,419	248,303	189,228	615,081	24,855	978,239
South-western Slopes	319	2,332	425,825	16,881	739,428	434,277	1,411,649	73,803	2,286,793
Northern Plains	77	491	42,512	3,937	104,534	82,623	228,035	9,859	382,957
Central Plains	54	327	21,065	2,388	82,652	53,232	176,756	5,154	209,911
Riverina ...	227	1,712	301,227	8,917	401,696	230,806	853,697	37,404	1,324,761
Western Division	128	2,275	332,308	4,148	1,015,442	581,634	2,045,871	666,119	5,952,173
	8,222	183,193	30,733,141	1,031,171	48,659,375	37,092,196	102,983,096	6,470,366	179,362,446

SIZE OF ESTABLISHMENTS.

The following comparative statement shows the distribution of establishments in the metropolitan and extra-metropolitan districts, according

to the number of persons engaged. Where two or more classes of manufacturing are conducted in one factory, each branch is treated, in the compilation of the factory statistics, as if it were a separate establishment:—

Establishments employing on the average—	1901.*		1911.		1920-21.		1926-27.	
	Establish- ments.	† Em- ployees.	Establish- ments.	† Em- ployees.	Establish- ments.	† Em- ployees.	Establish- ments.	† Em- ployees.
<b>METROPOLITAN DISTRICT.</b>								
Under 4 employees	79	188	233	547	493	1,083	1,147	2,208
4 employees ...	105	420	179	716	230	920	361	1,444
5 to 10 employees	429	3,036	743	5,336	1,072	7,566	1,286	9,012
11 ,, 20 ,, ...	334	4,939	520	7,834	684	10,118	806	11,903
21 ,, 50 ,, ...	279	8,564	477	14,655	639	20,437	792	25,514
51 ,, 100 ,, ...	107	7,518	202	14,360	222	15,158	316	22,053
101 and upwards...	82	17,750	151	34,144	183	49,270	214	64,556
Total ..	1,415	42,415	2,510	77,592	3,523	104,552	4,922	136,690
<b>REMAINDER OF STATE.</b>								
Under 4 employees	439	1,094	538	1,282	513	1,173	1,106	2,342
4 employees ...	256	1,024	371	1,484	270	1,080	457	1,828
5 to 10 employees	768	5,333	993	6,817	864	5,896	1,039	7,041
11 ,, 20 ,, ...	294	4,236	381	5,390	380	5,351	332	5,314
21 ,, 50 ,, ...	142	4,612	164	4,874	181	5,569	181	5,468
51 ,, 100 ,, ...	30	2,086	40	2,858	43	2,903	59	3,930
101 and upwards...	23	5,430	42	8,327	63	18,487	73	20,580
Total ...	1,952	23,815	2,529	31,032	2,314	40,459	3,300	46,503
<b>NEW SOUTH WALES.</b>								
Under 4 employees	513	1,282	776	1,829	1,006	2,256	2,253	4,550
4 employees ...	361	1,444	550	2,200	500	2,000	818	3,272
5 to 10 employees	1,197	8,369	1,736	12,153	1,936	13,462	2,325	16,053
11 ,, 20 ,, ...	628	9,175	901	13,224	1,064	15,469	1,188	17,217
21 ,, 50 ,, ...	421	13,176	641	19,529	820	26,006	976	30,982
51 ,, 100 ,, ...	137	9,604	242	17,218	265	18,061	375	25,983
101 and upwards...	105	23,180	193	42,471	246	67,757	287	85,136
Total ...	3,367	66,230	5,039	108,624	5,837	145,011	8,222	183,193

\* Excluding a number of small establishments in country districts (see Year Book 1907-8, page 446).

† Including working proprietors.

In 1901 the metropolitan district contained over 42 per cent. of the factories, and in 1926-27 the proportion was 60 per cent.

The establishments employing 10 hands or less represent 66 per cent. of the total number, the factories in the Metropolitan area being generally larger than those in other parts of the State. The average number of employees per establishment is 28 in the Metropolis, 14 in the remainder of the State, and 22 in the whole State; in 1901 the averages were 30, 12, and 20 respectively.

The apparent increase in the number of small factories in recent years was due partly to the inclusion of boot repairing establishments, viz., 88 with 386 employees in 1920-21, and 566 with 1,071 employees in 1926-27.

Of these, 73 with 318 employees, and 402 with 728 employees in the respective years were in the Metropolitan district. The inclusion of these establishments affects also the relative position of each group of factories in the Metropolitan and in the country districts which is shown in the following statement:—

Establishments employing on the average—	Proportion of each Group to Total.							
	Metropolitan District.				Remainder of State.			
	1901.	1911.	1920-21.	1926-27.	1901.	1911.	1920-21.	1926-27.
Under 4 employees ...	per cent. 5·6	per cent. 9·5	per cent. 14·0	per cent. 23·3	per cent. 22·5	per cent. 21·3	per cent. 22·2	per cent. 33·5
4 employees...	7·4	7·1	6·5	7·3	13·1	14·7	11·7	13·8
5 to 10 employees...	30·3	29·6	30·4	26·1	39·3	39·2	37·3	31·5
11 ,, 20 ,, ...	23·6	20·7	19·4	16·4	15·1	15·1	16·4	11·6
21 ,, 50 ,, ...	19·7	19·0	18·2	16·1	7·3	6·5	7·8	5·6
51 ,, 100 ,, ...	7·6	8·1	6·3	6·4	1·5	1·6	1·9	1·8
101 and upwards ..	5·8	6·0	5·2	4·4	1·2	1·6	2·7	2·2
Total ...	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

In the Metropolitan district the increase in the number of small workshops and factories has caused the proportion of establishments employing less than 5 hands to rise from 16.6 per cent. in 1911 to 30.6 per cent. in 1926-27. In the country districts the proportion of such factories has increased from 36 to 47.3 per cent.

### MOTIVE POWER.

The power used for driving machinery in factories is derived mainly from steam. There are electric engines of considerable voltage, but the generation of their power depends upon some other class of engine. Gas is used only to a limited extent.

The following table shows the distribution of motive power through the various agencies of steam, gas, electricity, water and oil, expressed in units of horse-power:—

Year.	Establishments using Manual labour only.	Establishments using Machinery.	Horse-power of Machinery (Average used).					
			Steam.	Gas.	Electricity.	Water.	Oil.	Total.
1901	1,398	1,969	42,555	1,577	330	97	36	44,595
1911	1,489	3,550	113,939	12,201	20,671	222	1,185	148,218
1920-21	835	5,002	192,816	13,242	103,846	24	2,381	312,309
1921-22	886	5,470	201,806	13,211	122,352	50	2,365	339,784
1922-23	896	5,807	211,377	14,400	124,172	48	2,472	352,469
1923-24	879	6,442	225,671	14,112	136,117	48	3,312	379,260
1924-25	930	6,976	251,042	14,817	154,849	682	3,539	424,929
1925-26	920	7,276	299,538	15,618	181,890	1,585	5,308	503,939
1926-27	827	7,395	331,036	13,896	204,094	1,041	8,778	558,845



The proportion of factories in which machinery is used increased from 58 per cent. in 1901 to 70 per cent. in 1911, and to 90 per cent. in 1926-27. The power actually used in operating the machines increased from 148,218 horse-power in 1911 to 558,845 horse-power in 1926-27. The greatest development occurred in electrical power, which has increased nearly tenfold since 1911, while steam power has increased by over 190 per cent. The proportions of each kind of power in 1926-27 were:—Steam 60 per cent., gas 2 per cent., electricity 36 per cent., and oil and water 2 per cent.

The full capacity of the factory machinery in 1926-27 was 875,570 horse-power, viz.: Steam 556,163, gas 20,204, electricity 284,486, water 2,077 oil 12,640.

#### CAPITAL VALUE OF PREMISES.

With regard to capital permanently invested in manufacturing industries, particulars are available only of the value of the land, buildings, and fixtures which are the property of the occupier. If they are not the property of the occupier the rental value is recorded.

The following statement shows the extent to which the capital value of the premises used for manufacturing purposes has increased since 1901, also the advance in the value of plant and machinery installed:—

Year.	No. of Establishments.	Capital Value of Premises (owned and rented).	Value of Machinery, Tools, and Plant.	Average per Establishment.	
				Value of Premises.	Value of Machinery, Tools and Plant.
		£	£	£	£
1901*	3,367	7,838,628	5,860,725	2,328	1,740
1911	5,039	13,140,207	12,510,600	2,608	2,483
1920-21	5,837	28,428,917	31,115,444	4,870	5,331
1921-22	6,356	32,032,303	35,229,530	5,043	5,543
1922-23	6,703	34,630,984	37,579,388	5,166	5,606
1923-24	7,321	37,979,192	41,141,890	5,188	5,620
1924-25	7,906	41,351,080	43,553,900	5,230	5,509
1925-26	8,196	43,954,312	45,994,534	5,363	5,610
1926-27	8,222	46,959,706	48,659,375	5,710	5,918

\* Excluding a number of small country establishments.

The premises owned by the occupiers in 1926-27 were valued at £30,733,141, and rented premises at £16,217,565; the valuation of the latter being based on the rent paid, capitalised at fifteen years' purchase. The corresponding values in 1920-21 were £19,111,772 for premises owned by occupiers, and £9,317,145 for rented premises. Since that year the total value has increased by more than 18½ millions sterling, or by 65 per cent.

A marked improvement in the class of buildings used as factories has been a feature of the progress of the industries. Unsatisfactory premises are being eliminated, and in the construction of new factory buildings provision is made for ventilation and good lighting, and for the general comfort and welfare of the employees, as well as for the expeditious handling of materials and products.

SALARIES AND WAGES.

The amount of salaries and wages quoted throughout this chapter is exclusive of amounts drawn by working proprietors.

The salaries and wages paid to employees in factories amounted in 1926-27 to £37,092,196. Male workers, including juveniles, received £32,319,649, equal to £245 8s. per head, and female workers, including juveniles, £4,772,547, or £107 6s. 2d. per head.

A comparison of the total amount of salaries and wages paid since 1901 is given in the next table, together with the average amount received per employee and the average time worked in all factories. Similar information regarding each class of industry is published in Part "Factories and Mines" of the Statistical Register.

Year.	Salaries and Wages (exclusive of drawings by Working Proprietors).				Level of Average Wages per Employee. 1911 = 1000.			Average time Worked.
	Total.	Average per Employee including Juveniles.			Males.	Females.	Total.	
		Males.	Females.	Total.				
	£	£ s. d.	£ s. d.	£ s. d.				months.
1901	4,952,000	*	*	81 0 0	*	*	839	11.32
1911	10,047,662	114 4 9	43 2 1	96 7 1	1000	1000	1000	11.55
1920-21	25,618,591	210 19 10	87 12 2	182 7 10	1847	2032	1893	11.52
1921-22	26,783,242	218 0 6	91 12 4	186 4 3	1908	2125	1933	11.53
1922-23	27,135,647	213 19 7	97 4 8	184 12 4	1873	2256	1916	11.47
1923-24	29,772,994	225 14 3	96 4 5	194 1 7	1976	2232	2014	11.62
1924-25	31,520,849	230 5 9	99 0 11	198 4 2	2016	2298	2057	11.68
1925-26	33,566,546	233 19 5	101 5 11	201 0 11	2048	2350	2086	11.70
1926-27	37,092,196	245 8 0	107 6 2	208 10 10	2148	2483	2164	11.75

\*Not available.

Between 1911 and 1926-27 the average of the wages paid to males, including juveniles, increased by over 114 per cent., the proportion of boys under 16 showing little alteration. The average amount paid to women and girls increased by 148 per cent., and the proportion of girls under 16 increased from 8.5 per cent. of the female employees to 11.1 per cent.

The average earnings of males were highest in factories producing heat, light and power, and chemicals and drugs, the average amounts paid per male worker, including the management staff, in 1926-27 being £288 16s. and £281 0s. 2d. respectively.

Of the female workers, those employed in the clothing industries, and in the printing and book-binding trades received in 1926-27 an average wage of £107 16s. and £104 6s. 5d. respectively.

## VALUE OF MATERIALS AND OUTPUT.

The following statement shows the value of materials and fuel used, the value of production, and the amount paid in wages in factories in various years since 1901:—

Year.	Value of—					Salaries and Wages paid, exclusive of Drawings of Working Proprietors.	Balance (Output, less Materials and Wages).
	Materials Used.	Fuel Consumed, including Motive-power Rented.	Goods Manufactured, or Work Done.	Production, being Value added to Raw Materials.	Production per Em- ployee.		
	£	£	£	£	£	£	£
1901	15,140,896	496,715	25,618,471	10,010,860	151·2	4,952,000	5,058,860
1911	33,070,951	1,242,613	54,816,011	19,432,447	178·9	10,047,662	9,384,785
1920-21	91,104,505	3,608,744	187,841,386	43,123,137	297·4	25,618,591	17,509,546
1921-22	82,600,396	3,983,730	132,820,065	40,745,939	313·9	26,783,242	19,962,097
1922-23	77,233,416	4,023,860	132,853,608	51,596,332	338·2	27,135,647	24,460,685
1923-24	85,563,596	5,129,848	146,350,260	55,600,816	348·6	29,772,994	25,887,822
1924-25	94,955,332	5,609,490	159,608,873	59,044,051	356·2	31,520,849	27,523,202
1925-26	99,302,834	5,821,942	169,963,146	64,833,370	372·5	33,566,546	31,271,824
1926-27	102,983,096	6,470,308	179,302,446	69,849,044	381·3	37,092,196	32,756,848

The value of the output has grown from £25,648,471 in 1901 to £179,302,446 in 1927, and the value of production from £10,010,860 to £69,849,044.

Of the value of goods manufactured or work done in 1926-27, the cost of materials used and fuel consumed amounted to £109,453,402, and salaries and wages to £37,092,196.

Thus, on the average, out of every hundred pounds worth of goods produced in manufactories in 1926-27, the materials and the fuel cost £61, while the employees received £20 14s., leaving a balance of £18 6s. for the payment of overhead charges and other expenses and for profits.

There are, of course, numerous items to be considered before profits accrue. The cost of these cannot be determined accurately, but from the information available it is possible to make a rough estimate with regard to such items as depreciation and interest on capital invested in factories other than Government establishments.

Excluding Government workshops and factories from consideration, the capital value of lands, buildings, and fixtures in 1926-27 amounted to £25,188,000. Municipal valuations indicate that the unimproved value of property is about 35 per cent. of the improved value, and on this basis the value of the buildings and fixtures would be about £16,372,000.

Factory buildings probably depreciate in value more quickly than any other class of buildings, and therefore 4 per cent. may be regarded as a very moderate rate to be allowed yearly on that account. Depreciation of plant is more rapid, and varies considerably in different industries. As a result of inquiries made by proprietors of some of the largest factories in various industries and of the managers of State undertakings, it is estimated that 6½ per cent. is a fair average allowance for depreciation of plant and machinery. The allowance to be made for depreciation of buildings and fixtures would therefore be about £655,000, and on plant and machinery £2,724,000, or a total of £3,379,000.

In addition to the allowance for depreciation, an allowance should be made for interest on invested capital. Excluding Government workshops and factories the capital value of machinery and plant is £41,902,000, and

in land and buildings £25,188,000, to this must be added the capital represented by materials awaiting treatment and by manufactured goods awaiting disposal. Assuming that the average value of materials on hand awaiting treatment represents generally about 21·5 per cent. (equal to about two and a half months' supply) of the value of all material used during the year, approximately £22,526,000 would have been invested in this way during 1926-27. The value of unsold stocks on hand is taken to be about 5 per cent. of the total value of the output, and this would represent an investment of capital to the extent of £8,395,000. The total capital invested in 1926-27, therefore, may be set down at about £98,011,000. Interest on this amount at 5½ per cent., which could have been obtained by investment in Government loans, would be £5,146,000. The allowance to be made for depreciation and interest is estimated, on this basis, to be £8,525,000, to which must be added cost of rented premises, £1,076,000, so that £9,601,000 should be deducted in respect of charges which must be taken into account before profits can be estimated. This would reduce the balance remaining after payment of wages, material, and fuel to £21,443,000, equal to 12·7 per cent. of the total output, and such items of expense as insurance, advertising, rates and taxes would still have to be paid.

The proportions of the items which made up the total value of output of the manufacturing industries in various years since 1901 are shown below:—

Year.	Proportion per cent. of Total Value of Output absorbed by—				Total.
	Materials.	Fuel.	Salaries and Wages.	Overhead Charges, Profit, etc.	
1901	59·0	2·0	19·3	19·7	100
1911	61·9	2·3	18·6	17·2	100
1920-21	66·1	2·6	18·6	12·7	100
1921-22	61·8	3·0	20·2	15·0	100
1922-23	58·2	3·0	20·4	18·4	100
1923-24	58·5	3·5	20·3	17·7	100
1924-25	59·5	3·5	19·7	17·3	100
1925-26	58·4	3·4	19·7	18·5	100
1926-27	57·4	3·6	20·7	18·3	00

After the outbreak of war, a decline occurred in the proportions absorbed by salaries and wages, and by other expenses and profits, but whereas a recovery in wages began in 1918-19, the proportion left for charges and profits continued to diminish until 1920-21. In the following year, however, it showed a substantial increase, and by 1922-23 the ratio had risen above the pre-war level. Then the proportionate cost of materials and fuel increased, and, notwithstanding a relative decline in respect of wages, the proportion for expenses, profit, etc., became somewhat smaller until 1925-26, when it rose to a point higher than it had been in any of the last fifteen years. In 1926-27 the ratio of salaries and wages was higher, and the proportion absorbed by materials was lower, in comparison with the preceding year.

The following table shows, in each class of industry, the value of goods manufactured and of work done, the cost of materials used and of fuel

consumed, the amount paid in wages and salaries, and the proportion of the total value of output which each of these charges represented in the year 1926-27:—

Class of Industry.	Goods Manufactured, and Work done.	Materials used.	Fuel consumed, including Motive-power rented.	Salaries and Wages Paid. *	Proportionate Value of Manufactured Goods represented by—			
					Materials used.	Fuel, etc.	Salaries and Wages.	Balance.
	£	£	£	£	per cent.	per cent.	per cent.	per cent.
Treating Raw Materials, etc. ...	8,286,476	6,579,270	134,215	808,634	79.4	1.6	9.8	9.2
Oils and Fats, etc. ...	2,666,791	1,693,844	51,46	2,19,020	63.5	1.9	11.2	23.4
Stone, Clay, Glass, etc. ...	7,402,486	2,166,224	799,853	2,19,313	29.4	10.7	32.7	2.2
Working in Wood ...	8,394,749	4,982,898	70,720	20,3,941	59.4	0.8	24.9	14.9
Metal Works, Machinery, etc. ...	47,039,441	26,679,924	2,466,615	11,480,258	56.8	5.2	24.4	13.6
Food and Drink, etc. ...	49,556,706	36,463,910	685,157	4,1 0,046	73.7	1.4	8.5	16.4
Clothing and Textile Fabrics, etc.	17,853,283	9,042,497	161,809	5,102,628	50.6	0.9	28.6	19.9
Books, Paper, Printing, etc. ...	8,761,601	3,6 8,975	135,4 5	2,899,565	41.2	1.5	33.1	24.2
Musical Instruments, etc. ...	1,112,830	543,350	10,390	1,96,341	48.9	0.9	16.6	23.6
Arms and Explosives ...	161,311	17,793	5,758	116,822	11.0	3.6	66.2	19.2
Vehicles, Saddlery, Harness, etc.	3,948,309	1,355,221	5,418	1,720,004	34.3	1.4	43.6	20.7
Ship and Boat-building, etc. ...	2,257,066	1,06,015	68,175	1,416.3 7	31.3	3.0	62.8	2.9
Furniture, Bedding, etc. ...	4,308,299	2,215,611	31,177	4,42,281	51.4	0.7	28.8	19.1
Drugs and Chemicals ...	5,303,184	1,653,851	72,867	709,614	50.1	1.4	13.4	35.1
Surgical and other Scientific Instruments ...	14,968	48,2.7	1,319	16,078	24.0	0.9	39.5	25.6
Jewellery, Timepieces and Plated-ware ...	419,051	146,588	5,664	159,746	34.9	1.4	33.0	25.7
Heat, Light, and Power ...	8,665,339	2,238,448	1,663,196	1,321,524	25.9	19.1	15.3	39.7
Leatherware, N.E.I. ...	743,780	386,745	3,326	203, 97	52.0	0.4	27.3	10.3
Minor wares, N.E.I. ...	2,373,737	1,447,076	49,848	567,281	61.0	2.1	23.9	13.0
<b>Total ...</b>	<b>173,302,416</b>	<b>102,983,096</b>	<b>6,4 0,306</b>	<b>37,92,19</b>	<b>57.4</b>	<b>3.6</b>	<b>20.7</b>	<b>18.3</b>

\*Exclusive of drawings of working proprietors.

The ratio of the total amount of wages to the value of production, that is, the value added to raw materials, rose from 52.5 per cent. in 1922-23 to 53.1 per cent. in 1926-27. The ratio varies considerably in different industries, as will be seen in the following table, which covers the five years 1923-27.

Class of Industry.	Ratio of Amount of Wages Paid to Value of Production				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	per cent.	per cent.	per cent.	per cent.	per cent.
Treating Raw Materials, etc. ...	49.3	51.9	59.8	54.0	51.4
Oils, Fats, etc. ...	37.8	34.4	32.9	28.9	32.4
Stone, Clay, Glass, etc. ...	55.5	53.0	56.9	55.4	54.5
Working in Wood ...	66.8	61.0	65.5	64.6	62.6
Metal Works, Machinery, etc. ...	64.6	63.7	63.0	60.9	64.1
Food, Drink, etc. ...	33.4	35.4	35.3	34.9	34.0
Clothing, Textile Fabrics, etc. ...	60.2	59.3	58.1	57.9	58.9
Books, Paper, Printing, etc. ...	52.8	57.4	59.2	57.4	57.7
Musical Instruments, etc. ...	63.2	63.9	61.1	61.9	53.0
Arms and Explosives* ...	39.8	39.7	40.1	41.5	37.1
Vehicles, Saddlery, Harness, etc. ...	67.4	67.2	71.2	69.1	67.8
Ship and Boat-building, etc. ...	97.4	90.7	93.0	90.5	95.5
Furniture, Bedding, etc. ...	67.3	67.3	63.2	64.3	60.2
Drugs and Chemicals ...	27.2	28.2	27.8	27.1	27.6
Surgical and other Scientific Instruments ...	64.4	60.8	58.9	66.2	60.7
Jewellery, Timepieces, and Plated-ware ...	63.9	62.3	64.2	61.6	59.7
Heat, Light, and Power ...	30.2	30.1	27.2	23.5	27.7
Leatherware, N.E.I. ...	59.6	61.1	58.9	55.0	57.4
Minor Wares, N.E.I. ...	57.0	61.6	59.0	51.4	64.7
<b>Total*</b>	<b>52.5</b>	<b>53.5</b>	<b>53.4</b>	<b>51.9</b>	<b>53.1</b>

\*Excluding Commonwealth Small Arms Factory.

FUEL CONSUMED.

The value of the fuel consumed in factories in 1926-27 was £4,281,200. Coal is used extensively in all large industries with the exception of smelting, where coke is used. The quantity and value of each kind of fuel used in the various industries in 1926-27 were as follows:—

Industry.	Coal.		Coke.		Wood.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Treating Raw Materials, etc....	52,303	85,015	457	767	6,105	4,127
Oils and Fats, etc. ... ..	22,817	35,610	962	1,589	179	172
Stone, Clay, Glass, etc. ...	474,668	532,290	7,940	10,629	49,043	43,216
Working in Wood ... ..	4,357	5,767	168	206	14,406	8,703
Metal Works, Machinery, etc.	540,844	562,867	643,452	1,210,316	2,741	3,306
Food, Drink, etc. ... ..	210,774	299,610	21,792	32,450	60,279	50,094
Clothing, Textile Fabrics, etc.	22,281	33,814	2,849	4,824	369	494
Books, Paper, Printing, etc....	7,243	12,003	554	813	148	157
Musical Instruments, etc. ...	2,580	3,891	77	198	—	—
Arms and Explosives ... ..	1,511	951	—	—	—	—
Vehicles, Saddlery, etc. ...	2,333	4,453	1,035	1,849	1,263	1,353
Shipbuilding and Repairing ...	13,354	19,270	5,091	11,808	165	197
Furniture, Bedding, etc. ...	1,542	2,825	226	345	43	45
Drugs and Chemicals ... ..	10,018	14,982	6,579	8,295	91	99
Surgical and Scientific Instru- ments ... ..	3	6	10	15	—	—
Jewellery, Timepieces, and Plated-ware ... ..	65	92	182	366	—	—
Heat, Light, and Power ... ..	872,324	1,100,802	146,651	132,057	19,362	17,599
Leatherware, N.E.I. ... ..	30	52	77	170	5	7
Minor Wares, N.E.I. ... ..	14,040	19,628	533	769	205	237
Total ... ..	2,253,037	2,733,928	838,635	1,417,466	154,404	139,806

The fuel used in factories during the year 1921-22 consisted of coal, 1,654,262 tons, coke 548,418 tons, and wood 134,121 tons. Since that year the quantity of coal has increased by 36 per cent., coke by 53 per cent., and wood by 15 per cent.

The cost of fuel varies greatly in accordance with the proximity of the industry to the source of supply. Much of the coke used for smelting iron at Lithgow is produced on the South Coast, and has to be hauled long distances by train.

## EMPLOYMENT IN FACTORIES.

The number of factory employees as stated in this chapter is the sum of the average number employed in each factory during the year specified. In the case of any factory which was not in operation during the whole of the year, the number included is the average number engaged during the time when work was in progress.

A comparative statement of number of persons engaged in the various classes of manufacturing industries is shown below:—

Class of Industry.	Persons engaged, including Working Proprietors.				
	1901.	1911.	1920-21.	1925-26.	1926-27.
Treating Raw Materials, etc. ... ..	2,981	3,890	3,840	3,741	3,698
Oils and Fats, etc. ... ..	698	889	1,584	1,657	1,495
Stone, Clay, Glass, etc. ... ..	3,102	5,695	8,829	9,853	10,493
Working in Wood ... ..	5,108	8,181	9,157	10,445	10,326
Metal Works, Machinery, etc. ... ..	13,831	22,862	36,860	44,760	47,938
Food, Drink, etc. ... ..	11,372	14,050	17,874	20,792	20,964
Clothing, Textile Fabrics, etc. ... ..	14,497	26,504	28,298	35,364	38,076
Books, Paper, Printing, etc. ... ..	5,573	9,134	10,527	13,327	13,713
Musical Instruments, etc. ... ..	226	387	642	1,044	1,284
Arms and Explosives ... ..	11	33	850	395	396
Vehicles, Saddlery, Harness, etc. ... ..	2,541	4,416	5,267	8,944	9,640
Ship and Boat Building, etc. ... ..	1,541	2,429	5,175	4,977	5,457
Furniture, Bedding, etc. ... ..	2,140	3,534	4,312	6,345	6,551
Drugs and Chemicals ... ..	450	1,460	2,659	3,176	3,362
Surgical and other Scientific Instruments ... ..	69	96	206	305	284
Jewellery, Timepieces, and Plated-ware ... ..	165	753	828	841	798
Heat, Light, and Power ... ..	1,417	2,795	5,038	4,391	4,661
Leatherware, N.E.I. ... ..	117	461	919	1,472	1,280
Minor Wares, N.E.I. ... ..	391	1,055	2,146	2,272	2,777
<b>Total ... ..</b>	<b>66,230</b>	<b>108,624</b>	<b>145,011</b>	<b>174,101</b>	<b>183,193</b>

Owing to an amendment in the classification, the figures relating to individual classes for the last two years are not strictly comparable with those for earlier years. Certain establishments formerly included in the class, musical instruments, etc., or with heat and power works are now in the metal and machinery group; others previously with minor wares have been transferred to the furniture group.

Of the industries which give employment to the greatest number of workers, the increase in employment has been most marked in the metal and machinery group, in which the number engaged was more than doubled between 1911 and 1926-27.

Since 1901 the increase in the number of employees in factories has been proportionately greater than the increase in the total population, the annual rates being 4 and 2.2 per cent. respectively. The very great proportionate growth of factories between 1906 and 1911, and the slackening between 1911 and 1916, are shown in the following comparison:—

Period.	Increase in Factory Employees.		Increase in Population— Average Annual Rate.
	Number.	Average Annual Rate.	
1901-06 (5 years) ... ..	11,592	per cent. 3.3	per cent. 1.7
1906-11 (5 years) ... ..	30,802	6.9	2.6
1911-16 (4½ years) ... ..	7,777	1.5	2.4
1916-21 (5 years) ... ..	28,610	4.5	2.1
1921-26 (5 years) ... ..	29,090	3.7	2.0
1926-27 (1 year) ... ..	9,092	5.2	2.3

During 1926-27 the number of persons employed in the metropolitan factories was 136,690, and there were 46,503 in the remainder of the State, which includes such centres as Newcastle, Broken Hill, Parramatta, Granville, Lithgow, Port Kembla, Goulburn, and Bathurst. A comparative statement on page 336 shows that the number is increasing at a faster rate in the metropolitan than in the extra-metropolitan districts, the increases in 1926-27 being 8,196 and 896 in the respective areas.

*Average Time Worked.*

The average time worked in the different classes of factories during various years since 1911 is shown below. The figures have been calculated on the basis of the average number of employees engaged in each factory during the period it was in operation in the year specified.

Class of Industry.	1911.	1920-21.	1924-25.	1925-26.	1926-27.
	Months.	Months.	Months.	Months.	Months.
Treating Raw Materials, etc....	10-11	10-83	10-64	10-71	11-03
Oils and Fats, etc. ... ..	11-38	11-78	11-98	11-85	11-84
Stone, Clay, Glass, etc. ...	11-56	11-48	11-49	11-68	11-67
Working in Wood ... ..	10-82	11-00	11-07	11-09	11-09
Metal Works, Machinery, etc.	11-70	11-49	11-94	11-91	11-94
Food, Drink, etc. ... ..	11-10	11-07	11-18	11-34	11-48
Clothing, Textile Fabrics, etc.	11-64	11-70	11-74	11-76	11-82
Books, Paper, Printing, etc....	11-89	11-87	11-92	11-91	11-94
Musical Instruments, etc. ...	12-00	11-77	11-85	11-08	11-97
Arms and Explosives... ..	8-21	12-00	12-00	12-00	12-00
Vehicles, Saddlery, Harness, &c.	11-83	11-60	11-80	11-77	11-52
Ship Building, etc. ... ..	11-98	11-98	11-96	11-98	12-00
Furniture, Bedding, etc. ...	11-58	11-73	11-88	11-85	11-83
Drugs and Chemicals ... ..	11-77	11-78	11-94	11-88	11-94
Surgical Instruments, etc. ...	12-00	12-00	11-30	12-00	12-00
Jewellery, etc.... ... ..	11-98	11-65	11-97	11-94	12-00
Heat, Light, and Power ... ..	11-81	11-75	11-85	11-57	11-95
Leatherware, N.E.I. ... ..	11-91	11-90	11-81	11-90	11-95
Minor Wares, N.E.I. ... ..	11-51	11-82	11-91	11-83	11-87
<b>Mean of all Industries ...</b>	<b>11-55</b>	<b>11-52</b>	<b>11-68</b>	<b>11-70</b>	<b>11-75</b>



In some industries, *e.g.*, those engaged in treating raw pastoral products, the work is seasonal, and factories may be closed during certain periods of each year. In other industries operations are continuous throughout the whole year, and periods of slackness, due to seasonal and other conditions, result in a reduction of the number of employees, but not in the average time as shown in the table. Therefore, these figures do not reflect the regularity or intermittency of employment in relation to factory employees; but they may be used, in combination with the average number of employees, to measure roughly the working time spent in producing each year's output.

#### Nature of Employment.

Of all the persons engaged in manufacturing industries during the year 1926-27 approximately 84 per cent. were actually employed in the different processes of manufacture, or in the sorting and packing of finished articles. The following statement shows the number and the nature of employment of the persons engaged in each class of industry in that year:—

Class of Industry.	Working Proprietors, Managers, and Overseers.	Clerks, etc.	Engine-drivers, etc.	Workers in Factory, Mill, etc.	Carters, Messengers, and others.	Persons regularly employed at their own homes.	Total.
Treating Raw Materials, etc. ...	329	119	113	3,009	128	...	3,698
Oils, Fats, etc. ...	78	200	36	1,142	34	5	1,495
Stone, Clay, Glass, etc. ...	708	427	184	8,660	514	...	10,493
Working in Wood ...	1,261	556	365	7,843	301	...	10,326
Metal Works, Machinery, etc. ...	2,368	1,948	616	42,746	259	1	47,938
Food, Drink, etc. ...	1,432	1,811	837	16,411	466	7	20,964
Clothing, Textile Fabrics, etc. ...	2,644	881	58	33,930	244	319	39,076
Books, Paper, Printing, etc. ...	1,153	1,182	35	11,119	221	3	13,713
Musical Instruments ...	55	119	10	1,097	3	...	1,284
Arms and Explosives ...	19	28	4	339	6	...	396
Vehicles, Saddlery, Harness, etc. ...	1,354	628	9	7,540	109	...	9,640
Ship and Boat Building, etc. ...	187	353	93	4,732	92	...	5,457
Furniture, Bedding, etc. ...	699	223	18	5,530	80	1	6,551
Drugs and Chemicals ...	285	395	47	2,588	47	...	3,362
Surgical and other Scientific Instruments.	30	19	...	223	12	...	284
Jewellery, Timepieces, and Plated-ware.	124	51	10	594	19	...	798
Heat, Light, and Power ...	354	267	847	3,231	22	...	4,661
Leatherware, N.E.I. ...	87	83	...	1,099	11	...	1,280
Minor Wares, N.E.I. ...	213	119	13	2,376	56	...	2,777
Total ...	13,380	9,349	3,295	154,209	2,624	336	183,193
Males ...	12,506	5,745	3,295	114,199	2,500	64	138,309
Females ...	874	3,604	...	40,010	124	272	44,884

The status of workers employed varied greatly in the nineteen standard classes of manufacturing industry. The average proportion of working proprietors, managers, and overseers was 7.3 per cent. for all classes, but it varied from 3.4 per cent. in ship and boat building to 14 per cent. in those making vehicles, saddlery, and harness.

Amongst the males the proportion of working proprietors, etc., was 9 per cent., and of workers in the factories 82.6 per cent. The corresponding proportions amongst the females were 1.9 per cent. and 89 per cent. respectively.

Only 5 per cent. of the employees were clerical workers, and of these more than one-half were females. The practice of giving out work at piece rates is very limited. Workers employed in their own homes represented only 2 per thousand of the total number employed, and nearly all were women engaged by clothing manufacturers.

*Sex Distribution of Employees.*

The following table shows the number of males and of females employed in factories, and the ratio to the male and female population respectively during various years since 1901:—

Year.	Males.		Females.		Total.	
	Average Number.	Average per 1,000 of Male Population.	Average Number.	Average per 1,000 of Female Population.	Average Number.	Average per 1,000 of Mean Population.
1901 ... ..	54,556	70.2	11,674	17.9	66,230	48.5
1911 ... ..	82,083	94.5	26,541	33.3	108,624	65.2
1920-21 ... ..	112,187	105.2	32,824	32.1	145,011	69.4
1921-22 ... ..	112,362	103.6	36,514	35.0	148,876	69.9
1922-23 ... ..	115,287	104.1	37,299	35.0	152,586	70.2
1923-24 ... ..	121,845	108.1	37,829	34.9	159,674	72.2
1924-25 ... ..	126,496	110.1	39,264	35.6	165,760	73.6
1925-26 ... ..	132,233	112.9	41,862	37.1	174,101	75.8
1926-27 ... ..	138,309	115.6	44,884	39.0	183,193	78.0

Manufacturing industries provide employment for 7.8 per cent. of the total population; more than 11 per cent. of males find employment therein, but less than 4 per cent. of females. The proportion of males has increased by 22 per cent. since 1911, and the proportion of females has fluctuated, but shows a tendency to increase.

The Factories and Shops Act imposes certain restrictions on the employment of women and of young persons, and the Minister for Labour and Industry may prohibit the employment of boys under 16 or of females in connection with dangerous machinery or in any work in which he considers it undesirable that they should be employed.

The following table shows, for the years 1911, 1921, and 1927, the industries in which women and girls have been employed in greatest numbers, and the ratio to every 100 males employed in the same industries.

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Only workers in the factory have been included, and managers, overseers, clerks, messengers, etc., have been excluded.

Industry.	Average Number of Women and Girls employed in Factory.			Number of Women and Girls per 100 Males employed in Factory.		
	1911.	1920-21.	1926-27.	1911.	1920-21.	1926-27.
Food, etc.—						
Biscuits ... ..	690	822	1,058	121	102	73
Confectionery ... ..	442	1,190	1,611	70	113	141
Jam and fruit canning, pickles, etc...	610	951	893	150	122	138
Condiments, etc. ... ..	209	545	590	122	125	178
Tobacco ... ..	746	1,262	1,326	128	131	140
Other food, etc. ... ..	459	325	490	8	6	8
Clothing, etc.—						
Woollen mills ... ..	561	793	1,703	172	101	193
Hosiery and knitting factories ... ..		1,186	2,646		663	426
Boots and shoes ... ..	1,499	1,612	2,235	61	61	71
Clothing, dressmaking, and millinery	12,475	11,080	12,141	488	620	627
Hats and caps ... ..	995	815	1,232	227	160	238
Shirts, underclothing, etc. ... ..	1,599	2,719	4,249	1,859	2,124	1,686
Other clothing ... ..	281	521	1,234	73	76	110
Paper, paper bags and boxes ... ..	727	827	1,467	201	119	135
Printing and bookbinding ... ..	1,387	1,711	1,843	29	34	30
Leatherware ... ..	56	279	548	16	57	99
Rubber goods ... ..	59	344	687	28	57	53
Other industries ... ..	1,592	2,620	4,057	3	4	5
Total ... ..	24,387	29,602	40,010	36	32	35

The above table shows that women workers are concentrated and predominate in industries relating to the preparation of food and clothing, and the "lighter" manufactures.

*Child Labour.*

The Factories and Shops Act prescribes that no child under 13 years may be employed in a factory, and that a child between the ages of 13 and 14 years may not be employed unless by special permission of the Minister for Labour and Industry. Moreover, the Public Instruction Act prescribes that children must attend school until they reach the age of 14 years, but exemptions from attendance may be granted in special cases, e.g., if the Minister for Education is satisfied that exemption is necessary or desirable, or in the case of children aged 13 years, if they have attained a certain standard of education.

In regard to children under 16 years of age the Factories and Shops Act authorises the issue of regulations prohibiting the employment of children under 16 years of age in specified classes of factories unless the occupier of the factory has obtained a certificate by a legally qualified medical practitioner that the child is fit for employment in that factory.

Special permits to children between the ages of 13 and 14 years numbered 143 in 1927, viz., to 90 boys and 51 girls in the metropolitan district, to 2 boys in other districts.

During the same year 9,278 certificates of fitness were issued to children under 16 years of age, viz., 4,394 to boys and 4,884 to girls.

*Ages of Employees.*

The age distribution of the male employees in factories in 1926-27 was as follows:—Boys under 16 years numbered 4,594, or 3.3 per cent.; 23,342, or 16.9 per cent., were between 16 and 21 years; and 110,373, or 79.8 per cent.,

were adults. Of the females, the number and proportion in the respective groups were 5,001, or 11.1 per cent.; 17,646, or 39.3 per cent.; and 22,237, or 49.5 per cent.

The following table shows the average number of persons under and over the age of 16 years engaged in the factories in various years since 1907, the first year for which statistics respecting the employment of children are available:—

Year.	Persons Employed in Factories, including Working Proprietors.								
	Aged 16 years and over.			Children under 16 years of age.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1907	63,547	18,634	82,181	2,406	1,880	4,286	65,953	20,514	86,467
1911	79,609	24,274	103,883	2,474	2,267	4,741	82,083	26,541	108,624
1920-21	108,514	29,214	137,728	3,673	3,610	7,283	112,187	32,824	145,011
1921-22	108,451	32,364	140,815	3,911	4,150	8,061	112,362	36,514	148,876
1922-23	111,286	33,011	144,297	4,001	4,288	8,289	115,287	37,299	152,586
1923-24	117,717	33,791	151,508	4,128	4,038	8,166	121,845	37,829	159,674
1924-25	122,528	35,008	157,536	3,969	4,256	8,224	126,496	39,264	165,760
1925-26	127,712	37,174	164,886	4,527	4,688	9,215	132,239	41,862	174,101
1926-27	133,715	39,883	173,598	4,594	5,001	9,595	138,309	44,884	183,193

During the year 1926-27 there was an increase of 6,070 in the number of male employees and of 3,022 in the number of females. Of those aged 16 years and over there was an increase of 6,003 males and 2,709 females; and there were 380 more children in the factories than in the previous year, the number of boys having increased by 67, the number of girls by 313.

Of 9,595 juveniles engaged in manufacturing, 8,142 were employed within the metropolitan area. A review of the statistics of juveniles shows that up to the year 1914 the boys outnumbered the girls, but in some of the more recent years the number of girls was the greater. About 92 per cent. of the girls were working in Sydney and suburbs, and 77 per cent of the boys.

The following statement shows the proportion of boys and girls amongst the factory employees in various years since 1907, also the proportion of children aged 13 and under 16 years who are employed in factories:—

Year.	Children employed in Factories.			
	Boys per 1,000 Male Employees.	Girls per 1,000 Female Employees.	Children per 1,000 Employees.	Children per 1,000 of all Children aged 13 and under 16.
1907 ...	36.5	91.6	40.6	45.9
1911 ...	25.2	76.4	37.4	49.9
1920-21 ...	32.7	110.0	50.1	62.8
1921-22 ...	34.8	113.7	54.1	68.4
1922-23 ...	34.7	115.0	54.4	68.2
1923-24 ...	33.9	106.7	51.1	66.8
1924-25 ...	31.4	108.4	49.6	65.9
1925-26 ...	34.2	112.0	52.9	72.5
1926-27 ...	33.2	111.4	52.4	73.7

The proportion of boys to men is lower now than in the year 1907, but the proportion of girls amongst the female employees is 22 per cent. higher.

The number of children employed in factories shows a tendency to increase, and was equal to 74 per 1,000 of all children in the community between the ages of 13 and 16 in 1927 as compared with 46 per 1,000 in 1907.

## INDIVIDUAL INDUSTRIES.

## PRINCIPAL PRODUCTS.

The foregoing information relating to the manufacturing industry as a whole or to groups of industries serves to show the general industrial development, but it does not furnish particulars relating to individual industries. It is desirable that detailed information should be available regarding all the important industries, but the output of many of them, e.g., engineering works, cannot be classified readily. Therefore the following statement of principal products includes only those for which particulars of quantity and value are available.

Commodities.	1924-25.		1925-26.		1926-27.	
	Quantity.	Value at Works.	Quantity.	Value at Works.	Quantity.	Value at Works.
Wool, Scoured ... ..lb.	18,974,079	2,955,565	24,042,176	2,734,868	30,021,122	3,371,345
"    Tops and Nolls* ...lb.	3,960,235	959,925	4,595,843	874,737	3,910,674	694,425
Leather ... ..lb.	19,276,236	1,385,034	22,797,546	1,578,684	21,099,047	1,499,503
Soap ... ..cwt	417,008	1,024,605	420,425	1,057,962	457,995	1,072,434
Bricks ... .. 1,000	384,226	1,363,308	398,126	1,415,146	430,065	1,600,237
Cement ... .. ton	272,300†	1,200,000†	305,948	1,317,802	365,384	1,553,689
Timber Sawn ... .. cub.ft.	14,197,908	2,264,428	14,663,087	2,279,773	14,052,938	2,209,120
Steel ... .. ton	320,693	...	339,463	...	360,212	...
Bacon and Ham ... ..lb.	19,764,983	961,023	21,548,888	1,109,484	23,275,890	1,203,387
Butter ... .. lb.	112,504,674	6,953,329	101,698,205	6,697,884	91,727,225	7,091,724
Margarine ... .. lb.	12,049,076	392,927	14,767,063	449,825	16,014,623	522,104
Biscuits ... .. lb.	43,564,093	1,377,629	39,593,616	1,309,872	44,780,830	1,410,577
Aerated Waters, etc. ...doz.	5,809,548	824,758	6,916,664	908,051	7,048,244	978,277
Jams and Preserves ...lb.	35,211,387	904,114	30,392,606	820,088	30,871,948	835,308
Flour ... .. ton	395,409	5,092,277	434,407	6,064,315	431,532	5,671,070
Bran ... .. ton	84,922	506,401	91,335	643,159	86,278	623,707
Pollard ... .. ton	85,167	557,477	90,197	698,719	97,607	775,805
Sugar, Raw ... ..cwt.	533,640	748,718	647,704	646,803	532,080	665,289
Beer and Stout ... ..gal.	24,519,876	2,622,583	25,597,281	2,772,477	27,372,445	2,964,969
Tobacco ... .. lb.	8,980,013	2,851,087	9,513,115	2,945,131	9,436,084	2,942,959
Cigarettes and Cigars ...lb.	4,744,257	1,808,558	4,976,791	1,821,211	5,200,744	1,861,584
Tweed and Cloth ...yds.	1,884,218	775,913	2,042,983	831,024	2,378,555	993,565
Socks and Stockings doz. prs.	514,295	886,131	731,495	1,180,033	737,437	1,118,057
Knitted Goods—Woolen ...No.	606,647	349,886	720,443	359,833	866,930	401,000
"    Cotton ...No.	1,316,820	83,279	2,545,185	219,275	4,269,713	364,454
Boots, Shoes, and Slippers prs.	4,354,760	2,290,900	4,504,559	2,409,189	5,102,953	2,673,891
Hats and Caps ... ..No.	2,400,516	737,604	2,312,796	707,540	3,054,180	993,758
Gas ... 1,000 cub. ft.	9,786,898	1,879,917	10,005,876	1,892,127	10,279,605	2,113,511
Coke ... .. ton	1,063,690	1,500,453	979,715	1,327,384	1,086,604	1,604,966
Electricity ... 1,000 units	610,658	3,571,579	692,125	4,507,837	798,917	4,261,600

\* In wool-scouring works only.

† Mines Department records for calendar years ended six months previously.

The list of commodities shown above represents less than one third of the total value of the factory production. It is exclusive of the products of the following important groups, viz., metal and machinery works which in 1926-27 contributed £47,039,000, or 26 per cent. of the total value; the printing and furniture trades, vehicles, etc., ship-building, and drug and chemical factories, of which the collective output was valued at £22,594,000, or 13 per cent. of the total. The largest items shown in the statement are food products, butter and flour, of which the output is liable to fluctuation on account of seasonal conditions affecting rural production.

## TANNERIES.

Skins and hides are available in large quantities, and in recent years the tanning industry has extended its operations. Besides maintaining an

extensive export trade in leather, it provides practically all the raw material needed for local requirements and for a small oversea trade in footwear and other leather goods. More than three-fifths of the leather produced locally is sole leather, but the production of the finer sorts is expanding. The exports of sole leather in 1927 were valued at £188,092, and of other leather £225,436. Fancy leathers, principally patent and enamelled leather, are still imported in large quantities. Thus 551,408 square feet of this leather, valued at £37,477, were imported into New South Wales in 1926-27, and more than half came from the United States of America.

The following table gives particulars of the industry for the year 1901 and at intervals thereafter:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	108	76	80	76	74
Average Number of Employees	1,059	1,039	1,242	1,265	1,256
Average Horse-power used ...	711	1,044	2,688	2,808	2,783
Value of Land and Buildings † £	115,752	105,990	265,166	309,757	329,141
Value of Plant and Machinery £	47,274	82,241	172,132	210,965	213,914
Salaries and Wages paid ... £	80,757	104,695	262,724	285,960	285,755
Value of Fuel and Power used £	4,893	7,160	17,855	19,001	21,493
Value of Materials used ...	£ 578,164	786,817	1,684,791	1,503,741	1,390,505
Value of Output ...	£ 735,231	982,023	2,103,525	1,980,168	1,964,836
Value of Production ...	£ 152,174	188,046	400,879	457,426	552,838
Materials Treated—					
Hides—					
Calf and Yearling ... No.	*	214,681	100,829	252,697	242,352
Other ... .. No.	*	317,025	692,335	754,862	764,421
Sheep Pelts ... .. No.	*	4,642,865	3,813,618	1,966,142	2,725,904
Other Skins ... .. No.	*	125,576	284,632	389,751	372,927
Bark ... .. tons	*	11,706	11,570	11,746	10,255
Articles Produced—					
Leather ... .. lb.	*	13,945,005	17,707,065	22,797,546	21,099,047
Basils ... .. lb.	*	4,324,139	2,730,162	1,661,195	2,316,398
Other ... .. £	*	26,885	296,113	140,639	145,351

\* Not available.

† Includes rented premises.

WOOL-SCOURING, FELLMONGERING AND WOOL-COMBING.

Only a very small proportion of the wool clip of New South Wales is scoured locally, as oversea manufacturers generally prefer to buy wool in

the grease and to treat it in accordance with the purpose for which they require it. The exports in 1926-27 of greasy wool were 335,025,736 lb., scoured wool 26,731,310 lb., and wool tops 2,900,897 lb.

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	73	59	42	38	35
Average Number of Employees	1,459	1,603	1,461	1,092	1,066
Average Horse-power used ...	997	2,009	3,623	3,260	2,293
Value of Land and Buildings † £	125,836	169,418	276,320	266,442	230,147
Value of Plant and Machinery £	66,391	160,200	373,442	402,367	298,464
Salaries and Wages paid ...	£ 77,429	126,215	280,731	215,625	251,184
Value of Fuel and Power used £	9,059	16,277	39,542	37,512	47,529
Value of Materials used ...	£ 25,244	2,151,713	2,991,868	3,201,771	3,671,389
Value of Output ...	£ 150,614	2,393,883	3,677,014	3,621,841	4,192,862
Value of Production ...	£ 116,311	225,893	645,604	382,558	473,944
<b>Materials Treated—</b>					
Greasy Wool ... lb.	*	34,023,054	24,960,202	37,744,500	42,902,945
Scoured Wool ... lb.	*	*	5,738,701	4,657,706	4,030,599
Skins ... No.	*	5,180,335	4,083,690	1,736,566	2,893,634
<b>Articles Produced—</b>					
Scoured Wool ... lb.	*	33,283,378	26,994,551	24,042,176	30,021,122
Wool-tops and Noils ... lb.	*	*	5,623,414	4,595,843	3,910,674
Pelts... No.	*	4,635,524	3,235,429	1,387,326	2,472,667

\* Not available.

† Includes rented premises.

The fellmongering establishments treated 2,893,634 skins and produced 10,386,514 lb. of scoured wool, the balance being the output of the scouring works.

#### SOAP AND CANDLE FACTORIES.

The soap and candle factories supply practically the whole of the local requirements except fancy and medicated soaps, and even these are being supplied to an increasing extent. There is also a small export trade with the islands of the Pacific. The following table shows the chief particulars of the industry since 1901:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	44	37	26	28	26
Average Number of Employees	533	638	946	1,086	1,111
Average Horse-power used ...	503	785	964	1,251	1,215
Value of Land and Buildings † £	84,923	165,218	223,423	347,053	345,811
Value of Plant and Machinery £	89,147	150,453	237,714	390,862	384,772
Salaries and Wages paid £	37,681	49,555	141,135	204,621	206,579
Value of Fuel and Power used £	5,932	12,205	40,160	35,742	33,374
Value of Materials used ...	£ 208,676	359,096	859,555	867,389	855,457
Value of Output ...	£ 322,036	597,544	1,177,511	1,495,065	1,518,472
Value of Production ...	£ 107,428	226,243	277,796	591,934	629,641
<b>Materials Treated—</b>					
Tallow ... cwt.	*	117,428	139,153	178,194	178,077
Alkali ... lb.	*	6,370,007 †	4,516,054	7,306,577	8,126,231
Wax ... lb.	*	*	2,481,854	2,670,444	2,519,674
Resin ... cwt.	*	*	22,327	31,841	32,107
Copra Oil ... cwt.	*	£180,697	15,560	30,682	30,249
Sand ... cwt.	*	*	3,595	19,757	20,132
<b>Principal Products—</b>					
Soap ... cwt.	233,600	277,449	280,620	420,425	457,995
Soap Extract, etc. ... lb.	*	965,807	4,051,251	5,703,608	5,147,752
Candles (including wax) lb.	3,895,468	5,388,848	4,191,534	3,792,285	3,623,663
Glycerine ... lb.	631,680	*	1,882,423	1,967,013	2,041,524
Soda Crystals ... lb.	*	*	681,024	2,935,014	3,112,388

\* Not available.

† Includes rented premises.

‡ All factories.

BRICK AND TILE WORKS.

Owing to the abundance of clay, brickworks have been established in many parts of the State. In the metropolitan brickworks 1,738 persons are employed, and the output of the kilns is much greater and more varied than in the country, where the employees number 1,356. In a number of cases the industry is associated with tile-making, so the figures for the two industries have been combined. The following figures present information concerning the industry in 1901 and later years:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	182	222	159	177	173
Average Number of Employees ... ..	1,823	3,017	3,716	3,866	3,880
Average Horse-power used ...	1,228	4,865	9,181	11,679	11,752
Value of Land & Buildings† £	200,170	391,875	865,182	983,110	1,004,824
Value of Plant & Mach'ry £	103,539	449,100	1,114,500	1,428,725	1,529,306
Salaries and Wages paid £	149,342	322,781	777,536	866,720	895,957
Value of Fuel and Power used ... .. £	46,355	101,267	276,402	320,503	377,829
Value of Materials used £	32,199	70,881	189,150	316,457	331,651
Value of Output ... .. £	364,251	726,620	1,640,743	1,962,088	2,155,718
Value of Production ... .. £	285,697	554,472	1,175,191	1,325,128	1,446,238
Articles Produced—					
Bricks ... .. No.	157,999,000	327,864,000	360,092,005	397,969,112	430,064,879
Tiles ... .. £	*	24,857	286,862	334,951	339,811
Fire Bricks, etc. ... .. £	*	*	72,225	149,143	172,307
Pipes and Pottery ... .. £	*	104,004	6,754	36,687	41,249

\* Not available.

† Includes rented premises.

In addition to the bricks made in the brick and tile works, a small number are manufactured in other establishments, but are not included in the figures shown above.

The local factories supply practically all the bricks and tiles required for use in New South Wales. In pre-war years large quantities of tiles were imported, but local production has developed to such an extent that importation has practically ceased.

*State Brickworks, Homebush.*

In the latter part of 1911 the Government established State Brickworks at Homebush, near Sydney, and the undertaking has proved very profitable. The requirements of the different Government Departments are supplied and bricks are sold to the public at prices below those ruling in private brick-yards.



The following table gives particulars of the operations of the State Brickworks at Homebush Bay during each of the last five years. The sale prices as stated in the table were for bricks loaded into trucks at the yard, Homebush Bay:—

Particulars.	1922-23.	1923-24	1924-25.	1925-26.	1926-27.
Bricks manufactured .. .. .	42,397,987	44,966,718	47,335,915	49,116,786	58,063,139
Used for Public Works .. .. .	14,831,201	9,832,900	14,684,279	23,740,727	23,169,934
Sold to Private Purchasers .. .. .	27,451,421	34,826,912	30,598,928	24,666,518	35,153,809
Used at Works .. .. .	6,941	53,789	1,980,338	1,231,793	104,237
Stocks at 30th June .. .. .	275,342	478,479	600,799	1,078,542	718,701
	£ s d	£ s. d	£ s. d.	£ s. d	£ s. d.
Cost of Manufacture per 1,000 .. .. .	2 6 5	2 6 8	2 6 3	2 7 10	2 8 9
Sale price per 1,000—					
Seconds .. .. .	2 19 6	2 10 6	2 10 6	2 12 6	2 13 0
Commons .. .. .	2 13 0	2 13 0	2 13 0	2 15 0	2 15 6
Face.. .. .	4 6 0	*4 6 0	4 10 0	4 15 0	4 16 0

\* From 1st November, 1923, £4 10s.

A system of profit-sharing by the employees of the industry is in operation, and, apart from the amounts distributed under this scheme, undistributed surpluses amounted at 30th June, 1927, to £129,789.

#### SAWMILLS.

Sawmilling is an important industry in many parts of the State, the majority of the mills being situated in the forest areas. Besides general sawmilling, moulding and planing are undertaken at some mills, also the cutting of wood-paving blocks. In the more populous centres sawmills are conducted in connection with yards where imported timbers are treated and joinery work is done.

Details concerning the sawmilling industry at intervals since 1901 are as follow:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ..	345	452	496	532	501
Average Number of Employees .. .. .	4,088	5,205	5,645	5,645	5,391
Average Horse-power used...	5,189	10,230	14,597	18,590	17,245
Value of Land and Buildings* .. .. .	£ 317,193	465,548	811,830	978,684	853,206
Value of Plant and Machinery .. .. .	£ 273,883	526,909	908,192	1,101,405	1,053,222
Salaries and Wages Paid ...	£ 304,826	456,520	926,276	1,070,221	1,055,687
Value of Fuel and Power used .. .. .	£ 17,601	6,503	24,405	36,329	37,535
Value of Materials used .. .. .	£ 824,065	1,309,549	2,732,656	3,362,610	3,305,113
Value of Output .. .. .	£ 1,335,153	2,057,807	4,103,924	5,083,351	5,054,463
Value of Production .. .. .	£ 494,437	741,755	1,346,863	1,689,412	1,711,815
Logs Treated—					
Hardwood cub. ft. } .. .. .	17,769,000	12,309,030	14,844,000	14,721,700	14,647,405
Softwood ,, } .. .. .		5,442,000	5,652,000	7,289,300	7,350,300
Sawn Timber Produced—					
Hardwood sup. ft. } .. .. .	180,028,000	100,079,000	117,781,837	117,390,141	111,557,114
Softwood ,, } .. .. .		51,392,000	45,628,945	58,566,904	57,078,139

\* Includes rented premises.

The native timbers treated during 1926-27 consisted of 14,344,265 cubic feet of hardwoods and 7,086,641 cubic feet of softwoods, the quantities of sawn timber produced therefrom being 108,245,939 super. feet, and 54,685,447 super. feet, respectively.

METAL AND MACHINERY WORKS, ETC.

This group is the most important of the manufacturing industries in the State, because it provides employment for nearly one-third of the adult males engaged in factories and workshops.

The output of these works constitutes a considerable proportion of the total value of local manufactures, though they supply only a portion of the local requirements of manufactured metals and machinery. Details of the products are not available, but in view of their importance the following particulars relating to the operations in 1926-27 are shown:—

Items.	Engineering Works.	Ironworks and Foundries.	Railway and Tramway Workshops.	Metal Extraction and Ore Reduction.	Other.	Total.
Number of Establishments ...	300	161	41	19	480	1,001
Average Number of Employees ..	7,805	8,293	12,644	3,246	15,950	47,938
Average Horse-power used ...	8,012	36,037	12,763	27,640	15,983	100,435
Value of Land and Buildings* £	1,471,506	1,376,403	2,355,882	614,731	2,334,216	8,732,748
Value of Plant and Machinery £	1,261,988	3,035,427	3,173,550	2,876,458	2,585,670	12,933,103
Salaries and Wages paid... £	1,744,344	2,036,011	3,277,700	1,008,437	3,383,766	11,480,258
Value of Fuel and Power used £	72,476	377,330	74,896	1,703,977	240,936	2,466,615
Value of Materials used ... £	2,230,337	8,573,382	2,333,218	6,558,847	6,984,140	26,679,924
Value of Output ... .. £	4,945,680	11,779,843	6,408,954	11,379,429	12,525,535	47,039,441
Value of Production ... .. £	2,642,867	2,829,131	4,000,840	3,119,605	5,300,459	17,892,902

\* Includes rented premises.

The number of persons employed in metal and machinery workshops has increased by 11,078 since 1920-21, the value of premises, plant, etc., by £7,379,000, and the value of production by £7,627,000.

The expansion of these industries has been stimulated in recent years by reason of large projects undertaken in the State, e.g., the Sydney Harbour Bridge, the City Railway, and the electrification of the suburban railways and the construction of water conservation works.

Various classes of engineering are undertaken at the dockyards, of which particulars are published in the chapter of this volume entitled "Shipping."

*Iron and Steel Works.*

In New South Wales there are large supplies of iron ore and of coal, both of excellent quality, and in close proximity to each other and to the seaboard.

The principal iron and steel works are located at Lithgow, where works established many years ago have been reorganised on modern lines, and at Newcastle, where operations were commenced in 1915. The products of the works include iron and steel of various grades, pipes and boilers, steel sleepers, rails, and such by-products as sulphate of ammonia, tar, benzol and solvent naphtha. At Lithgow local iron ores are used, and the ore treated at Newcastle is imported from South Australia.

The following table shows the production of pig-iron in New South Wales at intervals since 1907:—

Year.	From New South Wales Ores.	From Other Australian Ores.	Total.	Year.	From New South Wales Ores.	From Other Australian Ores.	Total.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1907	18,631	...	18,631	1923-24	60,841	306,258	367,099
1911	36,354	...	36,354	1924-25	101,293	358,861	460,154
1920-21	99,790	266,759	366,549	1925-26	97,572	333,025	430,597
1921-22	66,141	235,166	301,307	1926-27	125,126	343,773	468,899
1922-23	75,781	62,333	138,114				

The quantity of iron ore used in 1926-27 for the production of pig-iron was 690,217 tons, of which 156,900 tons were mined in New South Wales.

The production of steel in 1921-22 amounted to 181,007 tons. In the following year the Newcastle works were closed for nearly nine months and the output declined to 70,481 tons. The quantities produced in the last four years were 279,317 tons, 320,693 tons, 339,463 tons and 360,212 tons respectively.

Factories have been established in proximity to the iron and steel works for the production of galvanised iron wire, wire-netting tyres and axles, structural steel for bridges, and other metal products.

Large iron and steel works are under construction at Port Kembla in terms of an agreement between the Government of New South Wales and the Hoskins Iron and Steel Co., Ltd., which was ratified by Parliament in February, 1927. The Government agreed to construct a railway from Moss Vale, on the main southern line, to Port Kembla within a period of three years. The company agreed to expend within the same period a sum of £650,000 on the construction and equipment of iron and steel works at Port Kembla, and to spend an additional sum of £100,000 during the first year the line is open for traffic. In 1928 arrangements were made for merging the company's business into a new organisation, with which will be associated two English engineering firms and an Australian firm of shipowners and colliery proprietors. The purpose of the enterprise is the development of the iron and steel industry at Port Kembla.

#### *Metal Extraction and Ore Reduction.*

Smelting, as a distinct industry, is conducted at several centres in New South Wales, and there are nineteen establishments for the treatment of ores, one of the most important being at Port Kembla on the South Coast. Other metal works in this vicinity produce copper wire, copper and brass cable and tubes, and insulated telephone cable.

The following statement shows the operations of the smelting companies in connection with both local and imported ores during 1926-27:—

Metals.	Quantities of Metals extracted from Ores, Concentrates, etc., the produce of—								
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	N. Territory.	New Guinea.	New Zealand.
Silver ... oz.	8,334	18,643	31,693	51	4,071	166,815	...	6,598	11,145
Copper ... tons.	736	2	909	17	6	7,523	...	486	2
Tin ... ..	1,170	20	655	...	72	218	42	...	...
Iron—pig ..	125,126	...	...	343,773	...	...	...	...	...

BUTTER FACTORIES.

Butter-making is one of the chief industries connected with the preparation of articles of food. It gives employment to 1,068 persons, and has an annual output valued at over £7,258,000. Butter is an important item of the export trade, and 95 per cent. of local production is made in factories.

Details concerning butter factories and their operations in various years since 1901 are as follows:—

Items.	1901.	1911.	1920-21.	1925-26§.	1926-27§.
Number of Establishments	130	150	126	121	117
Average Number of Employees ... ..	909	968	1,022	1,100	1,068
Average Horse-power used	1,765	2,161	3,843	5,609	6,353
Value of Land and Buildings † ... .. £	247,394	186,893	308,189	487,845	641,061
Value of Plant and Machinery ... .. £	172,767	230,485	395,663	626,012	672,284
Salaries and Wages paid £	74,176	110,617	225,392	289,993	298,306
Value of Fuel and Power used ... .. £	13,924	23,599	61,655	73,932	75,325
Value of Materials used £	1,260,920	3,205,863	8,017,379	7,031,337	6,133,532
Value of Output ... .. £	1,535,398	3,475,890	8,974,967	7,855,462	7,258,714
Value of Production ... .. £	260,554	246,428	895,933	750,193	1,049,857
Cream used for butter lb.	*	177,401,000‡	174,837,000‡	216,071,067	200,525,769
Butter Produced ... .. lb.	34,282,214	78,421,512‡	79,864,745‡	101,698,205	91,727,225

\* Not available. † Includes rented premises.  
 ‡ Excludes small quantities in farm factories worked by farm employees.  
 § Includes 4 creameries.

The cream used during 1926-27 includes interstate imports 1,419,730 lb., from which 698,365 lb. of butter were made.

The annual production of butter depends largely on seasonal conditions in the dairy farming districts, but the general trend has been towards an increased output, and the increase in quantity has been accompanied by a marked improvement in quality. About 90 per cent. of the butter made in factories is graded as choicest by official graders.

The 117 butter factories mentioned in the foregoing table include four creameries, and four factories, in which is made cheese, as well as butter. There were also 75 other establishments engaged in the treatment of dairy produce, viz., 47 cheese factories, 25 bacon and ham factories, and 3 factories manufacturing condensed milk. Particulars of the operations of these factories for the year 1926-27 were:—

Number of employees ... ..	653
Value of land and buildings ... ..	£272,301
Value of plant and machinery ... ..	£214,692
Salaries and wages paid ... ..	£162,406
Value of output ... ..	£1,901,595
Value of production ... ..	£412,681

In addition there was one factory in which cheese was treated after manufacture.

Bacon, hams, butter, and cheese are made on farms as well as in factories, therefore the chapter in this Year Book relating to the Dairying Industry should be consulted for complete information regarding the production of these commodities.

## MEAT-PRESERVING AND REFRIGERATING.

In 1919-20 there were nine establishments, with 1,109 persons employed in connection with meat-preserving, but owing to depression in the meat trade only three establishments, employing 251 persons, were in operation in 1926-27.

The following table shows the production of establishments treating meat by canning and chilling during the last five years:—

Products.		1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
<b>Preserving Works —</b>						
Tinned Meat ... lb.		4,459,504	2,712,529	5,143,645	4,988,265	6,673,406
Other Products ... £		53,526	35,250	64,160	74,586	138,653
<b>Refrigerating Works—</b>						
<b>Carcases Frozen for Export*—</b>						
Cattle ... No.		20,749	5,138	31,825	27,792	12,499
Sheep ... No.		968,629	298,175	269,888	321,834	480,879
Lambs ... No.		403,843	146,996	228,056	456,136	685,154
Pigs ... No.		1,685	766	5,600	2,662	7,449
<b>Carcases Chilled—</b>						
Cattle ... No.		15,434	8,939	21,059	23,090	17,748
Sheep ... No.		16,480	36,917	30,503	23,502	41,018
Lambs ... No.		2,766	3,306	3,027	3,385	9,441
Pigs ... No.		2,143	6,465	4,076	8,393	6,512

\*Exclusive of meat for export as ship's stores.

The output of tinned meat was formerly much larger than at the present time. It amounted to 31,576,000 lb. in 1913, and during the three years ended 30th June, 1920, the average annual output exceeded 20,000,000 lb. Since that year prices of stock have been high and the demand for preserved meat has slackened.

The operations of the refrigerating works are affected by a number of factors, most important being the seasons and the condition of world markets. In adverse seasons, or after a succession of good seasons, the pastoralists sell all the stock which is in marketable condition, but on the breaking of a drought stock are retained for fattening or breeding. An unusually severe drought broke in June, 1920, and for a time stock were withheld. A few months later the oversea meat markets became glutted, and prices fell below the cost of production, consequently operations were restricted.

In 1922 a favourable oversea market for mutton and lamb and a local scarcity of winter fodder led to a revival in that section of the trade. Subsequently supplies of live stock for freezing dwindled, owing to good seasons and the high prices obtainable for wool. During the last two years a large number of lambs were frozen for export, but the number of sheep was less than half the number treated in 1922-23. In recent years there has been an increase in the chilling of beef, which, if transported in a satisfactory condition, commands a better market abroad than frozen beef.

## BISCUIT FACTORIES.

There are in the State ten establishments engaged in the manufacture of biscuits, of which nine are within the Metropolitan area. The output of biscuits reached nearly 45,000,000 lb., with a value of £1,410,000. An export trade in biscuits is maintained with the islands of the Pacific; the total

exports in 1926-27 amounted to 2,419,000 lb. A small quantity—261,503 lb.—was imported from abroad. Details for 1901 and other years, including 1926-27, are given below:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	8	6	10	10	11
Average Number of Employees	845	1,360	1,800	1,794	1,887
Average Horse-power used ...	131	556	1,115	736	833
Value of Land and Buildings† £	42,253	94,050	164,031	204,980	227,191
Value of Plant and Machinery £	29,066	86,192	135,285	103,521	116,441
Salaries and Wages paid... £	35,165	70,055	221,791	239,143	269,310
Value of Fuel and Power used £	1,862	7,104	23,614	30,727	34,548
Value of Materials used... £	126,891	332,341	936,747	746,776	811,966
Value of Output ... £	213,645	529,108	1,358,266	1,343,925	1,449,984
Value of Production ... £	84,892	189,663	397,905	566,422	603,470
Materials Treated—					
Flour... .. tons	*	8,755	12,210	12,462	14,367
Sugar ... .. tons	*	*	3,024	3,220	3,558
Articles Produced—					
Biscuits ... .. lb.	*	22,029,000	38,308,360	39,593,616	44,780,830
Cakes—Value only ... £	*	*	21,916	34,801	36,000

\* Not available.

† Includes rented premises.

An apparent reduction in 1925-26 was due partly to a change in classification, one factory being transferred to another group.

FLOUR MILLS.

The amount of mill-power for grinding and dressing grain is ample for manufacturing the flour consumed in the State, and there is a considerable export trade.

Details concerning flour-milling at intervals since 1901 are as follow:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ..	89	73	60	58	57
Average Number of Employees	889	967	1,023	1,210	1,224
Average Horse-power used ...	3,149	4,670	6,384	7,053	7,231
Value of Land and Buildings† £	334,037	357,356	561,688	710,106	755,694
Value of Plant and Machinery £	254,335	340,316	572,456	902,868	924,531
Salaries and Wages paid... £	77,321	123,491	219,964	307,046	318,610
Value of Fuel and Power used £	18,977	24,648	37,746	70,430	70,376
Value of Materials used... £	1,215,420	2,211,263	4,951,650	6,476,794	6,127,241
Value of Output ... £	1,514,512	2,538,331	5,590,405	7,438,168	7,098,456
Value of Production ... £	280,115	302,420	601,009	890,944	900,839
Wheat Treated ... .. bus.	9,369,534	12,616,111	11,595,807	20,674,708	20,598,188
Articles Produced—					
Flour ... .. tons	191,504	258,556	244,818	434,407	431,532
Bran, Pollard, Sharps, etc. ... .. "	*	112,766	100,545	178,204	179,279
Wheat Meal, etc. ... cwt.	*	21,840	21,863	68,095	64,215

\* Not available.

† Includes rented premises.

The average annual production of flour during the last three years was about 420,450 tons, and the annual export—oversea and interstate—was approximately 180,000 tons, or 43 per cent. of the output.

SUGAR MILLS.

Sugar cane is cultivated in the lower valleys of the northern coastal rivers of New South Wales, and the cane is crushed at three large mills situated respectively at Harwood Island, on the Clarence River, at Broadwater, on the Richmond, and at Condong, on the Tweed.

The raw sugar manufactured in 1926-27 was valued at £665,289, and the molasses at £5,715.

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	4	4	3	3	3
Average Number of Employees	529	469	437	487	447
Average Horse-power used ...	2,578	3,000	1,279	2,047	2,097
Value of Land and Buildings £	12,177	52,480	106,070	127,325	132,865
Value of Plant and Machinery £	509,242	467,976	425,283	509,301	529,116
Salaries and Wages paid £	31,764	38,004	63,003	121,558	109,831
Value of Fuel and Power used £	4,854	8,102	8,636	20,394	15,415
Value of Materials used £	95,394	107,600	303,651	435,188	414,490
Value of Output... ..	£ 197,137	206,277	476,405	654,385	671,004
Value of Production ... ..	£ 96,889	90,575	164,118	198,803	241,099
Cane crushed ... .. tons.	131,083	147,799	131,313	297,335	230,254
Articles produced—					
Raw Sugar ... .. cwt.	296,200	345,978	302,480	647,704	532,080
Molasses ... .. gals.	1,072,400	796,440	649,800	1,820,000	1,371,700

The operations of the mills increased considerably during the two years ended June, 1926, following an extension of the area planted with sugar cane. Seasonal conditions were not so favourable during 1926-27, and there was a decline in the quantity of cane crushed, though an unusually large area was cut. The industry has been assisted by the provision of bounties and other measures. At the present time there is an embargo on the importation of foreign sugar, except with the permission of the Minister for Trade and Customs.

#### *Sugar Refinery.*

There is but one sugar refinery in the State. It is situated at Pymont, Sydney, and it treats both local and imported raw products. During the year 1926-27 the quantity of raw sugar treated was 3,248,340 cwt., and it gave an output of 3,132,500 cwt. of the refined article, valued at £5,469,418.

The three mills and the refinery provided employment for 1,071 persons during the year 1926-27.

#### BREWERIES.

In 1926-27 there were in the State 10 establishments classed as breweries of which the three largest were within the Metropolitan boundaries. The number has decreased since 1911, when there were 37, but the output has increased considerably.

Items.	1901.	1911.	1920-21.	1925-26.	1926-27
Number of Establishments ...	51	37	17	12	10
Average Number of Employees	1,016	912	1,122	1,247	1,250
Average Horse-power used ...	1,105	1,035	3,289	3,460	3,515
Value of Land and Buildings* £	584,754	305,287	714,155	800,159	815,030
Value of Plant and Machinery £	190,710	281,316	924,181	1,092,675	1,079,896
Salaries and Wages paid £	119,099	120,340	286,685	365,955	374,296
Value of Fuel and Power used £	13,849	17,794	66,848	84,429	72,832
Value of Materials used... ..	£ 282,128	494,219	1,316,561	1,235,396	1,243,306
Value of Output... ..	£ 1,022,247	1,140,151	2,515,224	2,807,038	3,009,909
Value of Production ... ..	£ 726,270	628,138	1,131,815	1,487,213	1,693,771
Materials Treated—					
Malt ... .. bshls.	532,930	667,457	832,850	852,996	929,292
Hops ... .. lb.	665,345	790,866	831,656	827,804	897,046
Sugar ... .. tons	3,927	4,421	5,477	5,201	5,337
Articles produced—					
Ale, Beer, Stout ... .. gals.	13,973,751	19,804,540	25,470,404	25,597,281	27,372,445

\* Includes rented premises.

Nearly all the beer consumed by New South Wales is brewed in the local factories.

TOBACCO FACTORIES.

Nine tobacco factories were in operation during the year 1926-27, all within the Metropolitan area. The industry is highly organised, all but a small proportion of the output being produced in five large establishments. Conditions of employment in the tobacco factories are maintained at a high standard.

Most of the tobacco treated is imported from the United States of America. Only a small quantity is produced in New South Wales, where tobacco was grown on 881 acres in 1926-27, and the crop was 6,405 cwt., valued at £51,000.

The following table shows details of the operations of tobacco factories in New South Wales at intervals since 1901:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	20	26	16	9	9
Average Number of Employees	1,061	1,462	2,394	2,457	2,464
Average Horse-power used ...	151	630	657	947	997
Value of Land and Buildings* £	155,452	132,569	291,604	370,133	410,698
Value of Plant and Machinery £	69,124	92,138	226,043	321,614	335,782
Salaries and Wages paid £	55,149	131,323	356,781	439,097	449,816
Value of Fuel and Power used	1,288	1,067	11,697	19,680	12,127
Value of Materials used £	389,148	776,302	3,403,517	3,325,805	3,355,397
Value of Output ... £	561,991	1,250,748	4,240,746	4,769,829	4,817,651
Value of Production ... £	171,555	473,379	825,532	1,424,344	1,450,127
Materials Treated—					
Australian Leaf ... lb.	893,615	745,405	876,007	700,075	678,476
Imported Leaf ... „	2,114,456	4,617,756	9,546,861	12,316,410	12,612,993
Articles produced—					
Tobacco .. ... lb.	2,524,231	3,996,471	6,622,540	9,513,115	9,435,084
Cigars ... .. „	67,128	87,518	146,433	117,081	96,286
Cigarettes ... .. „	457,276	1,899,462	5,072,903	4,859,710	5,104,458

\* Includes rented premises.

Large quantities of tobacco and cigarettes are exported, mainly to other Australian States. The annual consumption in New South Wales of Australian-made tobacco during the three years ended June, 1927, was as follows:—Tobacco 5,187,943 lb., cigars 177,259 lb., cigarettes 1,800,551 lb.

WOOLLEN AND TWEED MILLS.

Although New South Wales is one of the greatest wool-producing countries in the world only a very small proportion of the woollen goods required in the State is manufactured locally. During the last three years



signs of progress were apparent and the number of factory employees engaged in the manufacture of woollen materials was increased from 1,617 in 1923-24 to 2,704 in 1926-27.

The output of local tweed increased by 150 per cent. between 1911 and 1921, and the production of other articles increased. Then there was a serious decline, due to adverse trade conditions, but there was a marked improvement in later years.

Details of employment, output, and other items, at intervals since 1901, are shown in the following table:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	4	5	9	13	14
Average Number of Employees	234	738	1,650	2,110	2,704
Average Horse-power used ...	255	937	2,795	3,551	5,222
Value of Land and Buildings† £	29,780	96,821	224,474	341,060	498,402
Value of Plant and Machinery £	26,650	122,927	384,662	677,827	959,608
Salaries and Wages paid £	12,459	66,536	235,668	282,722	398,769
Value of Fuel and Power used £	1,727	4,632	23,517	30,666	49,140
Value of Materials used £	30,272	142,915	745,848	725,546	821,290
Value of Output ... £	57,039	271,465	1,437,647	1,193,071	1,483,390
Value of Production ... £	25,040	122,918	668,282	436,859	612,960
Materials Treated—					
Scoured Wool ... lb.	685,240	1,225,470	3,603,448	3,008,377	3,666,815
Cotton ... ..	†	†	332,501	206,705	447,780
Articles produced—					
Tweed and Cloth ... yds.	525,020	1,054,845	2,494,417	2,042,983	2,378,555
Flannel and Blankets £	*	95,313	198,504	199,453	216,737
Rugs and Shawls ... £	*		23,000	9,783	11,562
Tops and Noils ... £	†	†	69,672	18,493	13,838
Yarn ... .. £	†	†	278,072	108,601	148,433

\* 3,423 yards flannel, 5,000 pairs blankets, 900 rugs. † Not available.

† Includes rented premises.

A number of new woollen mills have been established, viz., at Sydney, Albury, Goulburn, and more recently at Orange. There has been considerable expenditure on plant, etc., during the last six years, but the mills have not been in full operation. The customs duties on imported goods were increased in September, 1925, and in November, 1927, with a view to assisting the local industries.

*Hosiery and Knitting Factories.*

Marked progress has been made in the production of hosiery and knitted goods. In 1920-21 there were 33 establishments with 1,477 employees, the value of materials and fuel used amounted to £573,128, and the output was valued at £872,476. In 1926-27 there were 65 establishments employing 3,532 persons, and the value of materials and fuel was £1,011,931, and of the output £2,022,222. The value of the land, buildings and plant increased during the period from £282,539 to £1,160,844.

The materials used in 1926-27 included yarn 1,075,958 lb., cotton 1,378,968 lb., silk 88,626 lb., and artificial silk 698,648 lb. The products included 737,437 doz. pairs of socks and stockings valued at £1,118,057, and other woollen and cotton goods valued at £401,000 and £364,454 respectively.

BOOT AND SHOE FACTORIES.

Many varieties of footwear are made in the local factories. The bulk of the output is used in the State, and small quantities are exported, principally to New Guinea, Papua, and Fiji.

Particulars of the operation of these factories since 1901 are shown in the following table:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	100	106	101	104	104
Average Number of Employees	3,979	4,417	4,459	5,083	5,469
Average Horse-power used ...	300	855	1,379	1,705	1,806
Value of Land and Buildings† £	166,413	222,983	371,985	492,473	558,528
Value of Plant and Machinery £	85,571	156,643	184,549	258,857	261,264
Salaries and Wages paid £	216,869	367,605	628,541	827,496	896,991
Value of Fuel and Power used £	2,978	5,298	10,365	12,747	11,856
Value of Materials used.. £	398,309	709,818	1,496,068	1,221,440	1,282,401
Value of Output... £	692,253	1,221,748	2,540,222	2,436,300	2,587,199
Value of Production ... £	290,966	506,632	1,033,789	1,202,122	1,292,942
Leather Used—					
Sole ... .. lb.	*	5,189,000	4,822,678	4,935,618	4,952,794
Upper ... .. sq. ft.	*	8,010,000	7,282,176	8,583,495	8,759,154
Articles produced—					
Boots and Shoes ... pairs	2,821,724	3,730,760	3,232,413	3,869,686	3,970,139
Slippers, etc. ... ..	512,584	439,428	609,398	689,914	1,128,495
Uppers, N.E.I.... ..	...	71,138	41,925	41,472	41,032

\* Not available.

† Includes rented premises.

The figures are exclusive of particulars of boot repairing establishments, which numbered 566 in 1926-27; 1,071 persons were employed, and their wages amounted to £94,771. Materials to the value of £144,111 were used, including 843,192 lb. of sole leather, and 11,470 square feet of uppers; the output was valued at £468,656.

The number of factories for the manufacture of boots and shoes was 104, of which 95 were situated within the Metropolitan area and 9 in the remainder of the State.

HAT AND CAP FACTORIES.

There has been considerable expansion in the industry organised for the manufacture of hats and caps. The Australian products have gained an important place in local markets and some are exported to New Zealand. In 1926-27 the employees numbered 1,961, of whom 68 per cent. were females.

There were 29 establishments listed under this classification in 1926-27, and 28 were situated in the Metropolitan area. Particulars of the operations in various years since 1901 are as follow:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	10	32	28	24	29
Average Number of Employees ...	330	1,566	1,456	1,505	1,961
Average Horse-power used ...	21	433	764	586	658
Value of Land and Buildings* £	14,076	108,936	174,315	254,759	398,568
Value of Plant and Machinery £	7,034	60,807	88,817	144,061	152,765
Salaries and Wages paid £	15,055	96,498	185,394	220,771	315,305
Value of Fuel and Power used £	314	4,376	7,574	8,087	11,339
Value of Materials used... £	28,662	127,494	393,372	384,514	566,554
Value of Output... £	54,698	293,591	747,545	779,973	1,099,049
Value of Production ... £	25,722	161,721	346,599	357,372	521,156
Hats and Caps made ... No.	563,976	2,692,778	2,284,572	2,312,796	3,054,180

\* Includes rented premises.

### ELECTRIC LIGHT AND POWER WORKS.

The industries connected with the production and supply of electric light and power are making steady progress. The establishments include a number of Governmental undertakings.

The Railway Commissioners control large works in Sydney and Newcastle to supply electricity for transport and for the railway and tramway workshops. A Government undertaking is maintained at Port Kembla, whence power is supplied for harbour works, etc., and current is transmitted to constructional works in the vicinity and to a number of townships along the South Coast and in the Southern Highlands. Another scheme is operated by means of power available from the waters discharged through the Burrinjuck Dam for irrigation purposes. The current is transmitted by two lines—one running west to Wagga via Gundagai and the other running north to Young via Murrumburrah.

There are many municipal electricity works, the largest being the City of Sydney undertaking. Two hydro-electric schemes, viz., the Dorriggo and Nymboida, have been established by local governing bodies in the north-eastern areas.

The development in electric light and power works since 1901 is shown by the details given in the following table:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	51	104	117	124	126
Average Number of Employees ...	245	929	1,353	1,795	2,034
Average Horse-power used ...	3,494	54,734	111,591	233,930	271,289
Value of Land and Buildings† £	49,132	448,972	1,381,092	2,270,469	2,319,987
Value of Plant and Machinery £	192,842	1,257,173	2,531,358	5,376,105	5,546,585
Salaries and Wages paid £	28,862	134,884	327,157	524,953	614,886
Value of Fuel and Power used †	17,166	183,248	590,373	1,355,508	1,449,208
Value of Materials used £	21,123	69,484	54,995	77,895	137,409
Value of Output ... £	87,241	896,607	1,697,763	4,510,432	4,271,646
Value of Production ... £	48,952	643,875	1,052,395	3,077,029	2,685,029
Coal used ... tons	*	259,239	510,088	782,409	856,997
Electricity generated—					
Light ... units	*	20,727,000	53,691,324	692,124,564	798,916,739
Power ... units	*	114,610,000	288,844,906		

\* Not available.

† Includes rented premises.

A notable feature of the operations in recent years is the increasing efficiency of the plant, as indicated by an increase of 19 per cent. as compared with the year 1911 in the number of units generated per horse-power of the engines used.

GAS WORKS.

Despite the substantial progress that has been made in the installation of electric plants for purposes of illumination, power, and cooking, the use of gas is extending also, as will be seen in the following table:—

Items.	1901.	1911.	1920-21.	1925-26.	1926-27.
Number of Establishments ...	38	47	46	47	47
Average Number of Employees	650	1,053	1,642	1,445	1,459
Average Horse-power used ...	711	1,394	3,125	4,404	4,493
Value of Land and Buildings † £	459,060	564,387	1,066,074	804,185	837,718
Value of Plant and Machinery £	480,533	888,711	1,892,835	2,376,303	2,504,687
Salaries and Wages paid... £	80,654	151,426	437,318	343,585	356,329
Value of Fuel and Power used £	18,000	57,372	112,995	172,102	170,746
Value of Materials used	£ 123,440	277,861	829,906	916,322	998,184
Value of Output... £	583,815	910,972	2,264,644	2,518,458	2,711,630
Value of Production ... £	442,375	575,739	1,321,743	1,430,034	1,542,700
Materials treated—					
Coal ... .. tons	*	323,910	564,122	605,488	620,640
Shale... .. tons	*	55,621	27,298	60	10
Oil ... .. gals.	*	*	3,700,462	1,710,762	1,899,390
Articles produced—					
Gas ... .. 1,000 cub. feet	2,138,631	4,275,859	8,131,712	10,005,876	10,279,605
Coke ... .. tons	*	176,728	346,380	411,790	411,632
Tar ... .. gals	*	3,650,000	9,861,830	11,770,131	11,845,283
Ammoniacal Liquor gals	*	3,365,000	4,216,929	3,156,655	3,051,487
Sulphate of Ammonia tons	*	*	1,061	6,066	6,161

\* Not available.

† Includes rented premises.

As in the case of electric light and power works, the greater efficiency of gas-making plant and improved methods of treatment have resulted in an increase in production. In 1911 the average production of gas per ton of coal used was 13,200 cubic feet, but it was 15,100 cubic feet in 1921-22, and 16,600 cubic feet in 1926-27.

In addition to the coke and sulphate of ammonia made in gas works, considerable quantities are made in other establishments in which coal is treated. The total quantity of coke produced by all plants in 1926-27 was 1,086,604 tons, and of sulphate of ammonia 11,123 tons.

NEW INDUSTRIES.

Following the development of iron and steel works, there has been far-reaching expansion in the industries producing metal goods, machinery, etc. Factories in this group now produce various grades of iron and steel, rails, pipes, structural shapes, billets, tyres and axles, galvanised iron and black iron sheets, wire, wire-netting, wire nails, and many kinds of machinery, brass and copper wire and rods and bars, cable for telephones, and aluminium ware. A recent development is the construction of steel carriages for electric railways.

Factories have been established for the manufacture of new kinds of products for the building and allied industries, e.g., asbestos and fibro-cement roofing, reinforced concrete ware, and conduits for electric wires. The production of cement has expanded with the increased demand for use

in concrete buildings and civil engineering projects, and steel for reinforcement is manufactured locally. The production of white lead, paints and varnishes, and of linseed oil has increased considerably, and many of these commodities formerly supplied by importation are being made in the State.

In the clothing and textile group new industries include the ginning and weaving of cotton, the manufacture of calico, cotton garments, towels and other goods, in which Australian as well as imported cotton is used. The establishment of woollen mills in various country centres is a new feature of industrial progress, and there has been considerable advance in the manufacture of silk, cotton, and woollen hosiery and knitted goods. A factory for making sewing cotton was opened in 1924.

The manufacture of carpets has been commenced. Large modern factories have been established for food products, *e.g.*, confectionery and ice cream. The range of commodities produced in establishments for making soap, gelatine, rubber goods and leatherware has been extended widely, and many kinds of musical and scientific instruments are made. The building of bodies for motor-cars is a new industry, in which there has been rapid progress, and most of the requisite materials are produced in Australia.

The manufacture of gramophone records was commenced in 1925, and in the following year factories were in operation for the production of music rolls for player-pianos and of linoleum.

## MINING INDUSTRY:

NEW SOUTH WALES contains extensive mineral deposits of great value and variety. Coal was discovered as early as 1796, though under the industrial conditions prevailing at that time its importance was not fully realised. World-wide interest, however, was excited by the announcement in 1851 that gold had been discovered in New South Wales. It attracted a rapid flow of immigration to the country and promoted the development of its resources. In later years copper, tin, and silver-lead deposits were opened up.

With the exhaustion of the known alluvial deposits, where valuable minerals were recoverable without the expenditure of much capital, the organisation of the mining industry has become to a great extent the province of companies and syndicates with the necessary financial resources to instal machinery and to conduct operations on a large scale. Coal and silver-lead have proved to be the richest sources of mineral production.

### SUPERVISION OF MINING.

The general supervision of the mining industry in the State and the administration of the enactments relating to mining are functions of the Department of Mines under the control of a responsible Minister of the Crown. In the mining districts Wardens' Courts, each under the sole jurisdiction of a Warden, determine suits relating to the right of occupation of land for mining and other matters in regard to mining operations.

The occupation of land for the purpose of mining is subject to the Mining Act of 1906 and its amendments. Any person may obtain a miner's right which entitles the holder, under prescribed conditions, to occupy Crown land for mining purposes and to mine therein, and to occupy as a residence area land not exceeding a quarter of an acre within the boundaries of a town or village, or 2 acres elsewhere. A holder of a miner's right may apply also for an authority to prospect on Crown lands, and, in the event of the discovery of any mineral, he may be required to apply for a lease of the land or to continue prospecting operations. Another form of occupation of Crown land in connection with mining is under the right conferred by a business license which entitles the holder to occupy a limited area within a gold or mineral field for the purpose of carrying on any business except mining.

A business license confers the right to only one holding at a time. Holders of miners' rights may take possession of more than one tenement, but are required to hold an additional miner's right in respect of each tenement after the first of the same class. The term of a miner's right or business license is not less than six months and not more than twenty years. It may be renewed upon application, and is transferable by endorsement and registration. The fee for a miner's right is at the rate of 5s. per annum, and for a business license £1 per annum.

The number of miners' rights issued during 1927 was 8,839, and of business licenses 343. These figures show a marked decline in comparison with those for the year 1913, when 17,766 miners' rights and 1,039 business licenses were issued.

Crown lands may be granted as mining leases, which authorise mining on the land, and as leases for mining purposes which authorise the use of the land for conserving water, constructing drains, etc., and railways, erecting

buildings and machinery and dwellings for miners, generating electricity, dumping residues, and for other works in connection with mining, but do not allow mining or the removal of minerals from the land. Except in the case of special leases, which may be granted in certain cases, the maximum area of a mining lease varies according to the mineral sought, viz., opal,  $\frac{1}{2}$  acre; gold, 25 acres; coal, shale, mineral oils, petroleum, or natural gas, 640 acres; other minerals, 80 acres.

Private lands are open to mining subject to the payment of rent and compensation and to other conditions as prescribed. The mining wardens may grant to the holders of miners' rights authority to enter private lands, but, except with the consent of the owner, the authority does not extend to land on which certain improvements have been effected, e.g., cultivation, or the erection of substantial buildings. An authority may be granted for a period up to two years, and during its currency the holder may apply for a mining lease of the land. Leases of private lands for mining purposes may be granted also. The maximum areas of private lands that may be leased are:—Gold, 25 acres; opal, 150 ft. square; coal and shale, 640 acres; and other minerals, 80 acres. The owners of private lands, with the concurrence of the Minister for Mines, may lease areas under agreement to holders of miners' rights.

Dredging leases may be granted in respect of Crown and private lands, including the beds of rivers, lakes, etc., and land under tidal waters.

#### *Land occupied for Mining.*

The area under mining occupation in New South Wales at 31st December, 1927, was approximately 640,682 acres, made up as follows. The area is not stated definitely, as the area held under miners' rights is estimated by the mining registrars in some cases, where the holders are not required to register the areas they occupy.

Nature of Holding.	Crown Lands.	Private Lands.	Total.
	acres.	acres.	acres.
<b>Leases—</b>			
Mining ... ..	271,956	84,785	356,741
Mining Purposes ... ..	7,022	1,796	8,818
Agreements ... ..	...	50,491	50,491
Authority to Enter ... ..	...	79,516	79,516
Authority to Prospect ... ..	4,766	...	4,766
Miners' Rights and Business Licenses ... ..	6,051	...	6,051
<b>Applications for Leases—</b>			
Mining ... ..	27,387	30,510	57,897
Mining Purposes ... ..	1,270	310	1,580
Dredging ... ..	2,087*	...	2,087
Applications for Authority to Prospect ... ..	71,590	...	71,590
Other Mining Titles ... ..	1,145*	...	1,145
Total ... ..	393,274	247,408	640,682

\* Includes Private Lands.

The annual rent for mining leases of Crown lands is 2s. per acre, and of private lands 20s. per acre in respect of the surface actually occupied. The rent for dredging leases is 2s. 6d. per acre in respect of Crown lands, and it is assessed by the Warden in open court in respect of private lands.

Royalties are payable to the Crown in respect of the minerals won, except in certain cases where they have been obtained from private lands held without reservation of minerals to the Crown. The royalty on coal and shale is charged at the rate of 6d. per ton, and on other minerals at the rate of 1 per cent. of the value.

In regard to mining on private lands held without reservation of minerals to the Crown, royalty is collected by the Department of Mines on behalf of the owner at the rate of 6d. per ton of coal and shale, and 1½ per cent. of the gross value of other minerals, except gold. The Department retains one-sixth and one-ninth respectively of these amounts, and pays the balance to the owner of the minerals. The royalty on gold is payable to the Crown in all cases.

Royalty may be remitted under certain conditions as prescribed by the Mining Acts, *e.g.*, if the gross annual output of minerals, other than coal and shale, won from Crown land under mining lease does not exceed £500. In many cases rents may be deducted from the royalties.

The amount of royalty received during the year 1927 was £276,224, of which £799 was in respect of land held under permits, and the balance from land under lease,

#### ENCOURAGEMENT OF PROSPECTING.

The State Legislature votes a certain sum each year to encourage prospecting for minerals and to assist miners to open up new fields. The vote is administered by the Prospecting Board, which consists of the Under-Secretary for Mines as Chairman, the Government Geologist, the Chief Inspector of Mines, an inspector, the Chief Mining Surveyor, and a geological surveyor. Miners desiring a grant must satisfy the Board that the locality to be prospected is likely to yield the mineral sought, and that the mode of operation is suitable for its discovery. The amount advanced must be refunded in the event of the discovery of payable mineral by means of the aid.

The following statement shows a summary of the amounts allotted to prospectors for the various minerals:—

Period (years ended 30th June).	Amounts allotted to Prospectors for—						
	Gold.	Silver and Lead.	Copper.	Tin.	Coal.	Other Minerals.	Total.
1887-1900	£ 245,791	£ 13,026	£ 9,267	£ 4,684	£ 4,090	£ 7,587	£ 284,445
1901-1905	80,636	5,108	10,136	7,828	40	1,430	105,178
1906-1910	38,822	7,986	20,765	3,146	310	871	71,900
1911-1915	50,209	7,557	8,939	5,870	...	4,837	77,412
1916-1920	32,976	4,325	10,057	3,978	90	5,829	57,255
1921	7,375	889	1,330	901	863	1,286	12,644
1922	9,052	1,537	1,250	1,663	850	659	15,011
1923	7,013	1,727	410	1,559	...	341	11,050
1924	11,523	1,959	316	2,161	...	1,044	17,003
1925	9,963	1,897	403	2,194	...	1,248	15,705
1926	9,163	1,756	1,237	2,288	30	1,153	15,627
1927	7,003	3,428	1,550	3,391	625	1,922	17,919
Total ...	509,526	51,195	65,660	39,663	6,898	28,207	701,149



In each year some of the prospectors fail to complete the works for which aid has been granted, and the amounts allotted are not paid in full. The total amount expended to the end of 1927 in encouraging prospecting was £587,172.

The Government of New South Wales has promised a bonus of £10,000 for the production of 100,000 gallons of petroleum in the State, and has offered a reward for the discovery of a new mineral field, the amount being increased from £500 to £1,000 in 1922. An amount of £250 was paid in 1927 for the discovery of a new opal field at Grawin.

In 1926 the Commonwealth Government appropriated from public revenue the sum of £60,000, which was increased to £160,000 in the following year, for the encouragement of prospecting for petroleum oil in Australia, New Guinea and Papua. Another appropriation, £40,000, has been made for the assistance of persons engaged in prospecting for precious metals in Australia.

Geophysical methods of prospecting are to be tested in Australia in terms of an arrangement between the Government of the Commonwealth and the Empire Marketing Board, as representing the Imperial Government. To defray the cost, sums amounting to £20,000 for the first year and £12,000 for the second year are being provided in equal shares by the Commonwealth Government and the Marketing Board. A British geologist, with a staff of assistants, has been appointed to conduct experiments.

#### PRICES OF METALS.

The prices of the principal metals depend on market conditions in oversea countries, the local demand being small. The quotations in the following table for silver, lead, copper, and tin are the average spot prices on the London Exchange.

Year.	Silver.	Lead.	Zinc.	Copper.	Tin.
	per oz.	per ton.	per ton.	per ton.	per ton.
	s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1901	2 3·2	12 10 5	17 0 7	66 19 8	118 12 8
1911	2 0·6	13 19 3	25 3 2	56 1 9	182 13 5
1921	3 0·9	22 14 4	26 4 1	69 8 7	165 6 7
1922	2 10·4	23 15 9	29 15 0	62 3 6	159 10 9
1923	2 7·4	26 16 4	32 18 6	65 18 1	202 5 1
1924	2 9·9	33 13 11	33 12 0	63 4 2	248 17 8
1925	2 8·1	35 17 1	36 3 3	61 18 4	260 15 7
1926	2 4·7	31 2 3	34 2 8	58 0 8	291 3 0
1927	2 2·1	24 8 1	28 9 11	55 13 11	289 1 5

The outstanding feature of the movement of the prices of industrial metals during recent years has been the rise in the price of tin, which in 1926 was 83 per cent. higher than in 1922. There was a decline during 1927 from £313 9s. 5d. in March to £262 13s. 10d. in November; in December

the price was somewhat higher. The prices of silver and copper, on the other hand, have declined, and the prices of lead and zinc, which had been moving steadily upwards, decreased during 1926 and 1927.

#### PRICES OF COAL.

Prices of coal depend to a great extent upon local factors. The price varies considerably in the three districts in which coal is mined, the northern coal being the dearest and the western the cheapest. The following statement shows the average value per ton at the pits' mouths in each district during various years since 1901.

District.	1901.	1911.	1921.	1923.	1924.	1925.	1926.	1927.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Northern ... ..	8 4	8 0	17 7	17 7	17 8	17 7	18 10	19 2
Southern ... ..	5 3	6 2	16 6	16 1	16 2	15 11	16 5	16 8
Western ... ..	4 10	5 1	12 10	11 5	11 2	11 1	11 9	12 6
All Districts ... ..	7 4	7 3	16 10	16 5	16 6	16 4	17 4	17 7

Between 1911 and 1921 the average price of coal was increased by nearly 130 per cent, marked increases having occurred in consequence of awards of tribunals appointed by the Commonwealth Government during the war period to regulate wages and prices in the industry.

#### STATISTICS OF MINES.

The statistics relating to the mining industry as published in this chapter are obtained from two sources: (1) the records of the Department of Mines, which, until the year 1921, were the only data available; and (2) returns for 1921 and later years collected from owners by the Government Statistician under the authority of the Census Act, 1901. The principal distinction between the data obtained from these two sources lies in the statistics of the metalliferous mines. The particulars recorded by the Department of Mines relate to metals won during each year, including in many instances those won from minerals brought to grass in past years, whereas the Statistician collects returns of the minerals actually mined during the year.

Moreover, the statistics collected by the Department of Mines sometimes include particulars of ore dressing operations, and the use of the Department's figures for years prior to 1921 involved duplication in regard to the mining and manufacturing industries. In order to obviate this difficulty, the mine owners were asked to supply special returns to the Government Statistician, showing therein information relating to mining operations only, and excluding all particulars regarding the treatment of ores. It is found, however, that it is almost impossible to give separate details regarding the actual operations of mining, especially when the same company undertakes both mining and ore-dressing, and it is under such conditions that the most important branch of metalliferous mining in New South Wales—viz., silver, lead and zinc—is usually conducted.

Further difficulty arises in regard to the value of the annual output of the metalliferous mines. The value at the mines and before treatment cannot be determined until the minerals have been subjected to the final process for the extraction of the metallic contents, and such operations extend over

a long period and in some cases are conducted in localities outside the State. In view of these difficulties the value of the production of metalliferous mines can be calculated only approximately, and attention is directed to the fact that the values as stated in this Year Book are to be regarded as estimates.

The statistics of mines, other than metalliferous, as recorded for years prior to 1926, include particulars of quarries held under mining title. In the compilation of the returns collected by the Government Statistician for the years 1926 and 1927, these have been excluded from the statistics of the mining industry; therefore, the figures are not strictly comparable with those for the earlier years.

#### LABOUR AND MACHINERY.

Mining leases and permits contain conditions as to the minimum number of men to be employed. The usual labour conditions in respect of mining leases of Crown lands and of leases or agreements to mine on private lands are as follows:—For coal, shale, mineral oils, petroleum, or natural gas, for first twelve months of term granted, 2 men to 320 acres, thereafter 4 men; for gold, 1 man to 5 acres during the first year, and thereafter 1 man to 2 acres; for other minerals, 1 man to 20 acres during the first year, thereafter 1 man to 10 acres. For dredging leases the prescribed labour is in the proportion of 7 men to 100 acres. The labour conditions may be suspended in cases where low prices for the products or other adverse circumstances affect the working of a mine.

The extent to which the mining industry has provided employment is indicated in the following statement of the approximate number of men employed in the last seven years. The figures represent the sum of the average number employed at each mine in operation during the year.

Year.	Coal and Shale Mines.	Other Mines.							Total number employed (including fossickers).
		Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Other Metals.	All other Mines.	Total.	
1921	20,973	952	2,035	68	1,169	865		5,089	26,062
1922	21,704	715	1,732	52	751	866		4,116	25,820
1923	23,054	585	2,405	40	702	435	904	5,071	28,125
1924	23,212	713	2,462	56	837	500	998	5,566	28,778
1925	24,038	604	2,747	45	837	405	1,325	5,963	30,001
1926	24,125	842	3,273	64	1,222	453	*450	6,304	30,429
1927	24,483	805	3,315	26	1,236	438	*246	6,066	30,549

\* Excluding persons employed in quarries held under mining title, included previously.

The number employed, as stated above, includes "fossickers," viz., gold, 480; tin, 526; other, 170 in 1927. It is probable that they were not wholly engaged in mining, as the value of the output won by them was small.

The number of coal miners has increased in each year, but no shale miners are included in the figures for the last three years, as operations in the shale mines have been suspended. The persons engaged in mining for gold were more numerous in 1927 than in any year between 1922 and 1925, but the increase has occurred in the number of fossickers. In the tin-mining group also there has been a marked increase in fossickers during the last two years.

Additional information regarding miners is shown in the following statement:—

Year.	Coal and Shale Mines.				Other Mines.				
	Working Proprietors.	Employees above ground.	Employees below ground.	Total.	Working Proprietors	Employees above ground.	Employees below ground.	Fossilickers.	Total.
1921	5,385		15,588	20,973	2,353		2,286	450	5,089
1922	5,841		15,863	21,704	1,629		1,927	560	4,116
1923	6,227		16,827	23,054	2,188		2,525	358	5,071
1924	55	6,151	17,006	23,212	239	2,127	2,475	725	5,566
1925	60	6,195	17,783	24,038	227	2,362	2,841	533	5,963
1926	73	6,130	17,922	24,125	292*	1,654*	3,115	1,243	6,304*
1927	69	6,203	18,211	24,483	273*	1,554*	3,063	1,176	6,066*

\*Excluding particulars of quarries held under mining title, previously included.

Of the coal miners, 74 per cent. are employed below ground. In other mines the proportion is about half the total number of employees.

The employment of boys under 14 years of age or of women and girls in or about a mine is prohibited, and restrictions are placed upon the employment of youths. In 1927 the number of boys under 16 years of age employed in coal mines was 608, of whom 407 worked below ground, and 201 on the surface. At other mines 5 boys were employed above ground and none below ground.

The value of the machinery used in connection with mining in New South Wales during the year 1927 was £8,974,129; viz., coal mines, £8,000,373; metalliferous mines, £957,673; and other mines, £16,083. The value in each of the last seven years is shown below:—

Year.	Coal and Shale Mines.	Metalliferous Mines.	Other Mines.	Total.
	£	£	£	£
19	6,636,857	1,481,966	*	8,118,823
1922	6,854,580	1,288,960	*	8,143,540
1923	7,205,061	1,377,462	190,217	8,772,740
1924	7,484,078	1,171,554	172,857	8,828,489
1925	7,693,620	1,099,634	285,961	9,079,215
1926	7,747,139	947,911	41,858†	8,736,908†
1927	8,000,373	957,673	16,083†	8,974,129†

\* Included with metalliferous mines. † Excluding machinery in quarries held under mining title, previously included.

The value of the machinery used in mining for the various metals during 1927 was as follows:—Gold, £53,215; silver, lead and zinc, £573,413; copper, £17,671; tin, £202,241; other metals, £111,133.

The following statement shows separately the value of the plant used in actual mining operations, that is, in winning and weighing the minerals, hauling them to the surface, ventilating the mines, etc.; and the value of the conveyance plant for transporting the minerals from the surface to wharf or railway:—

Year.	Coal and Shale Mines.			Other Mines.			Total Value of Mining Machinery.
	Mining Operations.	Transporting Minerals to Wharf or Railway.	Other Machinery.	Mining Operations.	Transporting Minerals to Wharf or Railway.	Other Machinery.	
	£	£	£	£	£	£	£
1921	3,614,955	2,561,172	460,730	924,870	122,481	434,615	8,118,823
1922	3,713,263	2,573,399	567,918	797,923	116,077	374,960	8,143,540
1923	4,075,291	2,681,347	448,423	1,090,032	169,241	308,406	8,772,740
1924	4,285,490	2,752,475	446,113	990,239	117,278	236,894	8,828,489
1925	4,514,721	2,833,331	345,568	1,015,761	117,991	251,843	9,079,215
1926	4,524,850	2,880,051	342,238	796,461*	110,820*	82,488*	8,736,908*
1927	4,703,423	2,922,499	374,451	801,396*	103,942*	68,418*	8,974,129*

\* Excluding particulars of quarries held under mining title which were included previously.

In the coal mines, the value of the machinery employed in mining operations during 1927 represented 59 per cent. of the total value; 37 per cent. was used for transporting the minerals from the surface of the mine to a wharf or railway station. In other mines the proportions were as follows:—Mining operations, 82 per cent; transporting minerals, 11 per cent. In some cases mine owners have constructed railway lines for the purpose of connecting the mines with the State railway system or with wharves.

Particulars of the power used for operating mining machinery during the last seven years are shown below:—

Year.	Mines using Power Machinery.		Horse power of Machinery—Average used.						Total, all Mines.
	Coal and Shale.	Other.	Coal and Shale Mines.			Other Mines.			
			Steam.	Electricity.	Other.	Steam.	Electricity.	Other.	
	No.	No.							
1921	120	267	47,321	16,138	113	12,136	1,931	593	78,232
1922	136	259	49,040	16,725	121	8,162	1,585	412	76,045
1923	139	228	51,020	23,049	105	13,232	2,482	1,154	91,042
1924	141	261	55,481	21,348	107	10,218	3,384	478	91,016
1925	139	263	58,666	23,156	978	13,116	5,341	1,011	102,268
1926	132	213*	62,691	23,008	511	13,847*	2,632*	533*	103,222*
1927	131	193*	58,177	23,931	154	11,460*	2,631*	751*	97,104*

\* Excluding particulars of quarries held under mining title, previously included.

Steam is the principal agency used for operating the machinery. In coal mines the average motive force actually used in 1927 amounted to 82,262 horse-power, of which nearly 71 per cent. was steam and 29 per cent. electricity. Machinery is used extensively for mining coal, and 2,276,878 tons, or 20 per cent. of the total output, were cut by machines during 1927. Of 318 machines in use, 115 were operated by electricity and 203 by compressed air.

In mines other than coal and shale mines, steam power represented 77 per cent. in 1927 and electricity 18 per cent. of the power used.

The full capacity of mining machinery in that year amounted to 172,768 horse-power, *viz.*, 145,827 h.p. in coal mines and 26,941 h.p. in other mines.

The value of the fuel used during 1927 was £719,587, including 510,315 tons of coal valued at £528,922, and electricity to the value of £151,498.

## MINES IN OPERATION.

The following statement is a summary of the particulars furnished by mine owners in returns under the Census Act regarding the mines in operation and the minerals mined during each year from 1921 to 1927. The figures are not a complete record of either the income or expenditure of the undertakings concerned and are not intended to show their financial position collectively or individually :—

Year.	Mines in Operation.	Persons Employed.	Value of—				
			Salaries and Wages.	Land, Buildings, etc.	Machinery, and Plant.	Materials and Fuel Used, etc.	Output.
	No.	No.	£	£	£	£	£
1921	493	26,062	6,430,988	3,428,735	8,118,823	1,770,320	10,191,975
1922	500	25,820	6,344,284	3,704,782	8,143,540	1,802,612	9,666,007
1923	476	28,125	6,532,695	4,047,277	8,772,740	1,871,180	10,419,210
1924	482	28,778	7,512,027	3,963,978	8,828,489	2,096,257	11,844,831
1925	459	30,001	7,745,739	4,259,668	9,079,215	2,079,491	11,785,003
1926*	427	30,429	7,511,862	4,224,676	8,736,908	2,266,410	12,084,083
1927*	378	30,549	7,878,842	4,305,777	8,974,129	2,452,014	12,351,521

\* Excluding particulars (previously included) of quarries held under mining title.

The figures in the table include statistics of the operations of fossickers, who numbered 1,176 in 1927, and obtained an output valued at £73,393. The corresponding figures for the preceding year were 1,243 fossickers and output, £65,389. The cost of replacing tools worn out during each year and of repairing plant, machinery, etc., is included with the value of materials and fuel used, but many other costs and overhead charges are not included.

Under present conditions, coal mining is the main factor of the progress of the mineral industry, as it supplies more than three-fourths of the output. Coal mining in New South Wales, as in other countries, is liable to intermittency owing to various causes, and by reason of its compact organisation an industrial dispute in which only a small section are directly concerned sometimes causes dislocation throughout the industry. Particulars of interruptions to work in the principal collieries over a series of years are shown in the chapter of this volume relating to employment.

In 1922 coal mining was affected adversely by slackness of trade, and in 1923 and 1926 by industrial strife. In 1924 the output was the largest yet recorded, and a decline in the following year was due mainly to dislocations in the shipping industry. In 1927 the quantity of coal raised was less than in 1924 and 1925, but the value was greater on account of higher prices.

Apart from coal mining the output of the Broken Hill silver-lead fields is the most important. In 1921 conditions were unfavourable as prices of metals were low. Moreover operations at some of the mines were suspended for the greater part of the year in consequence of the partial destruction by fire of the smelting works in South Australia where the products are treated. In 1922 conditions began to improve, and in the succeeding four years there was a steady increase in the value of the output of the metalliferous mines. A drop in the prices of metals, which commenced during 1926, was the cause of a decrease in the output of 1927.

Summaries relating to the coal and shale mines, and to the metalliferous and other mines are shown below :—

Year.	Mines in Operation.	Persons Employed (including Fossilisers).	Salaries and Wages.	Value of—			Output.
				Land, Buildings, etc.	Machinery, and Plant.	Materials and Fuel Used, etc.	
Coal and Shale Mines.							
			£	£	£	£	£
1921	143	20,973	5,703,999	3,222,721	6,636,857	1,469,578	9,036,474
1922	148	21,704	5,570,830	3,501,841	6,854,580	1,329,722	8,293,135
1923	146	23,054	5,540,252	3,781,512	7,205,061	1,272,125	8,350,878
1924	149	23,212	6,332,475	3,721,600	7,484,078	1,466,870	9,385,988
1925	143	24,038	6,234,595	3,979,001	7,693,620	1,329,456	9,121,664
1926	141	24,125	6,058,270	3,999,836	7,747,139	1,496,436	9,096,611
1927	135	24,483	6,515,487	4,089,139	8,000,373	1,667,034	9,586,693
Other Mines.							
			£	£	£	£	£
1921	350	5,089	726,989	206,014	1,481,966	300,742	1,155,501
1922	352	4,116	773,454	202,941	1,288,960	472,890	1,372,872
1923	330	5,071	992,443	265,765	1,567,679	599,055	2,068,332
1924	333	5,566	1,179,552	242,378	1,344,411	629,387	2,458,843
1925	316	5,963	1,511,144	280,667	1,385,595	750,035	2,663,339
1926*	286	6,304	1,453,592	224,840	989,769	769,974	2,987,472
1927*	243	6,066	1,363,355	216,638	973,756	784,980	2,764,828

\*Excluding particulars of quarries held under mining title, previously included.

Of the salaries and wages paid during 1927 in coal-mining, £188,869 were for developmental work, and £6,326,618 for actual mining. The materials used consisted of timber, £221,462, and other materials £784,898—including timber, £4,269, and other materials, £74,333, used for developmental work. The value of fuel used was £466,630, and of tools replaced and repairs £194,044.

In other mines the value of timber used in 1927 was £229,301, other materials £197,395, tools replaced and repairs to plant, etc., £105,327, fuel consumed £252,957.

#### MINERALS WON—AS RECORDED BY DEPARTMENT OF MINES.

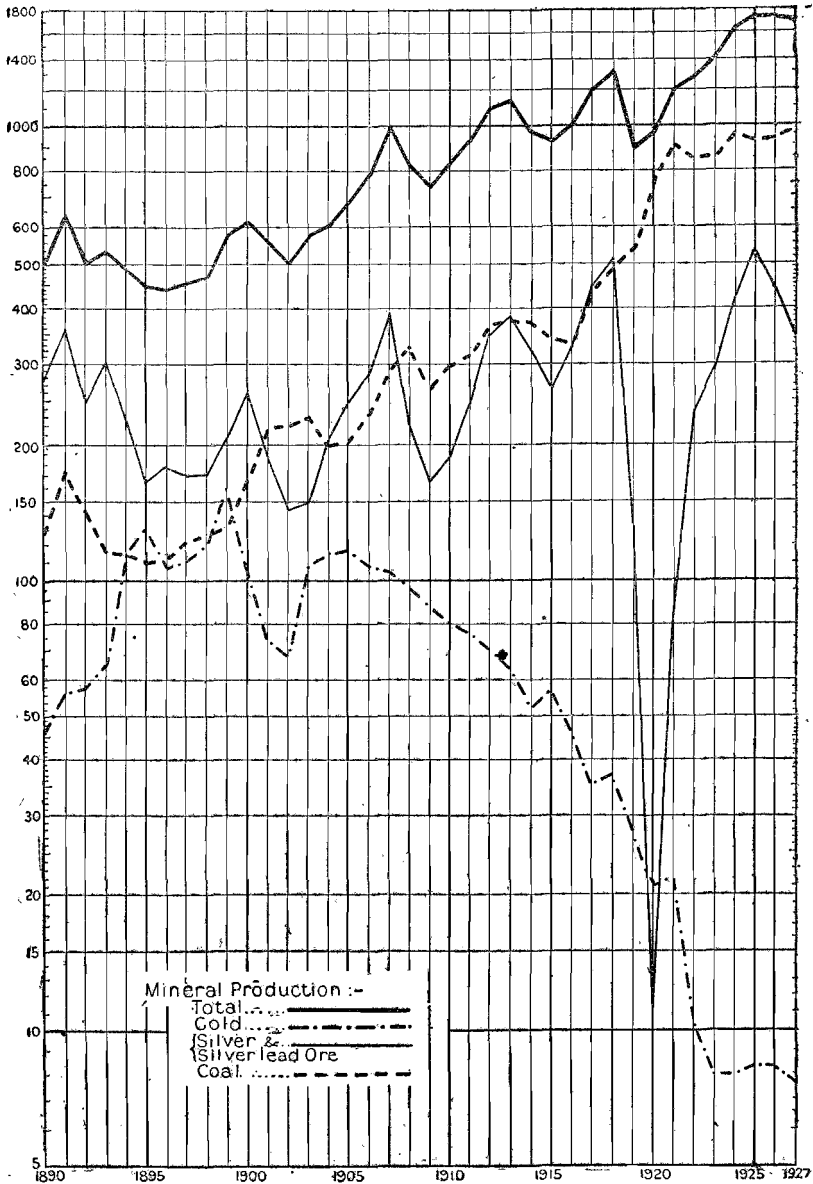
The particulars relating to the minerals won, as shown in the following pages of this chapter, have been obtained from the records of the Department of Mines. For reasons stated on page 371, they differ from those in the preceding tables, and the figures relating to production include, in many cases, the value of the ores after treatment at the mines. From the particulars shown in the annual reports of the Department those regarding the output of iron made from scrap, Portland cement and lime have been deducted, as they are included in the statistics of factories in the preceding chapter of this volume.

The average annual value of the minerals won in each quinquennial period from 1901 to 1925, the annual production since 1921, and the total production to the end of each period are shown below :—

Period.	Value of Production.		Year.	Value of Production.	
	Average per annum.	Total to end of period.		During year.	To end of year.
To end of 1900	£	£	1921	£	£
1901-05	...	132,535,358	1922	12,066,370	320,578,176
1906-10	5,873,176	161,901,240	1923	12,958,008	333,536,184
1911-15	8,330,883	203,555,656	1924	14,232,019	347,768,203
1916-20	10,169,752	254,404,418	1925	16,397,580	364,165,783
1921-25	10,821,478	308,511,806	1926	17,459,179	381,624,962
	14,622,631	381,624,962	1927	17,509,718	399,134,680
				17,048,370	416,183,050

VALUE OF MINERAL PRODUCTION, 1890 to 1927.

Ratio Graph.



The numbers at the side of the graph represent £10,000.

The diagram is a ratio graph, and the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

The value of the minerals won rose from £12,958,008 in 1922 to £16,397,580 in 1924. An increase of £1,000,000 occurred in 1925, but it was due mainly to the inclusion of the output from all quarries, whereas the figures for

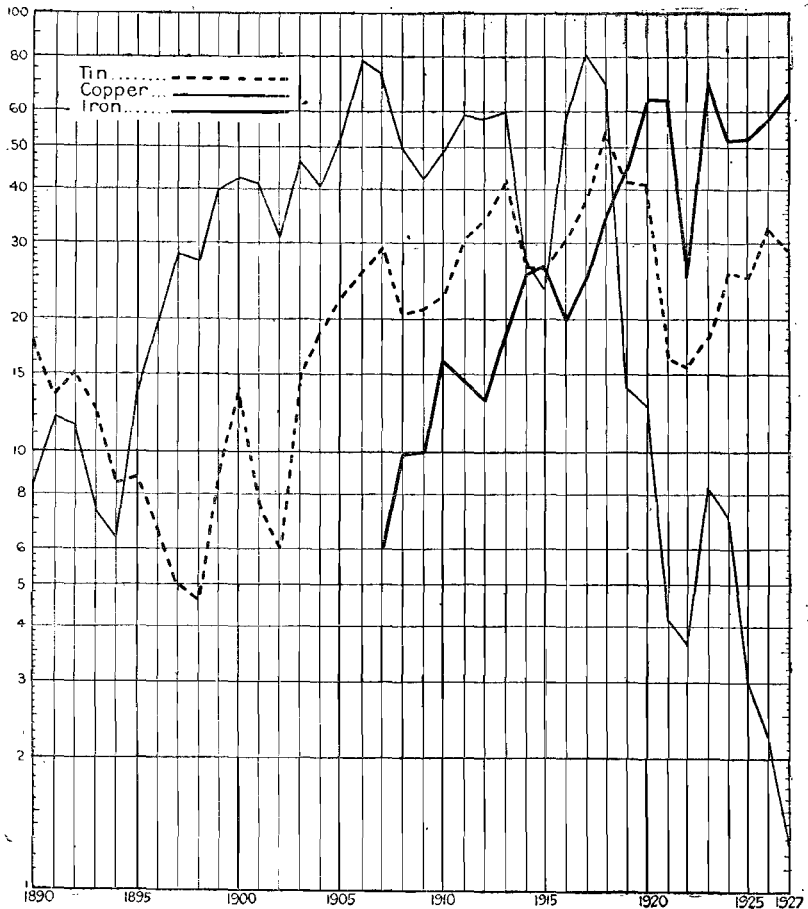


earlier years included only the output from quarries held under mining title. The value in 1926 was the highest yet recorded, being slightly in excess of the value in the previous year. There was a decline of £461,000 in 1927, which may be attributed to a fall in the prices of lead and zinc.

At the end of the year 1900 the value of the gold won, £48,422,000, exceeded that of any other mineral, but with the subsequent decline in gold mining and the development of the coal and the silver-lead fields, coal advanced rapidly to the head of the list, and the value of the silver and lead surpassed the output of gold. At the end of 1927 the value of the coal production represented 41 per cent. of the total value, silver and lead 27 per cent., and gold 15 per cent.

### VALUE OF PRODUCTION—TIN, COPPER, AND IRON, 1890 to 1927.

Ratio Graph.



The numbers at the side of the graph represent £10,000.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

The values of the ores are estimated after assay. Many of the metals are associated in the same mineral matter and it is very difficult to make a reliable estimate of the quantity and value, especially in cases where the ores are exported before final treatment.

The following statement shows the quantity and value of the various minerals won as estimated for the years 1926 and 1927, also the total yield to the end of 1927 :—

Minerals.	Annual Output.				Total Output to end of 1927.	
	1926.		1927.		Quantity.	Value.
	Quantity.	Value.	Quantity.	Value.		
		£		£		£
Gold ... ..oz. fine	19,435	82,551	18 032	76,595	14,968,346	63,581,454
Silver ... ..	9,342	1,130	5,341	534	45,456 232	6,102,338
Silver-lead ore, etc. ... tons	274,513	4,398,823	291,259	3,487,446	10,897,866	99,866,692
Lead—Pig, etc. ... ..	...	...	...	...	326,621	6,442,397
Zinc—Spelter and concentrates ... ..	267,533	1,359,588	277,425	996,877	6,424,789	21,943 396
Copper ... ..	357	22,473	376	12,655	265,846	15 552,954
Tin ingots and ore ... ..	1,134	326,474	1,030	287,539	131,763	13,905,677
Iron—Pig (from local ores) ...	105,201	578,605	118,951	654,230	1,349,041	7,163 567
Iron oxide ... ..	3,251	1,958	5,011	3,116	67,389	75,153
Ironstone flux ... ..	...	...	...	...	132,655	108,791
Chrome iron ore ... ..	597	1,704	...	...	38,766	121,460
Wolfram ... ..	...	...	...	...	2,278	267,995
Scheelite ... ..	...	...	...	...	1,690	192,375
Platinum ... ..oz.	397	6,910	226	3,200	18,446	112 826
Molybdenite ... ..tons	...	41	...	...	827½	211,800
Antimony ... ..	85	1,236	63	5,040	19,269	351,259
Manganese ore ... ..	1,290	3,955	1,202	4,285	36,427	78,728
Coal ... ..	10,885,766	9,438,520	11,126,114	9,782,002	333,161,860	170,172,431
Shale ... ..	...	...	...	...	1,919,685	2,690,710
Alunite ... ..	580	2,320	...	...	58,189	208,795
Limestone flux ... ..	109,693	27,049	119,094	44,660	2,475,390	1,146,442
Diamonds ... ..carats	64	77	199	227	202,431	144,756
Opal ... ..	...	11,485	...	13,353	...	1,574,762
Clays ... ..tons	1,830,264	373,413	2,000,942	417,273	...	...
Building material ... ..	307,286	168,216	652,937	281,933	...	*5,106,292
Road material ... ..	...	567,481	...	859,488	...	...
Other ... ..	...	137,709	...	117,917	...	...
Total ... ..	...	17,509,713	...	17,048,370	...	416,181,950

\* Exclusive of output prior to 1925 from quarries, except those held under mining title.

During 1927 there was increased production, as compared with the previous year, of iron, silver-lead ore, zinc concentrates, coal and limestone flux, and decreases in the quantity of gold, silver and tin.

**GOLD.**

Though gold had been found in New South Wales in earlier years, the history of gold-mining in the State dates from 1851, when its existence in payable quantities was proved by E. H. Hargraves, and the principal gold-fields were discovered. The deposits which have been mined include various types, e.g., alluvial gold, auriferous reefs or lodes, impregnations in stratified deposits and igneous rocks, and irregular deposits, as in auriferous ironstone.

Many rich alluvial deposits in which gold was easily accessible were exploited during the twenty years 1851-1870; then it became necessary to introduce expensive methods of mining, and the production declined. During the period of general depression which followed the financial crisis of 1893 greater attention was paid to prospecting for minerals, and with the development of new processes the output of gold showed considerable improvement. During recent years, however, there has been a steady decline, and the yield in 1927 was the lowest recorded in any year since 1851.

The following table shows the quantity and value of the gold won to the end of 1927 :—

Period.	Quantity.	Value.	Period.	Quantity.	Value.
	oz. fine.	£		oz. fine.	£
1851-1900	11,399,508	48,422,001	1924	18,685	79,370
1901-1910	2,252,851	9,569,492	1925	19,422	82,498
1911-1920	1,145,185	4,864,440	1926	19,435	82,551
1921	51,173	217,370	1927	18,032	76,595
1922	25,222	107,139			
1923	18,833	79,998	Total ...	14,968,346	63,581,454

Towards the end of the nineteenth century a system of dredging was introduced for the purpose of recovering alluvial gold from the beds of the rivers which drain auriferous country, and in 1900 the quantity obtained by the dredges was 7,924 oz. of fine gold, valued at £33,660. During the following decade the quantity amounted to 298,416 oz. fine, valued at £1,267,593. Subsequently the output of the dredges declined, the figures for the year 1927 being 7,300 oz. fine, valued at £31,008, as compared with 9,388 oz. fine, value £39,877, during the preceding year. Dredges are employed also for the recovery of stream tin; particulars are shown on page 383.

#### SILVER, LEAD, AND ZINC.

The production of lead and zinc in New South Wales is associated closely with the mining of silver, the Broken Hill silver-lead deposits being the main source of the output.

The Broken Hill field was discovered in 1883, and it has become one of the principal mining centres of the world. The lode, varying in width from 10 feet to 400 feet, may be traced for several miles. Mining leases held by companies and syndicates extend along its entire length, but operations are confined to an extent of  $3\frac{1}{2}$  miles in the centre. Underneath an outcrop of manganiferous ironstone were found rich oxidised ores, consisting of carbonate of lead and kaolin with silver, and, below these ores, mixed sulphides of lead and zinc with a high silver content. As the depth increased the proportions of silver, lead, and zinc became smaller, and the gangue was found to consist of rhodonite which causes difficulty in the extraction of the metals.

For some years operations were directed towards the recovery of silver in the ores which contained the metal in payable quantities. The other metals were not recovered because the current price for lead was comparatively low and a method had not been devised by which the lead and zinc in the complex sulphide ores could be separated profitably. Consequently huge dumps of residue and low-grade ores accumulated at the mines until the development of new processes for the separation of the sulphides by means of flotation led to their treatment.

Lead and zinc concentrates have been produced in large quantities at Broken Hill. The former contain lead amounting to 60 or 65 per cent., silver 20 to 25 oz. per ton, zinc 7 to 8 per cent., and sulphur 15 per cent. The zinc concentrates contain zinc, about 45 per cent., lead 6 per cent., silver 10 oz. per ton, and sulphur 30 per cent. The lead concentrates are treated at Port Pirie in South Australia. The greater part of the zinc concentrates is exported to the United Kingdom and other European countries or to Japan, but large quantities are treated in Australia at Risdon, Tasmania.

During 1927 the output of ore from the Broken Hill mines amounted to 1,394,926 tons, viz., 10,486 tons of carbonate and siliceous ore, and 1,384,440 tons of sulphide ore. The value of the output was £4,874,550.

Another silver field of importance, known as Yerranderie, is situated in the Burragorang Valley. The lodes are small, varying in width from mere threads to 8 feet, but they are exceptionally rich. The bulk of the silver is associated with galena, which contains up to 160 oz. per ton. Second-grade ores contain from 40 to 80 oz. per ton. The Yerranderie field is handicapped by the high cost of haulage along a steeply-graded road to the nearest railway, therefore only first-grade ore is despatched from the mines, the lower grades being stacked for concentration or future treatment.

Smaller silver fields are situated in various parts of the State.

In assessing the quantity and value of the metals won from the silver-lead ores mined in New South Wales, the Department of Mines estimates the total value on the basis of the metal produced within the State and the value of the ore, concentrates, etc., not smelted within the State, as declared by the several companies at the date of export from the State. The following table is a summary of the Department's records of the quantity and value of the silver and lead produced in New South Wales from local ores, and the quantity and value of silver-lead and zinc concentrates produced in the State and despatched elsewhere for treatment:—

Period.	Silver.	Silver-lead Concentrates, Carbonate ore, etc.	Lead-Pig, in Matte, etc.	Zinc Concentrates.	
				Quantity.	Value.
	oz.	tons.	tons.	tons.	£
To 1900	9,572,829	3,020,611	14,680	138,901	157,066
1901-1905	4,154,020	1,985,868	17,550	183,782	440,402
1906-1910	8,310,962	1,751,751	71,435	1,460,138*	3,761,223
1911-1915	12,460,553	1,694,834	114,375	2,093,783	6,861,489
1916-1920	7,982,192	866,654	80,115	553,628	2,195,599
1921	1,963,379	53,507	20,353	79,694	283,455
1922	749,904	199,585	8,113	363,681	1,157,458
1923	107,682	241,761	...	426,049	1,411,652
1924	93,484	240,957	...	353,650	1,296,571
1925	46,544	277,566	...	226,525	1,022,016
1926	9,342	274,513	...	267,533	1,359,588
1927	5,341	290,259	...	277,425	996,877
Total ...	45,456,232	10,897,866	326,621	6,424,789	20,943,396

\* Includes 2,758 tons of spelter.

The total value of the production, as shown above, amounted to £4,484,857 in 1927, as compared with £5,759,541 in the preceding year. The decrease in value, as recorded by the Department of Mines, in 1926 and 1927, was due to a fall in the prices of metals.

As stated previously, the bulk of the ores produced in the silver-lead mines is exported for treatment to other parts of Australia or despatched in the form of concentrates to overseas countries, therefore the figures shown in the

preceding table do not indicate fully the importance of the mines of New South Wales in respect of the production of the various metals. The Department of Mines has collected records from the various mining and smelting companies and ore-buyers with the object of ascertaining the actual value accruing to the Commonwealth from the silver-lead mines of this State. Thus particulars have been obtained regarding the quantity and value of the silver, lead, and zinc extracted within the Commonwealth, and the gross metallic contents of concentrates exported overseas have been estimated on the basis of average assays as follows. In the case of the lead and zinc contents, the quantities have been estimated only when payment was made for them.

Year.	Metal obtained within Commonwealth from ores raised in New South Wales.					Concentrates exported overseas.					Total Value of Production from Silver-lead Ores of New South Wales.
	Silver.	Lead.	Zinc.	Aggregate Value.	Quantity.	Contents by average assay.			Assessed Value.		
						Silver.	Lead.	Zinc.			
	oz. fine.	tons.	tons.	£	tons.	oz. fine.	tons.	tons.	£	£	
1921	3,634,413	47,426	1,425	1,723,864	47,127	617,477	6,539	19,272	261,238	1,985,102	
1922	6,643,825	97,667	23,724	4,113,427	287,074	3,264,102	19,328	132,186	1,272,074	5,385,501	
1923	7,233,236	124,570	41,153	5,707,739	356,139	4,831,718	40,906	149,319	1,813,287	7,521,026	
1924	3,292,978	120,380	43,679	6,472,812	261,404	2,983,693	21,513	114,374	1,292,220	7,765,032	
1925	7,437,967	139,839	39,991	7,539,130	184,712	1,782,193	30,752	75,435	1,371,183	8,910,313	
1926	7,338,477	142,654	39,277	6,730,689	251,294	3,371,264	23,242	96,167	1,591,673	8,332,362	
1927	7,901,861	156,306	42,757	8,955,009	259,989	2,339,382	26,709	116,123	1,467,235	7,422,244	

The silver-lead ores mined in New South Wales contain, in addition to silver, lead, and zinc, a number of other metals, *e.g.*, cadmium, copper, gold, and antimony, but unless these metals are extracted within New South Wales they are not represented in statistics of the mineral production of the State, except by inclusion as zinc concentrates.

Cadmium is recovered at Risdon, Tasmania, as a by-product in the treatment of zinc ores mined at Broken Hill. The quantity extracted during 1927 was 135 tons, valued at £22,618.

#### COPPER.

The ores of copper are distributed widely throughout New South Wales. Deposits of commercial value have been mined in the central portion of the State, but the industry has been handicapped severely in many places by the high cost of transport to market, and, as the price fluctuates considerably, operations have been intermittent. Large quantities of low-grade ores are available, and when the market is favourable they may be treated profitably.

The quantity and value of the copper won in New South Wales, as estimated by the Department of Mines, are shown below:—

Period.	Ingots, Matte, and Regulus.		Ore.		Total Value.
	Quantity.	Value.	Quantity.	Value.	
	tons.	£	tons.	£	£
1858-1900	95,501	5,474,309	6,101	92,651	5,566,960
1901-1905	33,989	2,011,609	8,578	104,533	2,116,142
1906-1910	41,898	2,869,101	6,872	62,006	2,931,107
1911-1915	36,305	2,169,508	9,870	108,226	2,277,734
1916-1920	21,453	2,355,248	554	8,887	2,364,135
1921	499	41,267	...	...	41,267
1922	575	35,533	50	650	36,233
1923	1,182	81,203	79	1,172	82,375
1924	1,129	71,658	...	...	71,658
1925	478	30,215	...	...	30,215
1926	357	22,473	...	...	22,473
1927	186	11,290	190	1,365	12,655
Total ...	233,552	15,173,464	32,294	379,490	15,552,954

The marked decrease in the output of copper during recent years was not due to a decline in the productive capacity of the mines, but to decreases in price, which precluded profitable working under existing costs. In addition to the production shown above, 1082 tons of copper were obtained in 1927 from the Broken Hill silver-lead ores treated in South Australia.

## TIN.

Tin, unlike copper, is restricted in its geographical and petrological range, and is the rarest of the common metals of commerce. The lodes discovered in New South Wales are numerous, but they are on a small scale. The maximum depth attained is about 360 feet.

Tin ore occurs in the northern, southern, and western divisions. The areas in which workable quantities are known to exist are on the western fall of the New England Tableland, with Emmaville and Tingha as the chief centres, and at Ardlathan in the southern district. Alluvial deposits of stream tin are exploited by means of dredging in the northern rivers.

Tin has contributed in a very considerable degree to the total production of the mineral wealth of the State, although its aggregate yield, in point of value, is below that of coal, silver, gold, copper, and zinc.

Particulars of the output and the value of production of tin are shown below :—

Period.	Ingots.		Ore.		Total Value.
	Quantity.	Value.	Quantity.	Value.	
	tons.	£	tons.	£	£
1872-1900	67,055	5,879,803	18,581	908,130	6,787,933
1901-1905	4,319	557,855	1,994	142,977	700,832
1906-1910	5,244	816,061	3,947	377,620	1,193,681
1911-1915	4,268	793,550	7,262	806,815	1,600,365
1916-1920	4,346	1,053,645	6,953	1,005,841	2,059,486
1921	*	*	1,595	163,451	163,451
1922	734	114,076	410	40,622	154,698
1923	896	180,789	...	...	180,789
1924	1,041	259,485	...	...	259,485
1925	957	250,944	...	...	250,944
1926	1,134	326,474	...	...	326,474
1927	976	285,806	54	1,733	287,539
Total ...	90,970	10,518,488	40,796	3,447,189	13,965,677

\* Included under the heading, "Ore."

In 1927 forty-nine pump dredges and one bucket dredge were employed in recovering tin in the northern districts. The quantity of tin obtained was 716 tons, valued at £143,850, as compared with 814 tons, valued at £157,476, in the previous year. The total yield by dredging since 1901 has been 27,108 tons, valued at £3,482,511.

Tin mining was affected adversely during 1927 by exceptionally dry weather.

## IRON AND IRON ORES.

Iron ore of good quality occurs in many parts of New South Wales. The most extensive deposits are at Cadia, where 10,000,000 tons may be recovered economically; at Carcoar, where a large quantity has been produced; and at Goulburn and Queanbeyan, each containing about 1,000,000 tons; at Wingello there are about 3,000,000 tons of aluminous iron ores of low grade. It has been estimated that in the known deposits, excluding Wingello ores, there are 15,000,000 tons which may be recovered by quarrying, and that a much greater quantity may be obtained by more costly methods of mining.

Prior to 1907 iron ore was mined principally for use as flux in smelting other ores, although in 1884, at Mittagong, and in later years at Lithgow, the production of pig-iron from local ores had been attempted without permanent success. Following a reorganisation and remodelling of the Eskbank Ironworks, Lithgow, the production of iron ore has been on a more extensive scale since 1907, although only the Cadia, Carcoar, and smaller deposits have been mined.

The production of pig-iron from local ores since 1907, and the materials used therein, are shown in the following table. The output prior to that year was principally from scrap iron:—

Year.	Principal Minerals Used.			Pig-iron.	
	Iron Ore.	Coke.	Limestone.	Production.	Value.
	tons.	tons.	tons.	tons.	£
1907-10	205,271	146,411	89,439	116,273	421,632
1911-15	454,953	350,674	158,888	267,062	983,633
1916-20	502,768	448,377	214,103	332,690	1,885,617
1921	168,385	130,561	68,881	90,053	639,376
1922	110,972	75,876	30,397	54,856	248,909
1923	173,507	142,719	86,985	94,350	707,625
1924	139,590	100,952	58,672	74,075	518,525
1925	165,689	144,161	63,015	95,530	525,415
1926	178,746	157,990	72,636	105,201	578,605
1927	*	*	*	118,951	654,230
Total	...	...	...	1,349,041	7,163,567

\* Not available for publication.

Further details relating to the operations of ironworks are shown in the chapter relating to factories.

#### *Iron Oxide.*

Iron oxide is obtained in the Port Macquarie, Moss Vale, Newcastle, and Goulburn districts for use in purifying gas or as a pigment. The output during 1927 was 5,011 tons, valued at £3,116, and the total output to the end of 1927 was 67,389 tons, valued at £75,153.

#### OTHER METALS.

*Platinum.*—Platinum occurs in several districts of New South Wales, but platinum mining is comparatively unimportant. The quantity produced to the end of 1927 amounted to 18,446 oz., valued at £112,826, of which 226 oz., valued at £3,200, were obtained during 1927.

*Chromite.*—Chromite, or chromic iron ore, is the only commercially important ore of chromium. It is found usually in association with serpentine. The chromite, mined in New South Wales, is used as a refractory material. The principal deposits are in the Gundagai and Tumut districts, and there are smaller quantities in the northern portion of the State. The quantity produced to the end of 1927 was 38,766 tons, valued at £121,460.

*Tungsten ores.*—The tungsten ores, wolfram and scheelite, occur in many localities in New South Wales generally in association with tinstone (cassiterite) bismuth, and molybdenite. These ores are used mainly in the manufacture of special steels for which the demand increased during the war period and declined upon the cessation of hostilities. Owing to the low price offered for the products, there has been no production of scheelite since 1920, and no wolfram has been won since 1925.

*Molybdenum*.—Supplies of molybdenite, the principal ore of molybdenum exist in New South Wales. Its main use, however, is for the manufacture of molybdenum steel, and, as in the case of tungsten ores, the demand has become almost negligible.

*Antimony*.—This mineral may be obtained in a number of districts, the principal field being at Hillgrove. Owing to fluctuations in the price of the metal, mining is spasmodic. The total output of antimony to the end of the year 1927 was 19,209 tons, valued at £351,259, of which 63 tons, valued at £5,040, were produced in 1927.

*Manganese*.—Manganese ores have been discovered in various places but generally in localities which lack facilities for transport. During the year 1927 the quantity obtained was 1,202 tons, valued at £4,285.

*Bismuth*.—Bismuth has been obtained chiefly in the neighbourhood of Glen Innes, and at Whipstick in the South Coast division. In other districts bismuth is associated with molybdenite and wolfram ores. The quantity of bismuth produced in 1927 was about 15 cwt., valued at £204, the quantity produced to the end of 1927 being 814 tons of ore, valued at £233,481.

*Mercury*.—Cinnabar, the most important ore of mercury, occurs in numerous localities, but it has not been discovered in a sufficiently concentrated form to enable it to be wrought profitably. No production of quicksilver has been recorded since 1916.

#### COAL.

The main coal basin extends along the coast from Port Stephens on the north to Ulladulla on the south, and this seaboard of nearly 200 miles enhances the value of the deposits by facilitating shipment and the development of oversea trade. From Ulladulla the basin trends inland to the west and north-west as far as Rylstone, whence the boundary line extends northward beyond Gunnedah, and then runs in a south-easterly direction to Port Stephens. The widest part of the area is between Dubbo and Newcastle—150 miles, and the basin is deepest in the neighbourhood of Sydney, where the uppermost seam is nearly 3,000 feet below the surface.

From Sydney the measures rise gradually in all directions. They emerge to the surface at Newcastle on the north, at Bulli in the Illawarra district to the south, and at Lithgow, in the Blue Mountain region, to the west, and these three districts contain the important coal mining centres.

The Upper or Newcastle coal measures show the greatest surface development. In the northern field they are known to contain twelve seams, six being worked; in the southern, seven distinct seams are known, and three have been worked; of the seven seams traced in the western field, only three are of commercial value. After many unsuccessful boring operations, the uppermost seam of the Newcastle measures was located under Sydney Harbour in 1891, and it has been worked to a depth of nearly 3,000 feet.

The coal obtained at Newcastle is suitable for gas making and for household use. The coal from Bulli and Lithgow is essentially steam coal. The southern coal produces a strong coke, specially suitable for smelting purposes by reason of its capacity for sustaining the weight of the ore burden in a blast furnace, and it contains less ash than the western. The coal obtained at the Sydney Harbour Colliery can be loaded into oversea steamers from a wharf near the pit's mouth.

An isolated basin of upper coal measures has been discovered at Coorabin in the Riverina district, 400 miles from Sydney.



In the western and southern fields the upper coal measures contain deposits of shale suitable for the manufacture of kerosene oil and for the production of gas. Deposits of kerosene shale, though much less extensive, occur in the upper and Greta measures of the northern coal-field.

The middle coal measures outcrop near East Maitland, but do not appear in the western field. Their occurrence in the southern field has not been proved definitely.

The lower or Greta measures outcrop over an irregular area in the neighbourhood of Maitland, and have been traced with intervening breaks as far north as Wingen. They occur as an isolated belt to the north of Inverell, and extend through Ashford, almost to the Queensland border. These measures have been located in the Clyde Valley, in the extreme southern portion of the Illawarra field, but do not occur in the western. The coal of the Greta measures is contained in two seams, and is the purest and generally the most useful obtained in the State, being of a good quality, hard, and economical as regards working. The Greta seams are worked extensively between West Maitland and Cessnock, in the most important coal-mining district in Australia, and at Muswellbrook.

#### *State Coal Mine.*

The State Coal Mines Act, 1912, empowers the Government to purchase or resume coal-bearing lands or coal mines and to open and work coal mines upon Crown land or upon private land containing coal reserved to the Crown or acquired for the purpose of a State coal mine. The coal obtained from a State mine is to be used only by the State Departments or undertakings.

A State coal mine was opened at Lithgow, in the Western district, in September, 1916. The area of the land containing coal reserved for the Crown amounts to about 40,200 acres, and the available supply of coal has been estimated at 240,000,000 tons. The mine, which was closed in July, 1917, was taken over by the Railway Commissioners in the early part of 1921. The output from the mine was 253,975 tons in 1923-24; 263,538 tons, 240,174 tons, and 286,704 tons in the succeeding years.

#### *Production of Coal.*

The following table shows the quantity and value of coal raised in New South Wales to the close of 1927, the total production being 333,161,860 tons, valued at £170,172,431 :—

Period.	Coal Raised.	Value at Pit's Mouth.	Average value per ton.
	tons.	£	s. d.
To 1900	91,476,633	37,315,915	8 1
1901-05	30,917,230	10,703,600	6 11
1906-10	40,624,698	14,240,992	7 0
1911-15	48,831,214	17,759,946	7 3
1916-20	44,830,757	25,847,168	11 6
1921	10,793,387	9,078,383	16 10
1922	10,183,133	8,507,946	16 9
1923	10,478,513	8,607,892	16 5
1924	11,618,216	9,589,547	16 6
1925	11,396,199	9,302,515	16 4
1926	10,887,766	9,436,520	17 4
1927	11,126,114	9,782,002	17 7
Total ...	333,161,860	170,172,431	10 3

The production of coal has exceeded 10,000,000 tons in each year since 1919, and it reached the highest point yet recorded in 1924. Cessation of mining operations for a period of six weeks, owing to industrial strife, was the main cause of the decline in production during 1926. In the following year there was an increase in production in the southern and western coal-fields, but a decline in the northern district, where trade conditions were unfavourable during the latter months of the year.

The bulk of the coal is obtained from the northern coal-fields. The output of each district during 1927 was:—Northern, 7,145,116 tons, valued at £6,845,039; Southern, 2,155,461 tons, £1,798,077; Western, 1,825,537 tons, £1,138,886.

A statement regarding the average value at the pit's mouth of the coal raised in each district is shown on page 371.

The following statement shows the quantity of New South Wales coal consumed in Australia, including bunker coal taken by interstate vessels, and the overseas exports, in each year since 1918. The bunker coal loaded in Sydney Harbour into interstate steamers is included in the table under the heading "domestic consumption," because it has not been distinguished in the records from the coal taken in that port by intrastate vessels:—

Year.	Domestic Consumption	Sent to other Australian States.	Total quantity consumed in Australia.	Exported to Oversea Countries.	Total Production.
	tons.	tons.	tons.	tons.	tons.
1918	5,641,500	2,697,033	8,338,533	724,643	9,063,176
1919	5,128,536	1,891,317	7,019,853	1,611,701	8,631,554
1920	5,729,208	2,270,566	7,999,764	2,716,235	10,715,999
1921	5,268,628	2,752,810	8,021,438	2,771,949	10,793,387
1922	4,943,736	2,841,253	7,784,989	2,398,144	10,183,133
1923	5,578,385	2,518,579	8,096,964	2,381,549	10,478,513
1924	6,204,272	3,096,881	9,301,153	2,317,063	11,618,216
1925	6,625,161	3,001,823	9,626,984	1,769,215	11,396,199
1926	6,347,939	2,740,570	9,088,509	1,797,257	10,885,766
1927	6,786,906	2,651,492	9,438,398	1,687,716	11,126,114
	Per cent. of Total.				
1918	62·2	29·8	92·0	8·0	100
1919	59·4	21·9	81·3	18·7	109
1920	53·5	21·2	74·7	25·3	100
1921	48·8	25·5	74·3	25·7	100
1922	48·5	27·9	76·4	23·6	100
1923	53·2	24·1	77·3	22·7	100
1924	53·4	26·7	80·1	19·9	100
1925	58·1	26·4	84·5	15·5	100
1926	58·3	25·2	83·5	16·5	100
1927	61·0	23·8	84·8	15·2	100

The domestic consumption of coal decreased during 1921 and 1922 as a result of restricted operations in many important manufacturing industries, *e.g.*, iron and steel works. On the other hand the export trade was brisk in consequence of industrial strife in Great Britain and in the United States. In 1923 there was a marked increase in the domestic consumption, and the export trade was maintained at a fairly high level.

In 1924 and 1925 interstate exports were large but overseas trade declined in the latter year when shipping activities were hampered by industrial disputes. In 1926 the effect of decreased production is noticeable in the figures relating to consumption in Australia, the overseas exports being somewhat greater than in 1925. In the following year exports declined, and a larger proportion of the output remained for domestic consumption.

Full particulars are not available as to the purposes for which coal is used locally, but statistics of factories and railways with those of the export trade contain information which covers approximately 85 per cent. of the production. The following statement shows these details for the last six years, though they differ from those shown in other tables insofar as they refer to periods of twelve months ending June, and not to calendar years:—

Coal Used.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
<b>In Factories—</b>	tons.	tons.	tons.	tons.	tons.	tons.
Fuel in Electricity Works ...	524,367	569,764	699,472	747,310	782,409	856,997
„ Other Factories ...	1,129,895	986,952	1,242,548	1,300,513	1,333,387	1,396,090
	1,654,262	1,556,716	1,942,020	2,047,823	2,115,796	2,253,087
Raw Material in Gas Works	551,971	571,589	593,844	611,477	605,488	620,640
„ Coke Works	654,374	557,177	876,581	1,041,661	890,444	1,060,368
	1,206,345	1,128,757	1,470,425	1,653,138	1,495,932	1,681,008
Total in Factories ...	2,860,607	2,685,473	3,412,445	3,700,961	3,611,728	3,934,095
<b>On Railways for Locomotive Purposes ...</b>	839,341	1,113,438	1,150,256	1,263,176	1,342,280	1,342,034
Total, Factories and Railways...	3,699,948	3,798,911	4,562,701	4,964,137	4,954,008	5,276,129
<b>Exports—</b>						
Interstate*—Cargo ...	2,572,505	2,215,241	2,611,239	2,701,800	2,132,173	2,505,174
„ Bunker† ...	291,649	297,692	338,302	404,531	405,223	410,062
Total, Interstate ...	2,864,154	2,512,933	2,949,541	3,106,331	2,537,396	2,915,236
Oversea—Cargo ...	1,023,512	1,114,090	1,336,483	974,704	792,144	803,254
„ Bunker ...	1,173,833	1,300,826	1,147,530	953,246	882,446	899,413
Total, Oversea ...	2,197,345	2,414,916	2,484,013	1,927,950	1,674,590	1,702,667
Total Exports† ...	5,061,499	4,927,849	5,478,554	5,034,281	4,211,986	4,617,903
Total, Factories, Railways and Exports†	8,761,447	8,726,760	10,041,255	9,998,418	9,165,994	9,894,032

\* Approximate.

† Excluding bunker coal shipped on interstate vessels in Sydney Harbour.

The quantity of coal used as fuel in factories has risen by over 36 per cent. since 1921-22, with a general expansion of the secondary industries, the increasing requirements of the electric light and power works being an important factor. The demand for coal as raw material in gasworks has been steady, and the quantity used in coke works has fluctuated, but was 62 per cent. greater in 1926-27 than in 1921-22. It is noticeable that the quantity consumed by railway locomotives has not increased appreciably during the last two years, though the traffic during 1926-27 was unusually heavy. This is due partly to the electrification of some of the railway services and to economy in the use of coal for steam engines. The export trade is dwindling by reason of a diminution in the overseas demand due to such causes as the substitution of oil.

On the average it appears that local factories absorb about one-third of the output, the railways approximately 12 per cent., and the export trade about 40 per cent.

#### OIL SHALE.

Oil-bearing mineral, which is a variety of torbanite or cannel coal, known locally as kerosene shale, has been found in many localities in New South Wales, the most important deposits being in the Capertee and Wolgan valleys.

The production of oil shale, from the opening of the mines in 1865 to the end of 1924 amounted to 1,919,685 tons, valued at £2,690,710. There was no commercial production during the last three years.

In the years 1910-1913 the Commonwealth Government paid a bounty on kerosene and paraffin wax made from Australian shale, and since 1917 has provided a bounty on crude shale oil. The last payments were made during the year ended 30th June, 1925, when they amounted to £335.

DIAMONDS.

Diamonds and other gem-stones are distributed widely in New South Wales, but an extensive field has not been discovered. The finest of the New South Wales diamonds are harder and whiter than the South African, and are equal to the best Brazilian gems.

The following table shows the output of diamonds as recorded, but it is probable that the actual output was much greater. The majority of the diamonds have been obtained from the mines in the Bingara and Copeton districts.

Period.	Carats.	Value.	Period.	Carats.	Value.
		£			£
1867-1900	100,103	55,535	1921	1,563	1,915
1901-1905	54,206	46,434	1922	1,000	1,300
1906-1910	16,651	12,374	1923	175	230
1911-1915	16,003	13,353	1924	284	498
1916-1920	11,973	12,573	1925	210	240
			1926	64	77
			1927	199	227

. OPAL.

Precious opal occurs in two geological formations in New South Wales, viz., in tertiary vesicular basalt and in upper cretaceous sediments. The most important deposits are in the upper cretaceous rocks at White Cliffs and Lightning Ridge. Gems from the latter field are remarkable for colour, fire, and brilliancy. The opals from vesicles in the tertiary basalt at Tintenbar in the North Coast division resemble the Mexican gems.

The following table shows the estimated value of precious opal won in New South Wales to the end of 1927 :—

Period.	Value.	Period.	Value.
	£		£
1890-1900	456,599	1923	3,040
1901-1905	476,000	1924	10,560
1906-1910	305,300	1925	10,030
1911-1915	154,738	1926	11,485
1916-1920	105,547	1927	13,353
1921	13,020		
1922	15,150	Total ...	1,574,762

During 1923 the output was small. The market demand for opal was limited and mining operations were hampered by the temporary exhaustion of the water supply at Lightning Ridge. In the following years production increased.

#### ALUNITE.

Alunite, or alumstone, occurs at Bullahdelah, about 35 miles from Port Stephens, in a narrow mountain range which for more than a mile is composed mainly of alunite, of greater or less purity. Owing to the nature of the occurrences, it has not been possible to estimate the ore reserves of commercial value. Four varieties of alunite are recognised at the mines, but operations are confined mainly to the light-pink ore, the average yield being about 80 per cent. of alum.

In 1926 the production of alunite was 580 tons, valued at £2,320, and the quantity exported since 1890 was 53,189 tons, valued at £208,795. There was no production during 1927.

#### OTHER MINERALS.

*Marble.*—Beds of marble of great variety of colouring, and with highly ornamental markings, are located in many districts of New South Wales. Much of the marble is eminently suitable for decorative work.

*Limestone.*—Immense supplies of limestone are distributed widely throughout the State. The commercial value of the deposits depends mainly on their accessibility and proximity to market. The bulk of the limestone is raised for the manufacture of cement in localities where coal and shale also are readily available.

*Fireclays.*—Fireclays of good quality are found in the permo-carboniferous coal measures, and excellent clays for brick-making, pottery, etc., may be obtained in the State.

*Magnesite.*—Magnesite is distributed widely, but few deposits are of commercial value. Large quantities have been mined at Fifield, Attunga, and Barraba. The output during 1927 was 10,017 tons, valued at £16,141.

*Diatomaceous earth* occurs in several localities. The principal deposits are situated at Cooma, Barraba, Coonabarabran, and Wyrallah.

*Other Mineral Deposits.*—Other mineral deposits known to exist but not worked extensively include asbestos, barytes, fluorspar, Fuller's earth, ochre, graphite, gypsum, slate, and mica. Quartzite for the manufacture of silica bricks is obtainable in large quantities.

#### QUARRIES.

The Hawkesbury formation in the Metropolitan district provides excellent sandstone for architectural use. The supply is very extensive, and the stone is finely grained, durable, and easily worked. In the north-western portion of the State and in the northern coal districts good building stone is obtainable.

Syenite, commonly called trachyte, is found at Bowral. For building purposes it is solid, and takes a beautiful polish. Granite occurs at many places in the State, and it has been obtained generally in places near the coast, whence it could be transported cheaply.

Basalt or blue metal, suitable for ballasting roads and railway lines and for making concrete, is obtained at Kiama and other localities.

The following statement shows the output of the quarries and clay, gravel and sand pits during the years 1926 and 1927, as recorded in returns collected from the owners by the Statistician under the Census Act of 1901. The collection in respect of these years was more comprehensive than formerly, and the figures include the output of clay, etc.

Stone, etc.	1926.		1927.	
	Quantity.	Value.	Quantity.	Value.
<b>Building Stone—</b>	tons.	£	tons.	£
Sandstone ... ..	46,130	47,858	60,537	71,568
Granite ... ..	6,981	23,269	9,061	34,005
Basalt ... ..	75,000	24,356	29,469	13,050
Trachyte, etc. ... ..	1,766	4,810	2,607	4,932
Limestone ... ..	137	318	2,182	2,537
Marble ... ..	1,951	6,830	813	4,598
Slate ... ..	155	1,550	334	3,597
<b>Macadam, Ballast, etc.—</b>				
Sandstone ... ..	205,458	51,641	263,263	64,192
Granite ... ..	79,100	36,975	163,603	77,706
Bluestone, Basalt, etc. ... ..	1,432,833	498,053	1,602,146	540,363
Quartzite ... ..	57,970	9,974	53,995	19,573
Limestone ... ..	9,309	1,985	16,565	3,693
Gravel ... ..	470,903	79,889	696,562	122,261
Sand ... ..	190,820	21,979	306,278	54,050
Shale ... ..	51,900	17,306	34,108	4,557
Chert ... ..	10,000	1,344	3,189	875
Slate ... ..	...	...	1,500	750
Ironstone ... ..	...	...	6,260	1,230
Other... ..	...	...	23,298	7,290
<b>Limestone—</b>				
For Burning ... ..	619,790	163,041	663,013	165,238
For Flux ... ..			122,108	39,457
Shale for Cement... ..	...	...	85,385	15,499
<b>Clays—</b>				
Brick ... ..	1,643,847	207,998	1,710,607	209,031
Pottery and Earthenware ... ..	60,451	14,686	115,594	33,720
Pigment ... ..	305	351	317	526
Kaolin ... ..	4,739	5,365	3,153	3,749
Fire Clay ... ..	31,265	20,363	31,866	13,569
Silica ... ..	...	...	14,425	8,005
Other... ..	...	...	21,621	1,879
<b>Total</b> ... ..	<b>5,000,810</b>	<b>£1,239,941</b>	<b>6,043,859</b>	<b>£1,521,500</b>

## INSPECTION OF MINES.

The inspection of mines with a view to safeguarding the miners from accident and disease is conducted by salaried officers of the Department of Mines in terms of the Coal Mines Regulation Acts, which apply to coal and shale mines, and the Mines Inspection Acts, which apply to other mines.

The Coal Mines Regulation Acts prescribe that every coal mine must be under the control and direction of a qualified manager, and daily personal supervision must be exercised by him or by a qualified under-manager. In mines where safety-lamps are used a competent person must be appointed as deputy to carry out duties for the safety of the mine, especially in regard to the presence of gas, the sufficiency of ventilation, the state of the roof and sides, and the supervision of shot-firers.

The Acts contain general rules for the working of coal mines in regard to such matters as ventilation, sanitation, the inspection and safeguarding of machinery, safety lamps, explosives, security of shafts, etc. It is provided that a person may not be employed in getting coal or shale on the face of

workings of a mine unless he has had two years experience or works in company with an experienced miner. Special rules are established in each mine for the safety, convenience, and discipline of the employees.

A Royal Commission, appointed in July, 1925, conducted an inquiry into conditions operating in the coal mines of New South Wales, with special reference to ventilation, the presence of gas, and the use of safety lamps. As a result of its recommendations the Coal Mines Regulation Act was amended with the object of minimising the risks attached to this class of mining, and Courts of Coal Mines Regulations may be constituted to determine matters relating to the safe working of the coal mines. The Governor may appoint a District Court judge, a stipendiary or police magistrate, or a mining warden to sit as a Court. During 1927 Courts were proclaimed at East Maitland, Newcastle, Muswellbrook, Gunnedah, Sydney, Wollongong, Lithgow, and Mudgee.

The Mines Rescue Act, 1925, makes provision for rescue operations in coal and shale mines by the establishment of rescue stations, rescue corps, and rescue brigades. In four districts, viz., the Western, Southern, Newcastle, and Maitland, central rescue stations have been established, and the mine owners in each district are required to contribute to a fund for their upkeep. The rates of contribution for the year 1927, as prescribed by regulations, were as follows :—Western and Southern, 0·75d.; Newcastle 0·1d.; and Maitland 0·4d. per ton of coal and shale raised during the preceding year. The amount contributed during 1927 was £19,947.

In the mines, to which the Mines Inspection Acts relate, a qualified manager, exercising daily personal supervision, must be appointed if more than ten persons are employed below ground, and the machinery must be in charge of a competent engine-driver. General rules are contained in the Act, and the inspectors may require special rules to be constituted for certain mines.

Certificates of competency to act in mines as managers, under-managers, deputies, engine-drivers, and electricians are issued in accordance with the Acts relating to inspection.

Particulars regarding the persons killed or seriously injured in mining accidents during the last seven years are shown below :—

Year.	Accidents.				Per 1,000 Employed.			
	Coal and Shale Miners.		Other Miners.		Coal and Shale Miners.		Other Miners.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1921	19	113	4	22	·89	5·31	·47	2·61
1922	12	86	5	25	·55	3·97	·54	2·70
1923	31	101	6	48	1·35	4·39	·62	4·94
1924	27	80	10	53	1·17	3·47	·98	5·22
1925	27	115	10	65	1·12	4·78	·76	4·93
1926	25	102	20	60	1·01	4·12	1·27	3·82
1927	24	107	11	58	0·98	4·37	·81	4·26

The accident rates are not based on the number of employees as shown on page 372. They relate to the total number of persons who are subject to the provisions of the Mining Acts, including persons engaged in connection with treatment plant at the mines, and in quarries held under mining titles; The particulars relating to all quarries are included in the figures for the years 1925 to 1927 inclusive.

In the chapter relating to Employment, particulars are given regarding industrial diseases in mines and the compensation provided in cases of accident or illness.

## PUBLIC FINANCE.

The collection and expenditure of public moneys in New South Wales are controlled by four authorities, viz.:—(1) The Government of the State of New South Wales; (2) the Government of the Commonwealth of Australia; (3) the Municipal and Shire Councils (local governing bodies operating in defined areas); and (4) statutory bodies appointed by the Governments to administer such public services as railways and tramways, water and sewerage, Sydney Harbour, irrigation, and main roads.

The governmental revenue of the State Government is derived mainly from taxes such as the income tax, stamp and probate duties, motor, betting, totalisator, and racecourse admission taxes, and fees for licenses; from the sale and leasing of its lands and forests; and from the contribution by the Commonwealth under the financial agreement of 1927. The expenditure of the State on governmental account includes the cost of such services as education, public health, hospitals, etc., police, prisons, the State Law Courts, Industrial Commission and Conciliation Boards, navigation (in part), agriculture, and lands administration, water conservation and irrigation, local government (administration and grants), widows' pensions, care of the destitute, administration of mining, fisheries, and factory acts, and the construction of public works.

The governmental revenue of the Commonwealth Government is derived mainly from taxes, such as the customs and excise duties, income tax, land tax, estate duty, and entertainments tax. Its expenditure is mainly in connection with war and repatriation services, old age and invalid pensions, maternity allowances, naval and military defence, lighthouses, navigation (in part), quarantine, bounties on production, the control of customs, meteorological observations, assistance in marketing operations, and the maintenance of a High Court and courts of industrial arbitration.

Local governing bodies are required to levy a rate of not less than 1d. in the £1 on the unimproved capital value of lands within the areas administered by them, and, in some cases, they are also empowered to levy rates on the improved capital value. They provide minor services, such as the construction, maintenance, and lighting of streets and roads, the control and maintenance of public parks and recreation areas, the supervision of building operations, and, in some cases, the provision of water and sanitary services. In general the cost of these services is defrayed from the general rates, but not infrequently charges are imposed for special services rendered.

The revenue of the statutory bodies is derived almost entirely from charges for the use of services which they administer, and all are ultimately subject to the control of the Government by which they are appointed. In some instances, *e.g.*, the railways and tramways of New South Wales and the posts, telegraphs and telephones of the Commonwealth, the accounts are incorporated with the governmental accounts, while in others, such as the Metropolitan Water, Sewerage and Drainage Board, and the Main Roads Board, they are kept separately.

Besides their ordinary governmental activities, the various Governments also conduct certain business and industrial undertakings. Thus the State Government owns brickworks, monier pipe works, and metal quarries, and numbers of the local governing bodies have established light and power services which are retailed to the general public.

Both State and Federal Governments have power to raise such loans as are required for their purposes, and these loans are applied to capital expenditure on works usually of a reproductive character, interest, sinking fund, and cost of repairs and renewals to the works being paid from



revenue. The Commonwealth Government, however, incurred a heavy debt for war and repatriation services, and this debt was shared in some measure by the States through the soldier settlement schemes. Steps taken to co-ordinate borrowing and sinking funds are described on a later page.

Municipalities and shires have power under certain conditions to raise loans. In the case of a municipality the total amount of loans must not exceed 20 per cent. of the unimproved value of the ratable land in its area, and, in the case of a shire, thrice its annual income.

Of the statutory bodies referred to, the Metropolitan Water, Sewerage and Drainage Board alone has power to raise loans on its own initiative, but such loans are subject to the approval of the Governor.

#### TAXATION.

The following statement shows in detail the taxation collected in New South Wales by the State and Commonwealth Governments, and the rates and charges received by local bodies, etc., during the five years ended 30th June, 1928:—

Head of Taxation, or Charge.	1924.	1925.	1926.	1927.	1928.
<b>STATE.</b>					
Land Tax ... ..	£ 2,657	£ 2,569	£ 2,600	£ 2,870	£ 2,744
Income Tax ... ..	4,373,519	4,661,892	5,392,947	7,739,627	6,382,467
<b>Stamp and Probate Duties—</b>					
Stamps ... ..	1,430,236	1,359,248	1,443,700	1,626,318	1,552,117
Betting Tickets ... ..	108,688	119,144	118,624	125,645	124,059
Probate, etc. ... ..	965,200	1,248,336	1,171,364	1,223,979	1,596,804
<b>Total, Stamp Duties</b> £	<b>2,504,124</b>	<b>2,726,728</b>	<b>2,733,727</b>	<b>2,975,942</b>	<b>3,272,980</b>
Motor Tax ... ..	255,261	‡453,226	‡762,309	‡952,481	‡1,130,280
Motor Licenses ... ..	106,997	‡163,136	‡234,886	‡295,434	‡348,706
Betting Taxes ... ..	108,720	112,944	105,644	110,957	114,527
Totalizator Tax ... ..	266,883	248,283	237,431	233,867	201,008
Recourse Admission Tax ...	143,013	139,499	137,903	143,668	136,175
Other Licenses ... ..	226,937	223,326	240,559	243,856	615,386
<b>Total, State Taxation</b> £	<b>7,988,131</b>	<b>‡8,731,663</b>	<b>‡9,848,072</b>	<b>‡12,698,642</b>	<b>‡12,204,243</b>
<b>COMMONWEALTH.</b>					
Customs Duties ... ..	10,988,303	11,645,992	12,472,972	14,143,132	14,050,692
Excise ... ..	5,110,916	5,187,473	5,475,830	5,700,350	5,784,649
Estate ... ..	490,400	662,706	591,484	570,187	
Land Tax* ... ..	1,155,100	1,391,556	1,392,093	1,443,977	}
Income Tax* ... ..	4,445,100	4,494,160	4,138,000	4,229,120	
Entertainments Tax... ..	249,010	274,791	181,735	159,197	
<b>Total, Commonwealth Taxation</b> ...	<b>£ 22,438,829</b>	<b>23,656,678</b>	<b>24,252,114</b>	<b>26,245,963</b>	<b>  </b>
<b>LOCAL, ETC.</b>					
Wharfage and Tonnage Rates	776,461	830,483	842,088	907,457	895,137
Fees for Registration of Dogs..	21,116	21,209	20,802	20,837	20,336
†Municipal Rates—					
City of Sydney ... ..	‡788,072	‡744,386	‡745,596	‡795,368	‡1,016,882
Suburban and Country ... ..	‡2,205,061	‡2,417,340	‡2,604,674	‡2,822,274	‡3,093,434
†Shire Rates ... ..	‡1,174,484	‡1,264,022	‡1,363,420	‡1,474,857	‡1,598,036
Water and Sewerage Rates ...	2,063,189	2,080,673	2,370,347	2,519,343	2,768,333
<b>Total, Local Rates and Charges</b> ...	<b>£ 7,028,383</b>	<b>7,358,123</b>	<b>7,946,927</b>	<b>8,540,136</b>	<b>9,392,658</b>
<b>Grand Total</b> ...	<b>£ 37,455,343</b>	<b>39,746,404</b>	<b>42,047,113</b>	<b>47,484,741</b>	<b>  </b>

\* Partly estimated. † Year ended 31st December preceding. ‡ The following amounts were paid to the Main Roads Board from proceeds of Motor Taxes and Licenses:—1924-25, £560,467; 1925-26, £897,664; 1926-27, £664,278; and 1927-28, £1,330,399. § Includes Harbour Bridge Rate and Main Roads Rate. || Not yet available.

The method of allocating revenue from motor taxes and licenses is discussed on page 400.

It is noteworthy that the amounts shown above in respect of Customs and Excise duties are the actual sums collected in New South Wales in respect of dutiable goods imported into the State from oversea or manufactured in the State, irrespective of whether such goods were consumed in New South Wales or sent to other States. There is, however, considerable movement of dutiable goods under bond to and from this State. Duty on such goods is usually paid in the State in which they are consumed, but considerable amounts of duty are collected in New South Wales in respect of manufactured tobacco consumed in other States.

*Taxation per Head of Population.*

The previous quotations, stated in their equivalent rates per head of population, are shown in the following table:—

Head of Taxation, or Charge.	1924.	1925.	1926.	1927.	1928.
<b>STATE.</b>					
Land Tax ... ..	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Income Tax ... ..	1 19 7	2 1 5	2 6 11	3 5 11	2 13 2
<b>Stamp and Probate Duties—</b>					
Stamps ... ..	0 12 11	0 12 1	0 12 7	0 13 10	0 13 0
Betting Tickets ... ..	0 1 0	0 1 1	0 1 0	0 1 1	0 1 0
Probate, etc. ... ..	0 8 9	0 11 1	0 10 2	0 10 5	0 13 3
Total, Stamp Duties ...	1 2 8	1 4 3	1 3 9	1 5 4	1 7 3
†Motor Tax ... ..	0 2 4	0 4 0	0 6 8	0 8 1	0 9 5
†Motor Licenses ... ..	0 0 11	0 1 6	0 2 1	0 2 6	0 2 11
Betting Taxes ... ..	0 1 0	0 1 0	0 0 11	0 1 0	0 1 0
Totalizator Tax ... ..	0 2 5	0 2 2	0 2 1	0 2 0	0 1 8
Racecourse Admission Tax ...	0 1 4	0 1 3	0 1 3	0 1 3	0 1 2
Other Licenses ... ..	0 2 1	0 2 0	0 2 1	0 2 1	0 5 1
Total, State Taxation ...	3 12 4	3 17 7	4 5 9	5 8 2	5 1 8
<b>COMMONWEALTH.</b>					
Customs Duties ... ..	4 19 5	5 3 4	5 8 7	6 0 6	5 17 1
Excise „ ... ..	2 6 3	2 6 0	2 7 8	2 8 7	2 8 2
Estate „ ... ..	0 4 5	0 5 11	0 5 1	0 4 10	
Land Tax * ... ..	0 10 6	0 12 5	0 12 1	0 12 4	}
Income Tax* ... ..	2 0 3	1 19 11	1 16 1	1 16 0	
Entertainments Tax ... ..	0 2 3	0 2 5	0 1 7	0 1 4	
Total, Commonwealth Taxation ...	10 3 1	10 10 0	10 11 1	11 3 7	
<b>LOCAL.</b>					
Wharfage and Tonnage Rates ...	0 7 0	0 7 6	0 7 4	0 7 9	0 7 5
Fees for Registration of Dogs ...	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
†Municipal Rates--					
City of Sydney ... ..	0 7 2	0 6 7	0 6 6	0 6 9	0 8 6
Suburban and Country ... ..	0 19 11	1 1 5	1 2 8	1 4 0	1 5 9
†Shire Rates ... ..	0 10 8	0 11 3	0 11 10	0 12 7	0 13 4
Water and Sewerage Rates ...	0 18 8	0 18 4	1 0 8	1 1 6	1 3 1
Total, Local Rates and Charges... ..	3 3 7	3 5 3	3 9 2	3 12 9	3 18 3
Grand Total ... ..	16 19 0	17 12 10	18 6 0	20 4 6	

\* † ‡ || See footnotes previous page

## STATE TAXES.

*State Land Tax.*

With the introduction of local government in the Eastern and Central Divisions of New South Wales from 1906 onwards the State discontinued the collection of land tax, and it is now levied only on the unincorporated districts of the Western Division. The rate of tax is 1d. in the £ on the unimproved value. For the purpose of assessment individual holdings are aggregated, and a statutory deduction of £240 is made from the assessed value to obtain the taxable value. The amount of land tax collected in the year ended 30th June, 1928, was £2,744.

*State Income Tax.*

Income tax was first levied in New South Wales as from 1st January, 1896, and it has since been levied annually with, latterly, frequent changes of incidence. Incomes are usually assessed for taxation in the year following that in which they are derived, the returns for assessment being normally made up for the twelve months ended 30th June.

In respect of income derived in the years ended 30th June, 1925, 1926, and 1927, income tax was payable to the State by all persons who received a net income exceeding £300 per annum from all sources in New South Wales other than interest accruing to foreign investors in New South Wales loans, and interest on Commonwealth loans and State tax-free loans raised locally. The amount of taxable income of individuals was the net amount received from all sources less a flat-rate statutory deduction of £300 per annum from all individual incomes and concessional deductions of £50 per annum in respect of each child under 18 years of age wholly maintained by the taxpayer, besides the amount actually paid (up to the limit of £50 per annum) in premiums for assurance, annuity, and fidelity guarantee policies and contributions to superannuation funds. Further concessional deductions (first allowed in respect of income derived in 1924-25) were made applicable to cases in which the taxable amount did not exceed £600. Those deductions embraced sums paid by the taxpayer to doctors, nurses, chemists, and hospitals on account of the illness of himself, his wife, or his children under the age of 21 years, and a sum up to £20 paid to an undertaker for funeral and burial expenses of any of these persons.

Tax was levied on the total net income of companies, whether distributed to shareholders or not, and without deduction of any kind.

The rates of State income tax payable in 1926-27 and 1927-28 in each case on income earned in the preceding year were:—For income of individuals derived from personal exertion, 9d. in the £ on the first taxable £250; 10d. in the £ on the second taxable £250; 11d. in the £ on the third taxable £250, and so on, the rate of tax on each successive £250 of taxable income increasing by 1d. in the £ up to a maximum of 3s. in the £. Tax at this rate was imposed on each £ of taxable income in excess of £6,750. An addition of one-third was made to the tax levied in respect of income derived from property, and, in the case of composite incomes, the assessment first took into account income derived from personal exertion. There was no additional tax on the income of absentees. The rate of tax levied on the income of companies was 2s. 6d. in the £ in 1925-26 and 3s. in the £ in 1926-27 and 1927-28, without deduction of any kind other than expenses incurred in producing the income.

The system of averaging incomes to determine the rate of tax applicable to income derived from the pastoral, dairying, and agricultural industries was brought into operation with the assessments made in 1922-23. The rate of tax applied to such income is that rate chargeable in the year of assessment on an amount of taxable income equal to the taxpayer's average taxable income derived from such industries during not more than the preceding five years, including the year of assessment. It was provided, however, that where the taxable income of the fifth preceding year was more than that of the fourth preceding year, the averaging period shall commence from the next succeeding year in which the taxable income was less than in that which followed it.

Recent changes in the incidence of State income tax are shown below, the rates of tax and the deductions being those applicable to income derived in the year preceding the year of assessment:—

Particulars.	Deductions and Rates of Tax for Assessments of year ended 30th June—			
	1923 and 1924.	1925.	1926.	1927 and 1928.
Statutory Deductions ... ..	£ 250	£ 250	£ 300	£ 300
Concessional Deductions—				
Each child under 18 years ... ..	50	50	50	50
Assurance Premiums, etc. ... ..	†50	†50	†50	†50
Funeral Expenses* ... ..	nil	†20	†20	†20
Medical Expenses, etc.* ... ..	nil	Actual amounts paid.		
Rates of Tax on taxable income from personal exertion—	Rate in the pound			
First £250 ... ..	d. 12	d. 9	d. 9	d. 9
Second £250 ... ..	13	10	10	10
Third £250 ... ..	14	11	11	11
Fourth £250 ... ..	15	12	12	12
Next £500 ... ..	16	13	13	} Increasing by 1d. in the £ on each successive taxable £250 to 3s. in the £ on taxable income in excess of £6,750.
" £500 ... ..	17	14	14	
" £500 ... ..	18	15	15	
" £500 ... ..	19	16	16	
" £500 ... ..	20	17	17	
" £500 ... ..	22	19	19	
" £1,000 ... ..	24	21	21	
" £2,000 ... ..	26	23	23	
Over £7,000 ... ..	27	24	24	
Income from property ... ..	Above rates plus one-third.			
Companies—				
Deductions ... ..	nil	nil	nil	nil
Rate of Tax in the £ ... ..	2s. 6d.	2s. 6d.	2s. 6d.	3s. 0d.

\* Taxable Income being less than £600.

† Amount actually paid up to limit shown.

The rate of tax originally imposed in 1896 was 6d. in the £ on all taxable income (inclusive of that of companies) the statutory deductions for individuals being £200 and the concessional deduction being the amount paid for assurance premiums up to a maximum of £50. The incidence of the tax remained unaltered until the assessments of the year 1907-08, when the statutory deduction was raised to £1,000 on income derived from personal exertion. Income derived from the ownership, use, or cultivation of land subject to land tax was altogether exempt from payment of income tax.

The tax continued on this basis until the assessments of 1911-12 (based on income derived in 1910-11), when a complete revision was made. The statutory deduction was lowered to £300, and the concessional deduction of

£50 for each child under 18 years of age wholly maintained by the taxpayer was introduced. The rates of tax levied on income derived from personal exertion were 6d. in the £ on the first £700 of taxable income; 7d. in the £ on the next taxable £1,000, and so on, increasing by 1d. in the £ on each successive taxable £1,000 until the maximum rate of 1s. in the £ was reached for taxable income in excess of £9,700. An addition of one-third was made to these rates in respect of the income of absentees and of income derived from property. The rate of tax on company income was 1s. 2d. in the £, the total net income being taxable.

Tax was levied on this basis also in 1912-13, but for the assessments issued in 1913-14 the statutory deduction for individuals was reduced to £250, an addition of 2d. in the £ was made to each of the rates, the impost of one-third on absentee incomes was discontinued, and the tax on company income was reduced from 1s. 2d. to 1s. in the £. In 1914-15 the incidence was unchanged, but a super-tax of 3d. in the £ was added to the existing rates of tax. No further change was made until 1920-21, when the rate of tax was increased to 1s. 3d. in the £ on the first taxable £700; 1s. 4d. in the £ on the next taxable £1,000, rising to 1s. 6d., 1s. 8d., 1s. 11d., 2s. 3d. on successive groups of £1,000 of taxable income, attaining 2s. 6d. in the £ on taxable income over £9,700. The rate of tax on company income was 2s. 6d. in the £ without deduction. These rates of tax applied to assessments made in 1921-22, and subsequent changes are shown in the foregoing table.

The incomes of the following bodies are altogether exempt from payment of income tax:—

Municipal corporations and other local authorities.

Mutual life assurance societies, and other companies or societies not carrying on business for purposes of profit or gain, except interest on moneys secured by the mortgage of land in the State.

The Government Savings Bank of New South Wales.

Societies registered under the Friendly Societies Act, or under any Act relating to Trade Unions.

Ecclesiastical, charitable, and educational institutions of a public character, whether supported wholly or partly by grants from the Consolidated Revenue Fund or not.

Societies registered under the Co-operation, Community Settlement, and Credit Act, 1923, as to (a) undistributed profits; (b) bonuses or rebates paid to a member based on business done by him with the society when 90 per cent. of its business is done with its members.

Tax is not levied on:—

Income arising or accruing to any person from Government debentures, inscribed stock, and Treasury bills, or from debentures or inscribed stock issued by the Commissioners of the Government Savings Bank of New South Wales.

Dividends derived from shares in a company (such being taxable as company income).

These exemptions do not extend to the salaries and wages of persons employed by any such corporation, company, society, or institution, whether paid wholly or in part from the revenues thereof.

The statistics published by the State Income Tax Commissioner since those for assessments made in 1910-11 have been very scanty, but the following data have been made available:—

Income* Assessed in year ended 30th June.	Companies.		Individuals.		Net amount of Tax collected in year shown.†
	Number Assessed.	Amount of Tax Assessed.	Number Assessed.	Amount of Tax Assessed.	
1921	2,201	£ 2,344,043	68,599	£ 2,472,281	£ 4,399,360
1922	2,201	2,258,441	97,334	2,148,370	4,077,897
1923	2,236	2,326,141	101,578	2,092,461	4,196,228
1924	2,720	2,757,822	111,528	2,156,641	4,373,519
1925	3,068	3,104,151	120,557	1,970,845	4,661,892
1926	3,338	3,692,863	85,795	2,054,146	5,392,946
1927‡	3,478	4,342,248	83,775	1,788,424	7,739,627
1928§	3,190	4,500,000	93,238	2,000,000	6,382,467

\* Being income derived in preceding year.

† Including arrears and assessments carried over from previous year.

‡ Partly estimated.

§ Approximate.

In considering the variations in the number of assessments and the amount of tax assessed from year to year, due allowance should be made for changes in the rates and incidence of the tax as shown on a previous page.

#### State Probate Duties.

Probate duties have been imposed as a State tax continuously since 1880. The rates of probate duty payable since 1st January, 1921, on the assessed value of estates of deceased persons have been as follow:—

Estates valued at—

Over £1,000 and under £5,000—2 per cent. of total value.

„ £5,000	„ £10,000—2½ to 4½ per cent.	Increasing by ½ per cent. per £1,000
„ £10,000	„ £20,000—5 to 7 „	„ by ½ „ £2,000.
„ £20,000	„ £140,000—7½ to 19 „	„ by ½ „ £5,000.
„ £140,000	„ £150,000—19½ „	

Exceeding £150,000—20 per cent.

Duty at the rates specified is charged upon the whole value of the estate, but estates valued at not more than £1,000 are exempt from the tax. Half rates are levied on estates under £5,000 in value when the property passes to widows, or to legitimate children under 21 years of age.

The tax is due and payable on assessment or six months after the death of the deceased.

The dutiable value of the estate of a deceased person is the assessed value of all property of the deceased situated in New South Wales at his death; all such property disposed of by trust to take effect after his death; any gift made by him within three years of his death (inclusive of any money paid or property transferred by him without equivalent consideration other than

by way of gifts for charitable or patriotic purposes); any property so disposed of that a life interest therein was reserved to deceased or that deceased reserved power to restore to himself; any gift not assumed by the donee to the entire exclusion of deceased; any property comprised in a *donatio mortis causa*; any property vested by deceased in himself and another jointly so that the beneficial interest therein passes to such other person on the death of deceased; money payable under policy of assurance on the life of deceased kept paid up by him for the benefit of a beneficiary; any annuity purchased by deceased to accrue at his death to a beneficiary; any property over which deceased at his death had general power of appointment; any property which on death of deceased passes to any other person by virtue of an agreement made by deceased to the extent which the value of the property exceeds the value of the consideration; any property which deceased has within three years of his death vested in a private company in consideration of shares or an interest in the company.

Whether deceased was domiciled in New South Wales or not at the time of his death, his estate includes every specialty debt secured to him over property in New South Wales; any shares or stocks held in any company carrying on mining or treatment of minerals, or the processes of pastoral or agricultural production in New South Wales; any shares held by deceased in any company carrying on business in New South Wales and having a share register therein where such shares are registered.

The deductions allowed are all debts actually due and owing by deceased.

Particulars of the amount of probate duty collected in each of the past five years are shown on a previous page. The number and values of estates assessed annually are shown in the chapter relating to "Private Finance" of this Year Book, and in greater detail in the Statistical Register.

#### *State Stamp Duties.*

In addition to the probate duty, stamp duty is imposed on a considerable number of legal and commercial documents, such as agreements, appointments of trustees, bank notes, betting tickets, bills of exchange and promissory notes, bills of lading, company capital, memoranda and articles of association, and certificates of incorporation of companies, contract notes on marketable securities, conveyances of property, declarations of trust, deeds of all kinds, hire purchase agreements, leases, letters or power of attorney, insurance policies (other than life), receipts or discharges given for payments of money of £2 or more (other than wages and salaries), share certificates and transfer of shares. Certain exemptions in all cases are laid down in the Stamp Duties Act, and specifically in other statutes, notably in regard to documents of organisations not operating for profit.

The amount of stamp duty collected in each of the past five years is shown page 394.

#### *State Motor Taxes.*

Particulars of the rates and amount of taxes on motor vehicles and fees for drivers' licenses are shown on pages 116 to 118 of this Year Book.

Since 1st July, 1924, with the exception of the period between 1st July, 1926, and 30th June, 1927, when special provisions operated (as explained on page 394 of the Year Book for 1926-27), 90 per cent. of the proceeds of taxes, fees and fines collected under the Motor Traffic Act, 1909, the Motor Vehicle (Taxation) Act, 1916, and the Metropolitan Traffic Act, 1900, has been paid into the funds of the Main Roads Board. The remaining 10 per cent. of this revenue is credited to Consolidated Revenue Account to cover cost of collection.

*State Taxes on Betting and Horse-racing.*

The following table shows the total amount of taxation in connection with betting and horse-racing during each of the last ten years:—

Year ended 30th June.	Racing Clubs and Associations.	Bookmakers.	Betting Tickets Stamp Duty.	Totalizator Tax.	Racecourse Admission Tax.	Total.
1919	£ 43,909	£ 28,321	£ 54,841	£ 132,403	..	£ 259,554
1920	60,951	32,775	87,504	222,970	..	404,200
1921	66,970	41,941	96,336	274,171	117,820	507,238
1922	65,707	44,422	106,066	281,818	155,630	633,643
1923	67,476	43,603	109,350	275,944	150,587	647,160
1924	67,941	40,789	108,638	266,893	143,013	627,324
1925	69,579	43,665	119,144	248,283	139,499	619,870
1926	65,434	40,210	118,624	237,491	157,903	599,662
1927	68,149	42,808	125,645	233,867	143,668	614,077
1928	73,136	41,391	124,059	261,008	136,175	575,769

*State Betting Taxes.*

The Finance (Taxation) Act, 1915, and amending Acts, imposed taxes on racing clubs and associations, on bookmakers, and on betting tickets. The last-named tax is now imposed by the Stamp Duties Act, 1924.

With regard to clubs, the taxes are levied on licenses and fees received from bookmakers. The existing rates range from 50 per cent. on racecourses within 40 miles of the General Post Office, Sydney, or 20 miles from the Post Office, Newcastle, to 20 per cent. on courses outside the limits mentioned.

The taxes payable by bookmakers are regulated according to the particular courses and enclosures where operations are carried on, and vary considerably.

The Act of 1915 further provided for the imposition of a stamp duty on all betting tickets issued by bookmakers, the amount being one penny in the saddling paddock, and one-halfpenny for the other parts of the racecourse. During 1917 these rates were doubled, and in 1920 the amount on the paddock tickets was increased to threepence, but the other rates were not altered. In addition to these amounts, bookmakers are required to furnish a monthly statement showing the number of credit bets made, the duty on which is the same as if tickets had been issued.

*State Totalizator Tax.*

Under the Totalizator Act passed on 20th December, 1916, amended in 1918, 1920, and 1927, all registered racing clubs and associations must establish an approved totalizator. The commission to be deducted from the total amount invested by patrons is 12½ per cent., with an additional 1 per cent. for the sinking fund to meet the cost of machines. The contribution, which must be paid to the Colonial Treasurer by clubs racing for profit, is 9 per cent. of the total payments into the machine, and by other clubs 5½ per cent.



*State Racecourse Admission Tax.*

An Act enabling the Government to levy a tax on persons entering racecourses came into operation on the 1st October, 1920, and an amending Act was passed on the 31st December, 1920. The Acts apply to all racecourses within 40 miles of the General Post Office, Sydney, and a similar distance from the Newcastle Post Office. The amounts leviable are:—Twopence on the admission charge through the outside gate or into the flat, 10d. into the Leger Reserve, while into the Saddling Paddock the rate is 3s. for males, 2d. additional being charged at Randwick, and 1s. 7d. for females. If no charge is made at the outside gate the tax for the Leger and Paddock enclosure is 2d. higher. Members and season ticket-holders are required to pay a tax equal to 40 per cent. on the amount of their annual subscriptions.

In order to carry out the provisions of this Act, racing clubs are compelled to furnish returns of the number of persons who paid for admission and the number of members and season-ticket holders.

*Family Endowment Tax.*

In order to provide the funds necessary for making effective the provisions of the Family Endowment Act, supplementing the basic wage, a tax of 3 per cent. was imposed as from 22<sup>nd</sup> July, 1927, on the amount of wages paid by employers. Employers who paid less than £150 in wages in the twelve months immediately preceding the period of assessment, and employers who were public hospitals, public benevolent or charitable institutions, were exempt from the tax. The taxable amount of wages paid under Federal awards was fixed at 90 per cent. of the wages so paid. The Government of the State and State governmental institutions are bound by the Act, but no instrumentality of the Federal Government is taxable. The tax is assessed on monthly returns lodged with the State Commissioner of Taxation. The collection of the tax was discontinued as from 31st October, 1927.

A description of the family endowment scheme is given in the chapter of this Year Book relating to Social Condition.

## COMMONWEALTH TAXES.

*Federal Land Tax.*

The first direct taxation by the Federal Government was the land tax imposed in 1910. This is a graduated tax on the unimproved value of the lands in the Commonwealth. In the case of landowners who are not absentees, an amount of £5,000 is exempt from taxation, and the rate of tax is 1/8750d. for the first £1 of value in excess of that amount, increasing uniformly to 5d. in the £ on a taxable balance of £75,000, with 9d. in the £ for every £ in excess of that amount. Absentee owners are required to pay 1d. in the £ up to £5,000, with a uniform progression from 2/8750d. to 6d. for the next £75,000. On every £ in excess of £80,000, the rate payable is 10d. The amount of tax payable on assessments made for financial years subsequent to 1st July, 1927, was reduced to 90 per cent. of the amounts determined under the foregoing rates.

Lands exempt from taxation are those owned by a State, municipality, or other public authority, by savings banks, friendly societies, or trade unions, and those used for religious, charitable, or educational purposes, grounds owned by clubs, etc., and used for sports (except horse-racing).

Estimates of the amount of tax paid in respect of land in New South Wales in recent years is shown on a previous page.

The latest available statement issued by the Commonwealth Commissioner of Taxation shows the following particulars in respect of taxable lands in New South Wales and in the Commonwealth at 30th June, 1924, and assessed before 30th June, 1927:—

Heading.	New South Wales.			Commonwealth.		
	Residents.	Absentees.	Total.	Residents.	Absentees.	Total.
Unimproved value—						
Town Lands ... ..	£ 51,289,224	£ 1,073,268	£ 52,362,492	£ 108,427,135	£ 2,207,934	£ 110,635,069
Country Lands ... ..	57,422,151	316,489	57,738,640	129,579,869	925,896	130,505,765
Total ... ..	108,711,375	1,389,757	110,101,132	238,007,004	3,133,830	241,140,834
Tax Assessed—						
Town Lands ... ..	631,716	9,101	640,817	1,256,299	22,819	1,279,118
Country Lands ... ..	552,872	4,216	557,088	978,581	10,945	989,526
Total ... ..	1,184,588	13,317	1,197,905	2,234,880	33,764	2,268,644
Area of Country Lands assessed ... ..	acres. 33,051,026	acres. 113,343	acres. 33,164,369	acres. 61,416,766	acres. 534,433	acres. 61,951,199

#### Commonwealth Income Tax.

In addition to the taxation of incomes imposed by the State, the Commonwealth levies a tax which is payable by residents and absentees in respect of income derived from sources within Australia (which includes Papua). The tax was first levied as a war measure in the year ended 30th June, 1916, in respect of income derived in the previous year.

Towards the end of 1923 arrangements were made between the Commonwealth and State Governments for the collection by the State Commissioners of Taxation of the income tax payable under Commonwealth law, thus obviating the necessity for taxpayers to supply separate returns, and leading to an amalgamation of the Federal and State Taxation Departments. This arrangement was entered into in all States except Western Australia, where the Commonwealth Taxation Office collects both Federal and State taxes. Originally the Commonwealth Government contributed 60 per cent. of the working expenses of the Taxation Office in New South Wales, but this was reduced to 50 per cent. on 1st April, 1925, consequent on the raising of the Federal statutory exemption and the diminution in the number of assessments.

Returns for purposes of taxation are normally made up for the twelve months ending 30th June, and the tax is assessed and is usually payable before the next succeeding 30th June. The taxable income is the net income (*i.e.*, gross income after deducting what may broadly be described as the cost of earning it) less statutory and concessional deductions allowed by law. In the assessments made in the years 1924-25, 1925-26, and 1926-27, resident taxpayers were allowed a statutory deduction of £300 less £1 for every £3 by which the net income exceeded £300, so that the deduction gradually diminished on successive grades of income, and became nil for net incomes exceeding £1,200. Absentees were taxed on the total income derived by them from all sources in Australia.

The concessional deductions include £50 for every child under 16 years of age maintained by a resident taxpayer; actual payments up to £100 for friendly society benefits, superannuation, etc., if the taxpayer is a salary or wage-earner, or has a taxable income not exceeding £300; premiums up to £50 for life assurance and fidelity guarantee; gifts exceeding £5 each to public charitable institutions or contributions to the Department of

Repatriation, donations to any public authority for research in respect of diseases of human beings, animals, and plants. Where the taxable income is less than £900 the deduction is allowed of fees paid to medical practitioner, hospital, nurse, or chemist in respect of the illness of the taxpayer, his wife, or children under 21 years of age, and the sum (up to £20) paid to an undertaker for funeral expenses.

Persons engaged in agricultural or rural pursuits in a district subject to the ravages of animal pests are entitled to a deduction of money expended in the purchase of wire-netting.

The incomes exempt from the tax include the revenues and funds of local governing bodies or public authorities; friendly societies; trade unions and kindred associations; religious, scientific, charitable, or public educational institutions; the income of provident, benefit, or superannuation funds established for the benefit of the employees in any business, and of funds established by any will or instrument for public charitable purposes; salaries of Governor-General, State Governors, foreign consuls, and trade commissioners of any part of the British Dominions; the revenues of agricultural, pastoral and horticultural, viticultural, stock-raising, manufacturing and other industrial societies not carried on for profit or gain; and of musical, art, scientific, and literary societies; remuneration paid by the Commonwealth or a State Government to non-residents for expert advice; war pensions paid under the Australian Soldiers Repatriation Act, 1920-21; the income derived by a person from a mining property in Australia, worked for the purpose of obtaining gold, or gold and copper, if gold represents at least 40 per cent. of the total output; so much of the assessable income of co-operative societies or companies as is distributed among their shareholders as interest or dividends on shares, and rebates or bonuses made to a customer by a co-operative society or company and treated as a charge on profits.

Certain Commonwealth War Loans were issued tax free prior to 1923, but under the Taxation of Loans Act, 1923, the interest on any loan raised in Australia after 31st December, 1923, by the Commonwealth or a State or any other authority is subject to Commonwealth income tax.

The rates of tax payable by individuals were fixed in the original Act on a graduated basis for the year 1915-16. The incidence of these rates has been altered by variations in the deductions allowed and by the addition of a variable proportion to the basic rate of tax. The maximum addition to the basic rates was 70.125 per cent. on income assessed in the year 1920-21, the subsequent proportional additions being reduced to 53.5 per cent. for assessments in 1922-23, to 38 per cent. in 1924-25, to 20 per cent. in 1925-26 and 1926-27, and to 8 per cent. in 1927-28.

In assessments for the year 1922-23 and subsequent years the rate of tax to be applied to the taxable income is to be calculated as if the taxable income were the average taxable amount derived in a period of at least two and not more than five years immediately preceding.

The rates of tax payable in respect of income derived by individuals in the year ended 30th June, 1927, and assessed in the year 1927-28 were 8 per cent. in addition to the basic or schedule rates, which are as follow:—

*Incomes derived from personal exertion.*—For so much of the taxable income as does not exceed £7,600, the average basic rate of tax per £ is  $3\frac{3}{8}\text{d.}$  on the first taxable £ increasing uniformly by  $\frac{3}{8}\text{d.}$  with each additional £ of taxable income. That is, the average rate of tax is determined in accordance with the formula:—

Rate of tax =  $(3 + \frac{3}{80}I)$  pence, where I is the number of £ in the taxable income.

Thus, the average basic rate of tax on an income of £400 in 4½d. in the £; on £1,000, 6½d. in the £; and on £7,600, 2s. 7½d. in the £. For so much of the taxable income as exceeds £7,600 the basic rate of tax is 5s. in the £.

*Incomes derived from property.*—For so much of the taxable income as does not exceed £546, the average basic rate of tax per £ is determined by the formula:—

Rate of tax =  $(3 + \frac{1}{151035} I)$  pence, where I is the number of £ in the taxable income.

For so much of the taxable income as exceeds £546 but does not exceed £2,000, the additional basic tax for each additional £ of taxable income above £546 increases continuously from 11.713d. for the pound sterling between £545 10s. and £546 10s. to 33.6d. for the pound sterling between £1,999 10s. and £2,000 10s.

For so much of the taxable income as exceeds £2,000 but does not exceed £6,500, the additional basic tax for each additional £ of taxable income above £2,000 increases continuously to 3s. 4d. for the pound sterling between £2,499 10s. and £2,500 10s., and to 5s. for the pound sterling between £6,499 10s. and £6,500 10s.

The basic rate of tax on every £ of taxable income over £6,500 is 5s.

*Income derived from both personal exertion and property.*—The average rate of tax on that part of the income derived from personal exertion is the average rate that would have been payable had the whole income been derived from personal exertion and the average rate of tax on that part of the income derived from property is the average rate that would have been payable had the whole income been derived from property.

*Income of Trustee.*—Where a trustee is liable to be separately assessed the rate of tax is determined as above as if one individual were liable to be separately assessed on the income concerned.

*Income of Companies.*—No statutory or concessional deductions are allowed to companies. The rate of tax on the taxable income is 1s. in the £, and the company is also liable to pay a tax of 1s. for every £ of interest paid or credited to any person who is an absentee in respect of debentures of the company or money lodged at interest with the company.

*Dividends* paid by a company to a shareholder taxable at a rate of more than 1s. in the £ in respect of income derived from property are taxable as part of the income of the individual, but where tax has already been paid by the company in respect of such dividends a rebate of 1s. in the £ is allowed to the taxpaying shareholder in connection with them.

An estimate of the amount of Federal income-tax collected in New South Wales in each of the four years ended June, 1927, is shown on page 394.

The amount of Federal income-tax assessed in the Commonwealth in the year 1926-27 was £9,499,441, comprised as follows:—Residents, £6,471,354, absentees £193,435, companies £2,811,018, and casual taxpayers £23,634. Particulars of the number and amount of income according to grade are shown in the annual reports of the Federal Commissioner of Taxation, the last report issued relating to the assessments of the year 1926-27.

#### *Commonwealth Estate Duties.*

The Estates Assessment Act, which came into operation on 21st December, 1914, provided for the imposition of a duty on properties of persons who died after the commencement of the Act. The rate of tax is 1 per cent. of the value of the estate where the total value exceeds £1,000, but does not exceed £2,000, and an additional one-fifth per cent. for every thousand pounds, or part thereof, in excess of £2,000, the maximum being 15 per cent. of the value of the estate. These rates of tax have remained unchanged since the inception of the Act.

A reduction to two-thirds of the above rates is allowed if the estate is left to the widow, children, or grandchildren of the testator. Estates of persons who died on active service in the war, or as the result of injuries or diseases contracted while on active service, are exempt from the tax.

#### *Commonwealth Entertainments Tax.*

The Entertainments Tax is levied on payments for admission to almost every class of amusement. Since 15th October, 1925, the rates of tax has been two pence halfpenny when the payment for admission is two shillings and sixpence, and, if it exceeds that amount, one halfpenny for every sixpence or part of sixpence in excess thereof. Details will be found in the chapter of this book entitled "Social Condition," and the amount of tax collected in New South Wales in each of the four years ended June, 1927, is shown on page 394.

#### STATE FINANCE.

The State Accounts are kept on a cash basis, and to ascertain the financial position from the annual statement prepared by the Treasurer, consideration must be given to the Consolidated Revenue Account, Closer Settlement Account, Public Works Account, Loans Account, the various Trust Accounts shown on page 417, and the accounts of the industrial undertakings shown on page 418, which do not form part of the Consolidated Revenue Account. Due regard must be taken also of such items as refunds, advances, cancellations, and cross entries.

All expenditure from loan moneys must be authorised under an Appropriation Act, in the same manner as the ordinary expenditure chargeable to the general revenue. There is a restriction on the expenditure, whether from loans or from revenue, in the provisions of the Public Works Act. Under that Act the question of constructing all works estimated to cost more than £20,000, except those connected with the maintenance of railways, is referred by resolution of the Legislative Assembly to a Parliamentary Standing Committee elected by the members of each Parliament. The Committee investigates and reports to Parliament, and the Assembly decides whether it is expedient to carry out the proposed work; if the decision be favourable, a bill based thereon must be passed before the authorisation is absolute.

#### *The Consolidated Revenue Account.*

Prior to 30th June, 1924, the Consolidated Revenue Account embraced the whole of the receipts and expenditure on revenue account of the State Government and of the statutory bodies appointed by it, inclusive of those in connection with railways, tramways, water and sewerage works, harbours and navigation works, housing and the Government grain elevators, but exclusive of those of industrial undertakings shown on page 418, and of the Metropolitan Meat Industry Board.

Since 31st March, 1925, the accounts of the Metropolitan Water, Sewerage and Drainage Board have been separated from the Consolidated Revenue Fund, and from 1st July, 1924, the whole or part of the revenue obtained from taxation of motor vehicles and from licenses therefor has been credited to the funds of the Main Roads Board, which came into being after that date. These changes invalidate in some degree comparisons between the totals now shown for consolidated revenue account and those formerly published.

It is noteworthy that the whole of the receipts credited to the Consolidated Revenue Fund are not applicable to general purposes. Section 13 of the Forestry Act, 1916, provides that one-half of the gross receipts of the Forestry Commission must be credited to a special account and set apart for afforestation. Section 4 of the Public Works and Closer Settlement

Funds Act, 1906, provides that two-thirds of the net proceeds of the sale of Crown lands, exclusive of interest, less 20 per cent., must be paid to the Public Works Fund. In addition, the Constitution Act and various other statutes require the appropriation annually of fixed amounts for specific purposes.

The Consolidated Revenue Account, however, affords guidance as to the general position of the State finances—the buoyancy of its revenue as related to its expenditure for current requirements, and the growth of deficits and surpluses on revenue account. The following table shows the trend of the receipts and expenditure of the Consolidated Revenue Account during each of the past ten years:—

Year ended 30th June.	Receipts.			Expenditure.		
	Governmental.	Business Undertakings.	Total.	Governmental.	Business Undertakings. †	Total.
	£	£	£	£	£	£
1919	9,411,899	14,036,267	23,448,166	9,219,299	14,014,099	23,233,398
1920	10,685,453	17,965,043	28,650,496	12,100,002	18,110,011	30,210,013
1921	13,568,535	20,462,861	34,031,396	14,014,452	20,462,440	34,476,892
1922	13,905,492	21,732,328	35,637,820	15,293,243	21,673,282	36,966,525
1923	14,384,140	21,761,804	36,145,944	14,083,671	21,258,765	35,342,436
1924	14,888,898	22,462,911	37,351,809	15,216,561	22,034,858	37,251,419
1925*	15,316,328	23,506,260	38,822,588	16,904,644	22,674,394	39,579,038
1926*	16,306,574	22,233,457	38,540,031	16,643,687	23,170,648	39,814,335
1927*	19,839,448	24,310,118	44,149,566	17,807,260	24,883,374	42,690,634
1928*	18,931,433	25,267,539	44,198,972	19,155,238	26,138,730	45,293,968

\* Omitting Metropolitan Water Board since 1st April, 1925.

† Including interest chargeable on loan capital.

Under the heading Business Undertakings are included the earnings and working expenses of the New South Wales Government Railways and Tramways, the Sydney Harbour Trust, the Hunter District Water Supply and Sewerage Board, and to 31st March, 1925, of the Metropolitan Board of Water Supply and Sewerage. Under Governmental are comprised the accounts of the various Government Departments, including lands, mines, and forestry revenue and administration, services rendered, revenue and working expenses of the ports other than Sydney, of the Government Grain Elevators, and amounts of interest paid and received other than from business undertakings.

The following table shows the debit and credit balances of each section of the Consolidated Revenue Account during each of the last ten years:—

Year ended 30th June.	Surplus (+) or Deficiency (—).			
	Governmental.	Business Undertakings. †	Total for Year.	Accumulated to end of Year.
	£	£	£	£
1919	(+) 192,600	(+) 22,168	(+) 214,768	(—) 244,545
1920	(—) 1,414,549	(—) 144,968	(—) 1,559,517	(—) 1,804,062
1921	(—) 445,917	(+) 421	(—) 445,496	(—) 2,249,558
1922	(—) 1,387,751	(+) 59,046	(—) 1,328,705	(—) 3,578,263
1923	(+) 300,469	(+) 503,039	(+) 803,508	(—) 2,774,755
1924	(—) 327,663	(+) 428,053	(+) 100,390	(—) 2,674,365
1925*	(—) 1,588,316	(+) 831,866	(—) 756,450	(—) 3,430,815
1926*	(—) 337,113	(—) 937,191	(—) 1,274,304	(—) 4,705,119
1927*	(+) 2,032,188	(—) 573,256	(+) 1,458,932	(—) 3,246,187
1928*	(—) 223,805	(—) 871,191	(—) 1,094,996	(—) 4,341,183

\* Omitting Metropolitan Water, Sewerage, and Drainage Board since 1st April, 1925.

† After payment of interest chargeable on loan capital.

## Heads of Revenue and Expenditure.

The following table shows for each of the last five financial years the details of revenue and expenditure:—

	Year ended 30th June.				
	1924.	1925.	1926.	1927.	1928.
<b>REVENUE.</b>					
<i>Governmental.</i>					
Revenue Returned by Commonwealth...	£ 2,738,725	£ 2,796,928	£ 2,883,850	£ 2,917,411	£ 2,978,313
State Taxation (see page 394) ... ..	7,988,131	*8,115,241	*8,850,877	*11,930,050	*10,725,257
Land Revenue ... ..	1,929,703	2,046,163	2,126,419	2,216,277	2,276,322
Services Rendered ... ..	1,068,886	1,247,459	1,265,654	1,349,554	1,393,083
General Miscellaneous, including interest received ... ..	1,080,532	1,059,794	1,147,250	1,388,512	1,507,116
Industrial Undertakings ... ..	7,655	7,792	5,657	6,195	5,322
Advances Repaid ... ..	75,266	42,946	56,897	42,449	39,990
<b>Total Governmental...</b>	<b>£ 14,888,898</b>	<b>15,316,328</b>	<b>16,306,574</b>	<b>19,839,448</b>	<b>18,931,433</b>
<i>Business Undertakings.</i>					
Railways and Tramways... ..	19,566,466	20,624,793	20,965,362	22,999,498	23,864,440
Sydney Harbour Trust ... ..	897,357	970,402	1,015,877	1,083,856	1,078,393
Water Supply and Sewerage† ... ..	2,057,068	†1,911,065	†232,218	†245,776	†231,300
<b>Total Business Undertakings†</b>	<b>£ 22,462,911</b>	<b>†23,506,260</b>	<b>†22,233,457</b>	<b>†24,310,118</b>	<b>25,267,539</b>
<b>Total Consolidated Revenue</b>	<b>£ 37,351,809</b>	<b>38,822,588</b>	<b>38,540,031</b>	<b>44,149,566</b>	<b>44,198,972</b>
<b>EXPENDITURE.</b>					
<i>Governmental.</i>					
Interest on Public Debt and Special Deposits† ... ..	2,239,395	3,338,368‡	2,977,517	3,109,335	3,274,872
Reduction of Public Debt ... ..	...	...	18,194	37,149	1,968
Transfer to Public Works Fund (Land Revenue) ... ..	351,927	363,528	384,470	376,629	390,047
Grants to Public Works Fund (Other Revenue) ... ..	200,000	200,000	200,000	225,000	60,000
Departments—					
Premier ... ..	84,733	84,599	78,658	122,870	136,747
Chief Secretary and Public Health ... ..	2,726,866	2,735,371	2,967,648	3,046,299	3,395,244
Treasurer (excluding Interest on Deposits, etc.) ... ..	1,050,216	1,152,633	1,638,134	1,044,461	1,168,556
Attorney-General and Justice ... ..	639,301	676,832	709,565	748,121	652,142
Lands ... ..	569,296	569,862	542,744	546,924	467,470
Public Works (excluding Business Undertakings) ... ..	718,095	768,925	724,965	805,180	787,277
Public Instruction (excluding Endowments) ... ..	4,000,324	4,212,158	4,364,431	4,607,571	4,846,451
Labour and Industry ... ..	167,831	111,574	119,571	989,165	146,329
Mines ... ..	91,107	94,200	112,904	165,525	182,426
Agriculture ... ..	497,967	562,221	536,933	587,728	661,286
Local Government—Administration, Endowment and Grants ... ..	42,533	44,690	47,864	56,892	62,694
All other Services ... ..	306,514	286,851	274,886	157,778	272,725
Advances made, etc. ... ..	1,132,067	1,694,322	1,479,349	1,795,349	2,151,917
Total Governmental...	£ 15,216,561	16,964,644	16,643,687	17,807,260	19,155,288
<i>Business Undertakings (Working Expenses and Interest Chargeable.)</i>					
Railways and Tramways... ..	19,435,742	20,447,734	22,209,833	23,855,606	25,038,963
Sydney Harbour Trust ... ..	757,333	756,799	794,196	824,385	875,058
Water Supply and Sewerage† ... ..	1,841,883	†1,469,861	†175,794	†202,881	†334,709
<b>Total Business Undertakings†</b>	<b>£ 22,034,958</b>	<b>†22,674,394</b>	<b>†23,179,823</b>	<b>†24,882,872</b>	<b>†26,248,730</b>
<b>Total Consolidated Revenue†</b>	<b>£ 37,251,428</b>	<b>38,579,038</b>	<b>39,814,235</b>	<b>42,039,638</b>	<b>45,389,968</b>

\* Exclusive of Motor Taxes and License Fees paid to Main Roads Board and of cost of collection included below under Services Rendered. † The accounts of the Metropolitan Water, Sewerage, and Drainage Board have not been included as from 1st April, 1925. ‡ Of this sum, £331,364 were available from surplus earnings of business undertakings. † Partly offset by miscellaneous interest receipts.

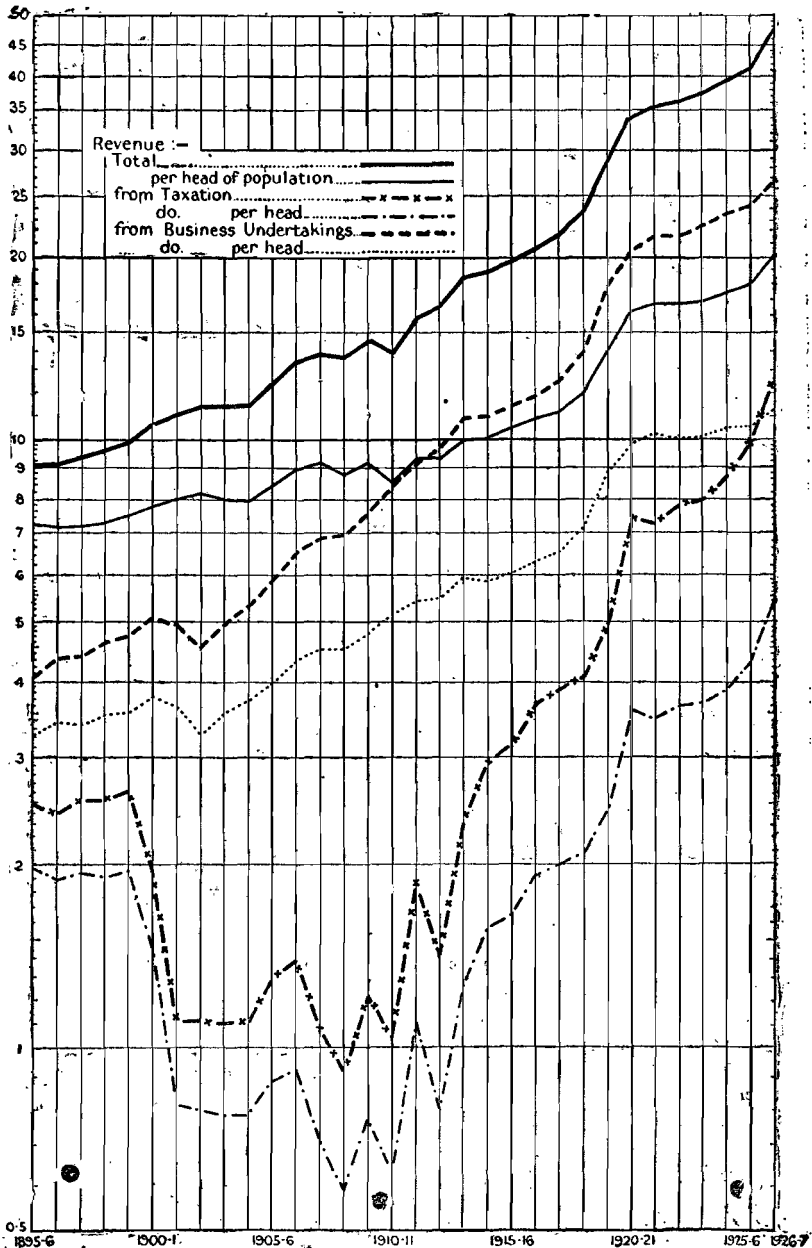
From the foregoing figures the following rates per head of population have been determined:—

	Year ended 30th June—				
	1924.	1925.	1926.	1927.	1928.
<b>REVENUE.</b>					
<i>Governmental.</i>					
Revenue Returned by Commonwealth.. .. .	£ s. d. 1 4 9	£ s. d. 1 4 10	£ s. d. 1 4 10	£ s. d. 1 4 10	£ s. d. 1 4 10
State Taxation (See page 395) .. .. .	3 12 4	*3 12 0	*3 17 0	*5 1 8	*4 9 4
Land Revenue .. .. .	0 17 6	0 18 2	0 18 6	0 18 10	0 19 0
Services Rendered .. .. .	0 9 8	0 11 1	0 11 0	0 11 6	0 11 7
General Miscellaneous .. .. .	0 9 9	0 9 5	0 10 0	0 11 9	0 12 7
Industrial Undertakings .. .. .	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1
Advances Repaid .. .. .	0 0 8	0 0 5	0 0 6	0 0 4	0 0 4
<b>Total Governmental .. .. .</b>	<b>£ 6 14 9</b>	<b>6 16 0</b>	<b>7 1 11</b>	<b>8 9 0</b>	<b>7 17 9</b>
<i>Business Undertakings.</i>					
Railways and Tramways .. .. .	3 16 6	9 3 1	9 2 8	9 15 9	9 19 1
Sydney Harbour Trust .. .. .	0 8 2	0 8 7	0 8 10	0 9 3	0 8 11
Water Supply and Sewerage† .. .. .	0 13 7	†0 16 11	†0 2 0	†0 2 1	†0 2 5
<b>Total Business Undertakings†</b>	<b>£ 10 3 3</b>	<b>†10 8 7</b>	<b>†9 13 6</b>	<b>†10 7 1</b>	<b>†10 10 5</b>
<b>Total Consolidated Revenue†</b>	<b>£ 16 18 0</b>	<b>†17 4 7</b>	<b>†16 15 5</b>	<b>†18 16 1</b>	<b>†18 8 2</b>
<b>EXPENDITURE.</b>					
<i>Governmental.</i>					
Interest on Public Debt and Special Deposits† ..	1 0 2	1 9 7§	1 5 11	1 6 5	1 11 5
Reduction of Public Debt.. .. .	0 0 2	0 0 2	0 0 2	0 0 4	0 0 0
Transfer to Public Works Fund (Land Revenue) ..	0 3 2	0 3 3	0 3 2	0 3 2	0 2 3
Grants to Public Works Fund (Other Revenue) ..	0 1 10	0 1 9	0 1 9	0 1 11	0 0 6
Departments—					
Premier .. .. .	0 0 9	0 0 9	0 0 8	0 1 1	0 1 2
Chief Secretary .. .. .	1 4 8	1 4 2	1 5 10	1 5 11	1 8 3
Public Health .. .. .	0 9 6	0 10 3	0 9 0	0 8 11	0 9 2
Treasurer (excluding Interest on Deposits, etc.)	0 5 9	0 6 0	0 6 2	0 6 4	0 5 5
Attorney-General and Justice .. .. .	0 5 2	0 5 0	0 4 3	0 4 8	0 3 11
Lands .. .. .	0 6 6	0 6 3	0 6 3	0 6 10	0 6 7
Public Works (excluding Business Undertakings)	1 16 3	1 17 5	1 18 0	1 19 3	2 0 5
Labour and Industry .. .. .	0 1 0	0 1 0	0 0 11	0 3 4	0 1 3
Mines .. .. .	0 0 10	0 0 10	0 1 0	0 0 11	0 1 6
Agriculture .. .. .	0 4 6	0 5 0	0 5 1	0 5 0	0 5 0
Local Government Administration .. .. .	0 0 4	0 0 5	0 0 7	0 0 6	0 0 6
Endowments and Grants .. .. .	0 2 9	0 2 7	0 2 5	0 1 4	0 2 1
All Other Services .. .. .	0 10 9	0 15 0	0 12 11	0 15 4	0 17 9
Advances made .. .. .	0 3 8	0 6 1	0 0 6	0 0 6	0 0 4
<b>Total Governmental .. .. .</b>	<b>£ 6 17 8</b>	<b>7 15 5</b>	<b>7 5 0</b>	<b>7 11 9</b>	<b>7 19 6</b>
<i>Business Undertakings. (Working Expenses and Interest Chargeable).</i>					
Railways and Tramways .. .. .	8 15 11	8 16 2	9 12 3	10 3 3	10 8 7
Sydney Harbour Trust .. .. .	0 6 10	0 6 9	0 6 11	0 7 0	0 7 4
Water Supply and Sewerage† .. .. .	0 16 3	†0 13 0	†0 1 6	†0 1 9	†0 1 10
<b>Total Business Undertakings†</b>	<b>£ 9 19 3</b>	<b>†9 15 11</b>	<b>†10 1 8</b>	<b>†10 12 6</b>	<b>†10 17 9</b>
<b>Total Consolidated Revenue.. .</b>	<b>£ 16 17 1</b>	<b>†17 11 4</b>	<b>†17 6 8</b>	<b>†18 5 9</b>	<b>†18 17 3</b>

\* † ‡ § See notes to previous table.



## STATE REVENUE, 1895-96 to 1926-27.

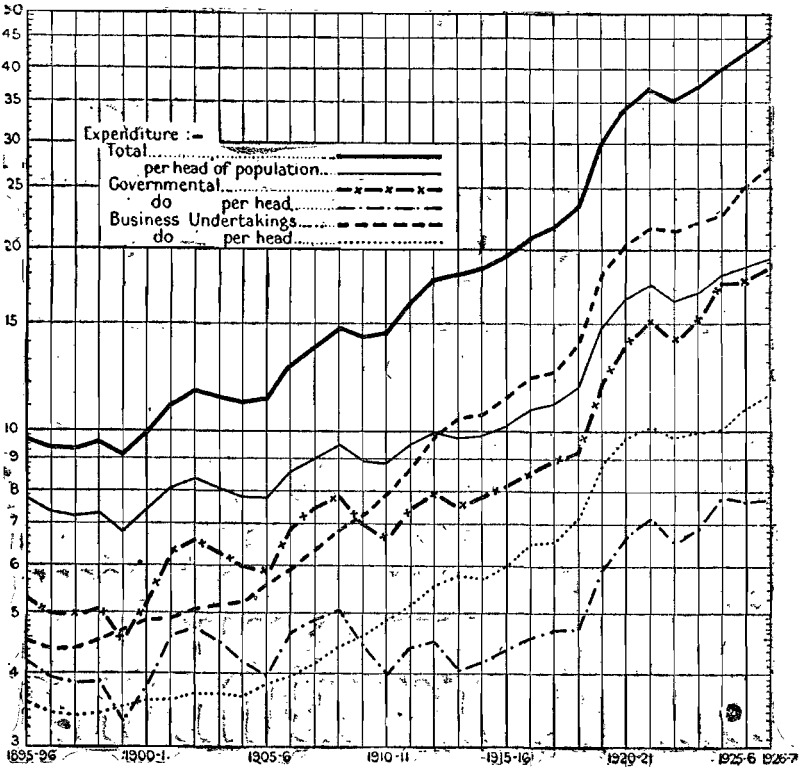


The numbers at the side of the graph represent £1,000,000 of revenue, and £1 per head of population.

The revenue shown in this graph is that of the State Government and of statutory bodies whose accounts were included in Consolidated Revenue Account prior to 1924-25. The amounts of individual component items in each of the past five years are shown on page 412.

The diagram is a ratio graph, as described in note at foot of page 411.

STATE EXPENDITURE FROM REVENUE, 1895-96 to 1926-27.



The numbers at the side of the graph represent £1,000,000 of expenditure, and £1 per head of population.

The expenditure shown in the graph is that of the State Government and of statutory bodies whose accounts are included in Consolidated Revenue Account prior to 1924-25. The amounts of individual component items in each of the past five years are shown on page 412.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

Latterly important items of revenue and expenditure formerly included in the Consolidated Revenue Account have been dissociated from it, and the totals and part of the details of that account for 1924-25 and succeeding years are not strictly comparable with those of former years. The following statement, however, shows as nearly as may be the total revenue and expenditure from accounts formerly embraced in Consolidated Revenue:—

Particulars.	Year ended 30th June.				
	1924.	1925.	1926.	1927.	1928.
<i>Revenue.</i>					
Consolidated Revenue Account, Governmental ... ..	£	£	£	£	£
Motor Taxes paid to Main Roads Board	14,888,898	15,316,328	16,306,574	19,839,448	18,931,433
	*...	560,467	897,664	644,278	1,330,399
Total, Governmental ...	£ 14,888,898	15,876,795	17,204,238	20,483,726	20,261,832
Consolidated Revenue Account, Business Undertakings ... ..	22,462,911	23,506,260	22,233,457	24,310,118	25,267,739
Metropolitan Water, Sewerage, and Drainage Board ... ..	*...	†165,993	2,181,471	2,266,909	2,468,001
Total, Business Undertakings ...	£ 22,462,911	23,672,253	24,364,928	26,577,027	27,735,540
Grand Total, Revenue...	£ 37,351,809	39,549,048	41,569,166	47,060,753	47,997,372
Per head of Population ... ..	£ s. d. 16 18 0	£ s. d. 17 11 1	£ s. d. 18 1 11	£ s. d. 20 0 11	£ s. d. 19 19 10
<i>Expenditure.</i>					
Consolidated Revenue Account, Governmental ... ..	£	£	£	£	£
Motor Taxes paid to Main Roads Board	15,216,561	16,904,644	16,643,687	17,807,260	19,155,238
	*...	560,467	897,664	644,278	1,330,399
	15,216,561	17,465,111	17,541,351	18,451,538	20,485,637
Consolidated Revenue Account, Business Undertakings ... ..	22,034,858	22,674,394	23,170,648	24,885,374	26,133,730
Metropolitan Water, Sewerage, and Drainage Board—Working Expenses	*...	†189,122	801,444	833,336	910,882
Interest on Capital Sinking Fund ... ..	*...	...	†1,200,000	†1,200,000	†1,200,000
	...	†8,156	106,957	113,168	123,014
Total, Business Undertakings ...	£ 22,034,858	22,871,672	25,279,049	27,029,878	28,372,126
Grand Total, Expenditure ...	£ 37,251,419	40,336,783	42,820,400	45,481,416	48,857,763
Per head of Population ... ..	£ s. d. 16 17 1	£ s. d. 17 18 0	£ s. d. 18 12 9	£ s. d. 19 7 5	£ s. d. 20 7 0

\* Included above. † From 1st April, 1925; balance included above. ‡ In addition, £49,847 in 1925-26, £211,107 in 1926-27, and £393,803 in 1927-28, were paid into Consolidated Revenue (Governmental) on account of interest.

The above table does not include the complete revenue and expenditure of the Main Roads Board as shown by the accounts of that body. The various funds of the Main Roads Board benefit by special contributions from the Consolidated Revenue of the State, by the proceeds of levies made on local government bodies, by contributions from loan funds, and by contributions from the Federal Government. While the revenue, working expenses and payments to sinking fund of the Metropolitan Water, Sewerage and Drainage Board in 1926-26 to 1927-28 were as shown above, the amount of interest shown is only the amount actually paid to the Treasury by the Board on funded debt. The actual interest charges debited by the Board in its own accounts were £1,316,784 in 1925-26, £1,433,539 in 1926-27, and £1,346,948 in 1927-28.

#### *State Revenue from Taxation.*

Particulars of the proceeds of State taxes are shown on page 394, and the nature of the taxes is described on subsequent pages.

*Land Revenue of the State.*

At the establishment of responsible government in New South Wales in 1856, the control of lands was vested exclusively in the State Parliament. At that date only 7,000,000 acres had been alienated, and approximately 191,000,000 acres of land were owned by the Crown. Nearly all these lands have been made available for settlement, approximately 42,800,000 acres having been absolutely alienated, 22,800,000 acres being in course of sale on terms, and 114,200,000 acres being occupied by landholders at rental under various leasehold tenures.

Over a considerable proportion of the whole area the State has reserved to itself mineral rights, and these produce a substantial income from royalties. In addition, there are approximately 6,750,000 acres of State forests and timber reserves returning revenue to the Government.

The income of the State from these resources in the past three years has been as follows, the amounts being the net payments to Consolidated Revenue:—

Land Revenue.	1925-26.	1926-27.	1927-28.
	£	£	£
Revenue from Sales * ... ..	699,263	693,635	} 1,102,858
Interest on Unpaid Balance of Deferred Sales*	849,161	349,703	
Rentals for Leases ... ..	654,777	677,960	701,967
Fees and other Receipts ... ..	71,008	78,775	82,722
Royalties on Minerals, Rents for Mining Leases, etc. ... ..	238,676	297,899	255,275
Royalties on and Sales of Timber, Forest Rentals, etc. ... ..	113,534	112,255	133,500
<b>Total Land Revenue ... ..</b>	<b>£2,126,419</b>	<b>£2,210,277</b>	<b>£2,276,322</b>

\* Partly estimated.

In addition, sums of £107,334 in 1925-26, £108,777 in 1926-27, and £118,663 in 1927-28 were allocated from the revenue from forests for afforestation purposes. The amounts shown are the total receipts, no deduction being made for administrative expenses and costs of collection.

Further particulars as to the land revenue of the State are published in chapter "Land Legislation and Settlement" of this Year Book, where the land policy is discussed.

*Receipts from Services Rendered.*

Apart from the revenue of business undertakings the State has a considerable income from charges imposed for specific purposes. These are more in the nature of fees for services rendered than of taxation, but the gross proceeds are paid into the Consolidated Revenue Fund and the cost of the services is charged to this fund.

The principal items of receipts for services rendered as shown in the Consolidated Revenue Account are as follows:—

Services Rendered.	1926-27.	1927-28.
	£	£
Pilotage, Harbour Dues and Fees ... ..	317,161	310,184
Fees collected by Registrar-General ... ..	220,163	222,456
Law Courts ... ..	171,032	199,395
Charges for Maintenance of Patients in Mental Hospitals ...	85,511	96,477
"    "    Children and Patients in State Institutions ... ..	64,835	54,293
"    Collection of Motor Taxes for Main Roads Board	124,314	148,588
Handling of Wheat by Government Grain Elevators ...	102,788	77,064
Fees for Valuation of Land, etc. ... ..	33,250	35,040
Other Services rendered ... ..	230,500	255,586
<b>Total ... ..</b>	<b>£1,349,554</b>	<b>£1,399,083</b>

*General Miscellaneous Receipts.*

All items not placed under headings already mentioned are included herein.

The principal item was payments by the Commonwealth to the State under the Surplus Revenue Act, 1910, viz., £2,917,411 in 1926-27 and £2,978,343 in 1927-28. In addition, sums of £1,383,512 in 1926-27 and £1,512,438 in 1927-28 were received on various accounts, the more important being as follows:—

Item.	1926-27.	1927-28.
	£	£
Interest paid to State by Commonwealth on Transferred Properties ... ..	171,475	171,470
Interest on (part) Capital Expended on Country Towns		
Water Supply and Sewerage ... ..	100,399	109,469
Trust Works under Water Act, 1912 ... ..	9,280	8,462
Fixed Deposits with Banks ... ..	18,750	...
Daily Credit Balances with Banks ... ..	29,357	19,503
Advance to Returned Soldiers ... ..	63,399	59,002
Advance by Rural Industries Board ... ..	18,076	7,436
Advance for Purchase of Wire Netting ... ..	17,525	17,204
Advance to Metropolitan Water, Sewerage and Drainage Board... ..	211,107	291,857
Capital Value of State Abattoirs ... ..	61,728	61,574
Rents of Government Buildings, Wharves and Premises ... ..	69,743	75,149
Fines and Forfeitures ... ..	51,695	60,414
Darling Harbour Resumed Area Rents, etc. ... ..	81,043	69,400
Other Miscellaneous Receipts ... ..	479,935	560,848
<b>Total Miscellaneous Receipts ... ..</b>	<b>£1,383,512</b>	<b>£1,512,438</b>

## CLOSER SETTLEMENT ACCOUNT.

The Closer Settlement Account was established under Act No. 1 of 1906. Its transactions are not included in the Consolidated Revenue Fund, and it is maintained as a separate account. As implied by the name, the moneys of the fund are devoted to the promotion of closer settlement.

The working capital of the fund is derived from loan moneys made available by the State, surplus revenue transferred from the Consolidated Revenue Fund, assurance fees paid in respect of property brought under the Real Property Act; and, in addition, capital repaid by settlers is utilised again in purchasing estates. The expenditure from the fund consists mainly of the purchase price paid for estates, interest on loan moneys so utilised, sums paid for assurances under the Real Property Act, and amounts for the redemption of closer settlement debentures issued in lieu of cash payment for estates.

The aggregate receipts and expenditure of the fund for the twenty-one years of its existence to 30th June, 1928, were as follows:—

Receipts.	Amount.	Expenditure.	Amount.
	£		£
Transfers from Consolidated Revenue	1,635,000	Purchase of Estates ... ..	8,502,508
"    "    Loans ... ..	8,083,750	Compensation for Improvement Leases Resumed ... ..	117,981
Assurance Fees, etc., under R.P. Act...	562,797	Interest on Loan Funds (recouped to Consolidated Revenue) ... ..	2,639,962
Repayments of Principal and Interest by Settlers—		Interest on Closer Settlement Debentures ... ..	1,586,298
On account of Resumed Estates ... ..	5,471,657	Interest paid to Vendors of Land ... ..	6,845
On account of Improvement Leases, etc., Resumed ... ..	139,736	Payments for Assurances under R.P. Act	10,835
Miscellaneous ... ..	8,708	Redemption of Closer Settlement Debentures ... ..	2,686,678
		Repayments to General Loan Account...	300,000
		Miscellaneous ... ..	2,442
<b>Total ... ..</b>	<b>15,901,648</b>	<b>Total ... ..</b>	<b>15,858,049</b>

The credit balance on the fund at 30th June, 1928, was £48,599. In addition to the net amount of loans outstanding (£7,783,750) there were outstanding closer settlement debentures and ministerial certificates (issued in payment for resumed estates) of a face value of £2,223,050, making a net indebtedness on loan account as at 30th June, 1928, of £9,958,201; besides which £1,635,000 transferred from consolidated revenue and a net amount of £552,462 proceeds of assurances under the Real Property Act have been used for capital expenditure.

The total amount of payments received from settlers on closer settlement lands as interest and repayment of principal was £5,611,393, and the amount of interest paid on loan funds, £4,233,105. The fund is not charged with interest on capital obtained from Consolidated Revenue nor from payments under the Real Property Act.

## PUBLIC WORKS ACCOUNT.

The Public Works Account, like the Closer Settlement Account, does not form part of the Consolidated Revenue Fund, although substantial contributions are paid to it from that fund. It was opened in the year 1906, under the authority of the same statute which provided for the Closer Settlement Fund. Its revenue consists of two-thirds of the net proceeds of the sales of Crown Lands, less 20 per cent., credited to the Consolidated Revenue Fund; the proceeds of land sales under the Public Instruction Act, 1880; amounts voted from the Consolidated Revenue, and sums recouped to the fund by various Government Departments and Government undertakings for special work done on their behalf. Its moneys may be applied in the construction, equipment, or renewal of public works, but not to the repair or upkeep of such works. The net transactions during the year ended 30th June, 1928, are shown below:—

Receipts.	Amount.	Expenditure.	Amount.
	£		£
Two-thirds of Net Proceeds of Sale of Crown Lands, exclusive of Interest on Purchase Money—less 20 per cent. (Act No. 9, 1906) .. ..	390,047	Business Undertakings— Railways and Tramways .. .. Hunter District Water and Sewerage .. .. Sydney Harbour Trust .. ..	17,371 2,546 60,360
			80,277
Net Proceeds of Sale of Land, under Section 4, Public Instruction Act of 1880 .. .. ..	586	Resumed Properties .. .. ..	838
		Water and Drainage Trusts .. ..	7,417
Transfers from Consolidated Revenue Account—Amount in aid .. ..	60,000	Country Towns Water Supply and Sewerage .. .. ..	11,933
		Wentworth Irrigation Area, etc. ..	4,332
Net Repayments on account of previous years .. .. ..	56,394	Public Buildings and Sites, etc. ..	400,712
		Roads, Bridges, Punts, etc. .. ..	86,021
		Harbours and Rivers Navigation ..	12,476
		Hospitals, etc. .. .. ..	8,321
		Municipalities and Shires, Aid ..	42,533
		Other .. .. ..	69,391
		Total Expenditure .. .. ..	724,262
Balance, 30th June, 1927, brought forward .. .. ..	239,057	Cr. Bal e, 30th June, 1928 .. ..	21,832
Grand Total .. .. ..	£ 746,064	Grand Total .. .. ..	746,064

The following summary shows the principal headings of expenditure during the twenty-one years during which the fund has been in operation to 30th June, 1928:—

Class of Work.	Construction.	Renewals.	Total.
	£	£	£
Business Undertakings ... ..	566,601	952,086	1,518,687
Industrial Undertakings ... ..	236,239	600	236,839
Other Undertakings ... ..	523,422	49,530	572,952
Government Buildings and Sites ... ..	7,614,752	872,708	8,487,460
Roads and Bridges ... ..	1,161,919	972,956	2,134,875
Navigation Improvements ... ..	802,868	111,520	914,388
Commonwealth Services ... ..	149,418	...	149,418
<b>Total ... ..</b>	<b>11,055,219</b>	<b>2,959,400</b>	<b>14,014,619</b>

Further details of the expenditure may be found in the Annual Report of the Auditor-General.

The aggregate receipts of the fund since its inception have consisted of the following items:—Proportion of land revenue, £8,426,363; other appropriations from Consolidated Revenue, £5,570,065; proceeds of sale of land under Public Instruction Act, £39,309, and public school property fund, £714; or a total of £14,036,451. At 30th June, 1928, the fund had a credit balance of £21,832.

#### SUMMARY OF ACCOUNTS.

The receipts and expenditure of the various State Accounts during each of the last six years, after necessary adjustments, were as follow:—

#### RECEIPTS.

Account.	1922-23.	1923-24.	1924-25.	1925-26. †	1926-27. ‡	1927-28. ‡
	£	£	£	£	£	£
Consolidated Revenue ... ..	36,145,944	37,351,809	38,822,588	38,540,031	44,148,566	44,198,972
Closer Settlement... ..	737,320	466,597	674,054	1,490,083	1,703,587	700,868
Public Works ... ..	575,363	578,469	593,255	638,470	645,719	507,027
Railways Loan ... ..	259,662	1,350	...	3,000,000	...	...
General Loan ... ..	19,257,081	27,265,137	28,558,609	17,968,178	34,048,842	28,598,704
<b>Total ... ..</b>	<b>57,476,700</b>	<b>65,664,353</b>	<b>68,613,566</b>	<b>61,637,762</b>	<b>80,547,714</b>	<b>74,005,571</b>

† Excluding Accounts of Metropolitan Water, Sewerage and Drainage Board, and Main Roads Board.

## EXPENDITURE.

Account.	1922-23.	1923-24.	1924-25.	1925-26.‡	1926-27.‡	1927-28.‡
	£	£	£	£	£	£
Consolidated Revenue ...	35,342,436	37,251,419	39,579,038	39,814,335	42,690,634	45,293,968
Closer Settlement...	675,777	575,370	585,595	528,568	538,498	529,577
Public Works ...	673,005	491,317	576,434	643,612	662,469	724,252
Railways Loan ...	...	...	...	3,000,000	...	...
General Loan ...	9,841,610	9,338,472	10,170,042	12,267,350	12,700,014	15,633,605
Repayment of Loans	10,609,182	18,101,086	25,502,051	4,712,522	12,566,152	15,457,225
<b>Total</b> ...	<b>57,142,010</b>	<b>65,757,673</b>	<b>76,413,160</b>	<b>60,966,387</b>	<b>69,157,767</b>	<b>77,638,627</b>

‡ Excluding accounts of Metropolitan Water, Sewerage, and Drainage Board and Main Roads Board.

The results shown above are exclusive of the transactions of the Special Deposits and Suspense Accounts.

The Audit Act provides that the Treasurer may arrange with any bank for the transaction of the general banking business of the State. The accounts are kept under the several headings which follow, and all amounts paid into any of the accounts mentioned are deemed to be "public moneys," and for interest purposes the several accounts are treated as one. The special accounts, which consist of "Supreme Court Moneys," are not controlled by the Audit Act, as they are operated on directly by the officers in charge of the Departments concerned.

The position of the Ledger Balances of the various accounts on the 30th June, 1927, is shown below:—

Head of Account.	Ledger Balances on 30th June, 1927.		
	Invested in Securities.	Cash Balances.	Total.
<b>Credit Balances—</b>	£	£	£
Special Deposits Account.. .. .	332,766	18,365,292	19,198,058
Special Accounts—Supreme Court Moneys .. .. .	..	810,982	810,982
Public Works Account .. .. .	..	239,057	239,057
Miners' Accident Relief Account .. .. .	77,000	..	77,000
Closer Settlement Account .. .. .	..	70,508	70,508
<b>Total</b> .. .. . Cr. £	<b>909,766</b>	<b>19,485,889</b>	<b>20,895,655</b>
<b>Less Debit Balances—</b>	£		
Consolidated Revenue Account.. .. .	3,246,186		
General Loan Account .. .. .	7,294,306		
Loans Expenditure Suspense Account .. .. .	2,002,887		
Public Works Expenditure Suspense Account .. .. .	9,861		
Grain Elevators Freight Suspense Account .. .. .	25,376		
London Remittance Account .. .. .	988,199		
Metropolitan Water, Sewerage and Drainage Board—Advance Account .. .. .	4,115,000		
<b>Net Credit Balance</b> .. .. . Cr.	<b>909,766</b>	<b>1,804,024</b>	<b>2,713,790</b>
<b>Deduct—Amounts not transferred to Public Accounts.. Dr.</b>	<b>..</b>	<b>608,542</b>	<b>608,542</b>
<b>Net Credit Balance in Sydney</b> .. .. . Cr.	<b>909,766</b>	<b>1,195,482</b>	<b>2,195,248</b>
<b>Add—London Account</b> .. .. . Cr.	<b>..</b>	<b>988,199</b>	<b>988,199</b>
<b>Net Balance</b> .. .. . Cr.	<b>909,766</b>	<b>2,183,681</b>	<b>3,998,447</b>



The cash balance on the 30th June in each of the last two years was distributed as follows:—

						1927.	1928.
						£	£
Sydney ... ..	...	...	...	...	Cr.	1,195,482	Cr. 1,082,116
London ... ..	...	...	...	...	Cr.	988,199	Dr. 1,047,573
Total Credit ... ..						£2,183,681	£34,543

#### ACCOUNTS OF STATE ENTERPRISES.

Aggregate statements in respect of the State enterprises classed in the Consolidated Revenue Account as "Business Undertakings" have been shown on a previous page, and further reference to them may be found in the chapters of this Year Book relating to "Railways and Tramways," "Shipping" as to Sydney Harbour Trust, and "Local Government" as to water and sewerage works.

Included in the Governmental section of the Consolidated Revenue Account are the transactions in respect of the Government Grain Elevators, the State Forests, Crown Lands, and three small irrigation settlements. Further reference to the accounts of these undertakings is made in chapters of this Year Book relating to "Agriculture," "Forestry," "Land Legislation and Settlement," and "Water Conservation and Irrigation."

Beyond these, however, are a number of other utilities and undertakings whose accounts are kept, on a quasi-commercial basis, separately from the Consolidated Revenue Fund, and the receipts and expenditure of these pass through the Special Deposits Account of the Treasury. These operative enterprises comprised, at 30th June, 1927, (a) four industrial undertakings, viz., the Blue Metal Quarries, the State Brickworks, the Monier Pipe Works, and the Building Construction Branch; (b) three public utilities, viz., the State Abattoirs, the Government Dockyard, and the Government Tourist Bureau and Tourist Resorts; (c) one undertaking of a national character, viz., the Murrumbidgee Irrigation Area. There are also the Government Savings Bank of New South Wales and the State Housing Fund, which the bank administers as explained in the chapter dealing with "Private Finance."

The following table shows the transactions of various undertakings that were operative during the year ended 30th June, 1927, and the total capital expenditure at that date:—

Enterprise.	Revenue.	Expenditure.			Net Surplus.
		Working Expenses.	Interest,† Appropriations from profit, etc.	Total.	
	£	£	£	£	£
<b>INDUSTRIAL UNDERTAKINGS—</b>					
Blue Metal Quarries—Kiama and Port Kembla ..	267,412	245,245	16,913	262,158	5,254
Brickworks—Homebush Bay .. .. .	207,524	172,683	21,454	194,137	13,387
Building Construction .. .. .	349,430	331,522	11,611	343,133	6,297
Monier Pipe Works .. .. .	130,005	99,765	20,313	120,078	9,929
Total, Industrial Undertakings .. .. .	954,371	849,213	70,291	919,504	34,867
<b>OTHER ENTERPRISES—</b>					
State Abattoirs .. .. .	603,456	481,430	101,574	583,004	20,452
Observatory Hill Resumed Area .. .. .	81,540	23,696	69,778	93,439	(-) 11,899
Government Dockyards .. .. .	942,270	943,269	37,872‡	981,141	(-) 38,871
Tourist Bureau and Resorts .. .. .	181,128	162,147	7,834§	170,031	11,097

(-) Denotes net deficit. † Interest was charged at the rate of 5-1812 per cent. on loan capital only.  
‡ Includes only part interest. § Depreciation only.

It is noteworthy that although most of the capital for these undertakings was originally supplied from loan funds very considerable additions to capital expenditure have been made from accumulated profits. The sources of capital and the transactions in respect thereto are summarised in the following statement made up to 30th June, 1927:—

Enterprise.	Original Sources of Capital Expenditure to 30th June, 1927.					Loan Liability outstanding 30th June, 1927.†
	Loans.	Public Works Fund.	Reserves Account Accumulated Profits, etc.	Other.	Total.	
<b>Industrial Undertakings—</b>	£	£	£	£	£	£
Blue Metal Quarries ...	107,393	...	87,183	...	194,576	96,918
Brickworks ...	82,326	...	107,843	...	190,169	Nil.
Building Construction ...	25,964	699	6,400	848	33,911	Nil.
Monier Pipe Works ...	17,068	...	33,963	1,200	52,231	Nil.
Ten Inoperative Undertakings ...	391,365	63,994*	9,990	1,926	467,275	344,842
<b>Total, Industrial</b>	<b>£ 624,116</b>	<b>64,693</b>	<b>245,379</b>	<b>3,974</b>	<b>938,162</b>	<b>441,760</b>
<b>Other Enterprises—</b>						£
State Abattoirs ...	1,565,985‡	219	665,364	...	2,231,568	1,565,985‡
Observatory Hill Resumed Area ...	1,252,347	120,956	...	1,452	1,354,755	1,252,347
Government Dockyard...	944,897§	18,000	9,106	...	972,003	937,656
Tourist Bureau & Resorts	87,125	82,660	87,421	...	257,206	87,125

\* Includes £3,117 from Consolidated Revenue Fund. † As shown by General Loan Accounts.  
‡ Interest is charged on £1,200,000. § Revised since previous issue.

Of fourteen industrial undertakings established, ten had been closed down, leaving at 30th June, 1927, an unpaid loan liability of £344,842 (subject to further adjustment) and an unpaid capital liability of £63,994 to Public Works and Consolidated Revenue Funds.

On the other hand the four operative industrial undertakings had repaid from profits £136,057 of loan capital invested in them, besides providing from profits £235,388 additional capital and accumulating credits amounting to £260,075 in Special Deposits Account. Beyond this it is undoubted that the four operative undertakings, which earned in 1926-27 a net revenue of £105,158 on a capital expenditure of £470,887, are worth as going concerns very much more than the capital cost of the assets.

In respect of the State Abattoirs and the Government Dockyard the interest-bearing loan capital has been substantially reduced, and, while the former has been singularly productive, the latter has failed to earn sufficient to pay its interest bill. On the other hand the Observatory Hill Resumed Area, undertaken as a measure of slum improvement, has proved profitable, while the Tourist Bureau and Tourist Resorts, undertaken partly as developmental schemes, have shown large profits.

Details of the accounts of most of these undertakings are published in the annual reports of the Auditor-General relating to Industrial Undertakings.

#### SPECIAL DEPOSITS AND SPECIAL ACCOUNTS.

The Special Deposits and Special Accounts form a very important division of the public finances, not only from the nature and volume of the transactions, but also by reason of the manner in which they are used in connection with the general finances of the State. These funds are of great assistance in the banking operations of the Government, and they form a strong reserve on which the Treasurer may draw to meet his temporary requirements. Although the Audit Act provides that the funds cannot be used except for the specific purpose for which they were deposited, it has been the custom for many years to draw on the balances for overdrafts of the Consolidated Revenue Fund and Loan Accounts if required. The great

bulk of the funds bear interest, whether invested or not, and the power to use them enables the Government to effect a large saving in the interest which might otherwise be charged for accommodation from the banks. The following table shows the amount of the Special Deposits and Special Accounts in each of the last twelve years:—

As at 30th June.	Amount.	As at 30th June.	Amount.	As at 30th June.	Amount.
	£		£		£
1917	5,619,703	1921	13,097,856	1925	26,001,112
1918	5,957,608	1922	17,491,833	1926	25,069,338
1919	6,222,291	1923	18,527,873	1927	20,009,040
1920	9,848,520	1924	19,666,636	1928	22,738,618

The amount at the credit of each of these funds at 30th June, 1927, was: Special Deposits Account, £19,198,058, and the Special Accounts, £810,982.

The amount of the credit of each individual account is shown in the following table:—

	£	Executor Trustee and Agency Co. of South Australia	£
Government Savings Bank of New South Wales Deposit Account ... ..	4,401,050	Public Trustee — Unclaimed Balances ... ..	20,000 156,602
Government Savings Bank of New South Wales Advances Deposit Account ... ..	500,000	Commonwealth Advances— Settlement of Soldiers ...	8,465,883
Government Savings Bank of New South Wales Homes Department, Capital Account State Debt Commissioners' Deposit Account ... ..	44,377 163,536	Wheat Storage Act ... ..	250,000
State Debt Trust Accounts ...	232,328	Wire Netting Act ... ..	1,676
Public Works, Railways, and Sydney Harbour Trust, etc., Stores Advance Accounts ...	166,226	Metropolitan Water Sewerage and Drainage Board ... ..	32,245
Industrial Undertakings ...	352,349	Hunter District Water and Sew- erage Board ... ..	14,477
Sundry Deposits Account ...	708,424	State Superannuation Board ...	14,686
Housing Fund ... ..	52,860	Compensation Fund (Liquor Amendment Act) ... ..	909,736
Revenue Suspense Account ...	53,773	Sydney Harbour Bridge (Act 26 of 1922), Municipal and Shire Rates Account ... ..	10,803
Broken Hill Water Supply Account ... ..	33,946	Relief to Necessitous Farmers and Graziers ... ..	84,172
Forestry (Act No. 55 of 1916) ...	108,805	Developmental Roads Fund ...	277,660
Treasury Guarantee Fund ...	23,665	Com'th Immigration Account ...	23,520
Treasury Fire Insurance Fund	52,000	Main Roads, Funds, etc. ...	253,745
Treasury Marine Insurance Fund ... ..	352,467	Prickly Pear Destruction Fund	50,084
Treasury Workmen's Compen- sation Fund ... ..	255,986	Prison Industries ... ..	44,506
Treasury General Accident Insurance Fund ... ..	44,842	Resumed Properties, State Clothing, Drug Depot—Work- ing Accounts ... ..	39,877
Water and Drainage Loan Re- demption Fund ... ..	134,159	Govt. Printer, Working Cap- ital Account ... ..	36,411
Elder's Trustee and Executor Company, Limited ... ..	20,000	Wild Dog Destruction Fund ...	28,420
Union Trustee Company of Aus- tralia, Limited ... ..	20,000	Security Deposits—Workers' Compensation Act ... ..	600,950
Trustees, Executors and Agency Co. (Melbourne) ... ..	20,000	Other Accounts ... ..	121,712
		Total ... ..	£19,198,058

#### Special Accounts.

	£		£
Master-in-Equity Account ...	210,781	Prothonotary Account ... ..	7,546
Master-in-Lunacy Account ...	18,062	Registrar of Probates' Account	19,423
Public Trustee Account ... ..	555,170		
		Total ... ..	810,982

Of the total sum of £20,009,040 at the credit of the accounts on the 30th June, 1927, £832,766 were invested in securities; £16,864,348 were uninvested but used in advances and on public account at interest, the rates

allowed ranging from 1 to 7½ per cent.; the remainder, £2,311,926, was similarly used, but without any interest allowance. In cases where interest was being paid by the Treasurer on the 30th June, 1927, the rate was 3 per cent., with the following exceptions:—

Crown Leases Security Deposit Account ... ..	5½ per cent.
Government Savings Bank of N.S.W. Deposit Account ...	2 to 5 "
"    "    Advances Deposit Account ...	4½ "
State Debt Commissioners' Trust Accounts, Municipal	
Council of Sydney Sinking Fund (50 Vic., No. 13) ...	4 "
Commonwealth Advance re Settlement of Returned Soldiers...	5½ to 7½ "
Commonwealth Advance, Wheat Storage Act, 1917 ...	£6 7s. "
Liquor Amendment Act, Compensation Fund ... ..	5 "
Master-in-Equity Account ... ..	2½ "
Master-in-Lunacy Account ... ..	1 "
Metropolitan Water, Sewerage, and Drainage Board, Act 50,	
1924 ... ..	5½ "
Public Trustee ... ..	4½ "
Treasury Guarantee Fund ... ..	2½ "
"    Fire Insurance Fund ... ..	2½ "
"    Marine Insurance Fund ... ..	2½ "
"    General Accident Insurance Fund ... ..	2½ "
"    Compensation Insurance Fund ... ..	2½ "
Industrial Undertakings ... ..	5'1312 "
Sydney Harbour Bridge—	
Municipal and Shire Rate Account ... ..	5'1312 "
Architects' Fund ... ..	4 "

The funds in the custody of the State Treasurer at credit of Special Deposits and Special Accounts, were held as follows:—

	30th June, 1926.	30th June, 1927.
	£	£
<b>In Banks—</b>		
Special Deposits Account ... ..	23,577,004	18,365,292
Special Accounts ... ..	780,156	810,982
New South Wales Funded Stock	132,500	152,500
Deposits on Tenders ... ..	58,120	55,040
Security Deposits ... ..	500,000	600,950
Miscellaneous Securities ... ..	23,558	24,276
<b>Total ... ..</b>	<b>£25,069,338</b>	<b>£20,009,040</b>

#### STATE LOAN FUNDS.

In recent years the whole of the moneys raised on loans have been credited to General Loan Account. Formerly other loan accounts were in existence for short periods, but now all have, in effect, been amalgamated into a combined account.

The whole of the loans outstanding have been raised for capital expenditure on various works and services most of which produce a sufficiently large excess of revenue over expenditure to meet the interest payments on loan capital invested in them.

Prior to the year 1900 loans not credited to General Loan Account were raised for defence works, for promoting immigration, etc., and some revenue deficits were met, temporarily, by the issue of special Treasury Bills. The stocks issued in this way have all been repaid from revenue and now the only outstanding parts of the public debt not included in the General Loan Account are discounts and flotation charges and a sum of £120,050, advanced by the old Advances to Settlers' Board.

The following summaries provide a reconciliation between the funded debt of New South Wales and the aggregate State loan expenditure on works and services showing the transactions under main headings on General Loan Account and indicating the extent and nature of redemptions and conversions as well as the costs incurred in raising loans (including discount and flotation charges). The funded debt as represented by the excess of stock, debentures and Treasury bills sold over the amount redeemed

from the foundation of the State to the end of each of the last two financial years was as follows:—

	30th June, 1927.		30th June, 1928.	
	£	£	£	£
<b>Stock Debentures and Treasury Bills—</b>				
Sold (Face value) ... ..	...	404,760,743*	...	437,956,250
Redeemed from Loan Accounts	165,927,604	...	181,342,307	...
Redeemed from Revenue Accounts ... ..	11,108,673	177,036,277	11,366,036	192,708,343
<b>Funded debt outstanding (face value) ... ..</b>	...	227,724,466*	...	245,247,907

\* Exclusive of £10,995,100 conversion loans outstanding but not yet credited to Loan Account.

The proceeds of the above loans, except £6,251,901, being the net receipts in respect of stock of a face value of £6,187,603, were credited to Loan Accounts and, of this latter sum £6,067,553 were redeemed from revenue, leaving a sum of £120,050 outstanding which had not been credited to General Loan Account. In addition, at 30th June, 1928, there was a sum of £5,351,406 representing the proceeds of stock in course of sale which had not been credited to General Loan Account. Adjusting for these items the reconciliation between funded debt outstanding and net expenditure from loan funds on works and services was:—

	To 30th June, 1927.		To 30th June, 1928:	
	£	£	£	£
<b>Funded Debt outstanding (face value)</b>	...	227,724,466*	...	245,247,907
Loans outstanding not credited to General Loan Accounts ... ..	120,050	...	120,050	...
Stock, etc., sold and proceeds not yet credited to General Loan Accounts	...	120,050	5,351,406	5,471,456
<b>Expenditure from overdraft on General Loan Account ... ..</b>	...	227,604,416* 7,294,306	...	239,776,451 9,786,432
<b>Public Debit proper (funded and unfunded) (see footnote †) ... ..</b>	...	234,898,722†	...	249,562,883
Stock, etc., credited to General Loan Account and redeemed from Revenue ... ..	5,041,120	...	5,298,483	...
Amount credited to General Loan Account from Revenue ... ..	175,838	5,216,958	175,838	5,474,321
<b>Aggregate expenditure from loans and moneys which were credited to General Loan Account ... ..</b>	...	240,115,680	...	255,037,204
Discount, flotation charges, etc., on loans ... ..	...	10,088,038	...	10,601,943
<b>Net expenditure from General Loan Account on works and services ... ..</b>	...	230,027,642	...	244,435,261

\* Exclusive of £10,995,100 conversion loans outstanding but not yet credited to General Loan Account.

† Exclusive of £120,050, shown above and loan expenditure suspense and Commonwealth advances Gra'ton-Kyogle-Brisbane railway, as shown on page 432.

In addition at 30th June, 1927, a sum of £2,002,887 and at 30th June, 1928, a sum of £129,546 had been expended on works and services in anticipation of appropriations from loan funds. These amounts were charged to Loan Expenditure Suspense Account and are not included above. There were also outstanding at 30th June, 1927, overdraft loans of £4,115,000, and, at 30th June, 1928, £6,495,000 for the Metropolitan Water, Sewerage, and Drainage Board. These overdrafts, the debits on suspense account and the overdraft on General Loan Account were all drawn against funds in the temporary possession of the Government as special deposits on which the average rate of interest was very low. The utilisation of these funds for loan expenditure enables a large saving to be effected in the State's interest bill.

It is noteworthy that the amount of stock, etc., redeemed from revenue shown above is exclusive of repayments of loans from loan account met by (a) recoups to General Loan Account from Public Works Fund; (b) repayments made to General Loan Account on account of advances made to settlers and various public bodies; (c) proceeds paid to General Loan Account in respect of sales of lands, works, materials, etc., acquired from loans; (d) repayments of loan capital from profits earned by industrial undertakings.

*Loan Expenditure.*

The specific services on which the above expenditure has been incurred and the net amount expended on each to 30th June, 1927, may be classified as follows:—

	£	£
<b>Railways and Tramways—</b>		
Railways (including works under construction)	115,513,298	
Tramways ( " " )	12,050,080	
<b>Water Supply and Sewerage—</b>		127,563,378
Metropolitan ... ..	25,563,965	
Hunter District ... ..	4,276,874	
Country towns (repayable in part) ...	3,165,934	
<b>Water Conservation and Irrigation—</b>		33,006,773
Murrumbidgee Irrigation Areas (excluding advances to settlers) ... ..	6,838,402	
Other (including Hydro-electric schemes) ...	3,702,124	
<b>Navigation and Shipping—</b>		10,540,526
Sydney Harbour Trust ... ..	10,916,316	
Navigation Works, Outports and Rivers ...	6,628,970	
Government Dockyard, Newcastle ... ..	937,656	
<b>Various Other Undertakings—</b>		18,482,942
Housing and Slum Improvements ... ..	2,230,347	
Homebush Public Abattoirs ... ..	1,523,080	
Grain Elevators ... ..	3,708,988	
Industrial Undertakings ... ..	441,760	
Other Undertakings ... ..	379,322	
<b>Land Settlement—</b>		8,283,407
Closer Settlement (repayable) ... ..	7,391,767	
Other Land Settlement ... ..	124,004	
Advances to Landholders (repayable) ... ..	4,635,988	
Advances to Irrigation Farmers (repayable) ...	1,741,354	
<b>Miscellaneous—</b>		13,893,113
Roads, Punts and Bridges ... ..	6,032,766	
Public Buildings and Sites ... ..	7,586,494	
Darling Harbour Wharves Resumption ... ..	52,681	
Immigration ... ..	569,930	
Services transferred to Commonwealth (repayable) ... ..	3,965,687	
Public Works in Queensland prior to separation	49,855	
		4,015,542
Net expenditure on works and services from Loan Account to 30th June, 1927 ... ..		230,027,642

The amounts shown above represent the net expenditure after deducting repayments and recoups, and they are exclusive of loans expenditure suspended amounting to £2,002,887 at 30th June, 1927.

This statement and that which precedes it omit from account loans represented by debentures and ministerial certificates issued in part payment for estates acquired for purposes of closer settlement. These debentures and certificates which amounted to £2,395,050 at 30th June, 1927, and to £2,223,050 at 30th June, 1928, are a liability of the Closer Settlement Fund and are additional to the loans shown above.

The borrowed funds re-loaned to individuals or transferred to other Governments and repayable to the State exceed £20,000,000.

The foregoing dissection of the loan expenditure makes it apparent that the loan funds of the State have for the most part been invested in reproductive and developmental enterprises, and that the public debt of the State is offset by valuable assets. Many of these assets are producing

sufficient revenue to meet the working expenses and interest bill, while some show a surplus of profit after meeting all such charges.

The accounts of some undertakings, such as the outports, are not kept in such a way as to show the net amount of interest earned, and for this reason it is not possible at present to state accurately how much of the loan expenditure is fully reproductive, how much is partly so and how much of it is unproductive so far as earning power is concerned.

In view of the difficulty of determining a satisfactory distinction between "productive," partly productive and non-productive works the dissection of loan expenditure formerly published is not now presented, but endeavour is being made to obtain the data necessary for a more satisfactory dissection.

*Annual Loan Expenditure (State).*

The net increase in expenditure from General Loan Account of the State and from other funds including those of statutory bodies appointed by the State Government during each of the five years ended 30th June, 1927, is shown below:—

Head of Service.	1923.	1924.	1925.	1926.	1927.
From General Loan Fund—	£	£	£	£	£
Railways ... ..	4,177,273	2,914,722	4,246,663	6,060,259	6,229,347
Tramways... ..	492,012	738,092	427,129	275,684	151,263
Water Supply ... ..	1,366,256	1,543,916	1,612,912†	776,281†	656,919†
Sewerage ... ..	479,879	567,346	436,562†	492,706†	410,398†
Water Conservation and Irrigation ... ..	1,004,504	844,121	519,069	660,268	199,496
Harbours, Rivers, Wharves, and Docks ... ..	451,279	400,114	448,539	577,395	486,756
Public Works, Buildings, etc....	310,437	499,264	606,391	713,337	485,416
Roads and Bridges ... ..	231,271	185,578	750,907†	972,733†	1,726,420†
Pastures Protection Boards, for Wire-netting ... ..	39,514	62,179	53,643	33,474	5,399
Grain Elevator and Bulk Wheat Handling ... ..	778,284	154,694	94,208	40,131	124,281
Industrial Undertakings, including Housing Fund ... ..	18,237	...	...	...	...
Returned Soldiers' Settlement, etc. ... ..	38,284	...	...	...	...
Closer Settlement* ... ..	300,000*	...	...	850,000*	494,767*
Immigration ... ..	...	...	151,457	16,705	10,409
Advances to Settlers for financial aid ... ..	...	94,334	42,508	...	...
All Other Services ... ..	112,180	13,380	17,065	21,720	37,636
Total ... ..	9,799,410	8,017,740	9,407,353	11,820,762	11,019,107
Less Repayments to Credit of Votes not named above ... ..	5,391	292,269	231,667	340,290	596,837
Net Expenditure on Public Works, etc. from General Loan Account ... ..	£9,794,019	7,735,480	9,175,686	11,180,492	10,422,270
From Funds of Metropolitan Water Sewerage and Drainage Board—					
Water Supply ... ..	...	...	309,023	1,212,449	1,376,040
Sewerage and Drainage ... ..	...	...	76,029	428,035	567,609
From Funds Advanced by Commonwealth—Grafton-Kyogle-Brisbane Railway ... ..	...	...	...	275,275	330,589
Net Expenditure on Public Works, etc. ... ..	9,794,019	7,735,480	9,560,736	13,096,241	12,696,508

\* For redemption of Closer Settlement Debentures.

† Exclusive of loan expenditure by Metropolitan Water Sewerage and Drainage Board, shown below.

‡ Including loans voted to Main Roads Board.

The amounts expended from General Loan Fund as shown under the various headings above represent the total new expenditure during the year less the amounts repaid under those headings during the year. The item "Repayment to Credit of Votes" represents the total amount of repay-

ments under headings for which there was no expenditure during the year plus the excess repayments on items in respect of which payments exceeded new expenditure for the year. The gross expenditure on works and services from General Loan Account was £12,267,350 in 1925-26, £12,700,014 in 1926-27, and £15,633,605 in 1927-28. The net expenditure is arrived at by deducting the amounts repaid in each year to the credit of previous years' votes.

It is noteworthy also that the amounts shown above in respect of General Loan Fund represent the net increase in expenditure debited to General Loan Account and not the actual amounts disbursed each year. Adjustments are made each year on account of loan expenditure suspense whereby the amount expended in any one year in excess of loan appropriation is voted in the following year and included in that year's votes. Thus the actual gross disbursements of the State Government and statutory bodies, irrespective of these adjustments and of repayments to credit of votes of previous years, were as follow, the years shown being those ending on 30th June:—

Service.	1924.	1925.	1926.	1927.	1928.
	£	£	£	£	£
Gross expenditure from General Loan Fund on works and services.*	9,328,472	13,170,042	12,237,350	12,760,014	15,633,605
Less Loan expenditure suspense of previous year included above.	471,281	908,102	1,622,579	622,046	2,002,887
Plus Loan expenditure suspense of year..	8,867,191	9,261,940	10,614,771	12,137,968	13,630,718
	908,102	1,622,579	622,046	2,002,887	129,546
Gross expenditure from State Loan Accounts.	9,775,293	10,884,519	11,277,817	11,669,855	13,760,234
Metropolitan Water Sewerage and Drainage Board.	...	385,052	1,640,484	1,948,650	2,373,768
Commonwealth advance for Grafton-Kyogle-Brisbane Railway.	...	...	275,275	320,289	398,593
Grand Total (Gross)	9,775,293	11,269,571	13,198,576	16,344,064	16,532,625

\* Excluding repayments to votes in respect of expenditure during the year shown.

The grand total of the foregoing table represents as nearly as may be the gross amount of loan moneys actually expended each year under State, as distinct from Federal and Local authority. It is noteworthy that the figures are gross and include the total amount of advances to settlers and local bodies, irrespective of repayments. The amount of repayments to credit of previous years' votes and not deducted above were:—£1,602,692 in 1923-24, £994,355 in 1924-25, £1,086,868 in 1925-26, £2,277,744 in 1926-27, and £1,225,987 in 1927-28. Furthermore, the amounts shown include sums of £300,000 in 1922-23, £850,000 in 1925-26, and £1,025,750 in 1926-27 voted to Closer Settlement Fund for the redemption of Closer Settlement Debentures issued in previous years for the purchase of estates for closer settlement. The expenditure as shown is exclusive of re-advances from repayments to loan funds voted for the constitution of specific advance accounts such as those for closer settlement and wire-netting purchase.

The State Government's net expenditure from General Loan Account on works and services (exclusive of repayments to credit of votes, redemptions, conversions, and renewals of loans, and after deducting repayments to credit of votes) is shown below for the period of thirty-nine years, 1842-1880, in decennial periods from 1881 to 1920, and for the eight years ended 30th June, 1928:—

Years.	During Each Period.		Total at end of Period.	
	Amount.	Per Inhabitant.	Amount.	Per Inhabitant.
	£	£ s. d.	£	£ s. d.
1842-1880	16,316,530	41 12 2.	16,316,530	21 9 11
1881-1890	27,639,022	29 8 8	43,955,552	39 3 7
1891-1900	20,515,704	16 6 8	64,471,256	47 12 1
1901-1910	26,876,468	18 0 4	91,347,724	56 11 11
1911-1920	65,228,221	35 5 8	156,575,945	75 13 5
*1921-1928	87,859,316	39 5 3	244,435,261	100 16 3



The amount of expenditure shown above is the gross expenditure from General Loan Account less amounts repaid or recouped to the credit of votes and less the amount of discount, flotation charges, etc., on loans, viz., £10,601,943 at 30th June, 1928. On other hand, the expenditure as shown has not been reduced by the amount of loans redeemed from revenue, viz., £5,298,483. A reconciliation between the public debt and the net expenditure on works and services from General Loan Account appears on page 422.

The great increase in loan expenditure during the period 1911-20 was due partly to the diminished purchasing power of money and the fact that 1,372 miles of railway constructed from loan money were opened as against 832 in the preceding ten years. There was also a large expenditure in connection with the Murrumbidgee Irrigation scheme, Sydney Harbour Trust, the rapid extension of water and sewerage services, the erection of silos and terminal elevator for handling wheat in bulk, meat abattoirs (Homebush), and Returned Soldiers' and Closer Settlement schemes. The objects of loan expenditure during the five years ended June, 1927, are shown on page 424 of this Year Book.

#### Loans Maturing.

The following statement shows the loans to be renewed during the next five years in London and Sydney, at each original rate of interest.

In a number of cases the loans may be redeemed earlier than the dates shown at the option of the Government and upon notice of from three to twelve months.

Date of Maturity.	Existing Rate of Interest per cent.	Amounts repayable in—		
		London.	Sydney.	Total.
1928-29 ...	4 10 0	...	4,000	4,000
	5 0 0	...	32,200	32,200
	5 10 0	...	28,300	28,300
	6 0 0	...	383,550	383,550
Total ..	...	...	448,050	448,050
1929-30 ...	5 0 0	...	165,040	165,040
	6 0 0	...	3,175,046	3,175,046
Total ...	...	...	3,340,086	3,340,086
1930-31 ...	5 5 0	...	901,267	901,267
	5 10 0	...	11,038,170	11,038,170
Total ...	...	...	11,939,437	11,939,437
1931-32 ...	5 10 0	...	4,288,242	4,288,242
1932-33 ...	£ s. d.	£	£	£
	5 5 0	...	3,891,999	3,891,999
	5 10 0	...	1,203,120	1,203,120
	5 15 0	12,992,904	83,096	13,076,000
Total ...	...	12,992,904	5,178,215	18,171,119
Total for 5 years ...	...	12,992,904	25,194,030	38,186,934

Cost of Raising Loans.

Operations incidental to the issue of loans in London are conducted on occasion by the Bank of England, but usually by the Westminster Bank. The former charges  $\frac{1}{4}$  per cent. per £100 of stock on all loan issues, and £350 per million annually for the inscription and management of stock, including the payment of the half-yearly dividends, while the latter charges  $\frac{1}{4}$  per cent. and £150 per million respectively for similar services. At 30th June, 1928, stock to the value of £22,061,959 was managed by the Bank of England, while the Westminster Bank held the remainder. In Sydney the Bank of New South Wales and the Commercial Banking Company of Sydney (Limited) transact all Government banking business. The former acts as the financial agent for the State in Victoria, and undertakes the payment of the half-yearly dividends on local debentures and funded stock. Management of the local debt is conducted through the Funded Stock Office and the Treasury directly conducts the operations connected with the issue of New South Wales Funded Stock Debentures and Treasury Bills in Sydney, and no local loan has been underwritten. However, commission is paid to recognised brokers on loan applications received from them.

Commission paid to banks for management expenses in connection with the public debt is a charge on the Consolidated Revenue Fund; expenses incurred in the negotiation of loans, such as brokerage, underwriting, printing, etc., are charged against the proceeds of the loans.

The following statement shows the charges for the negotiation of recent loans, inclusive of the accrued interest and bonuses allowed to investors. Local Debentures and Treasury Bills have not been included, as those disposed of in Sydney are usually sold at par, and little expenditure, if any, is incurred, while the securities under these headings negotiated in London are generally for short periods pending the flotation of long-dated loans. The statement includes both new loans and conversions:—

Year of Flotation.	Amount of Principal.	Price of Issue per cent.	Gross Amount Raised.	Costs of Negotiation.			Net Amount Credited to General Loan Account.*	Date from which Interest Accrues.	Nominal Rate of Interest.	Year of Maturity.
				Brokerage, Underwriting, and Bank Commission.	Stamp Duty and other Expenses.	Total.				
Issued in London.										
1924-25	£ 6,500,000	98·5	£ 6,402,500	£ 112,663	£ 14,904	£ 127,567	£ 6,280,884	1-6-25	5	1965
1925-26	4,000,000	98	3,920,000	69,416	4,108	73,524	3,847,648	1-6-26	5	1965
1926-27	4,000,000	97	3,880,000	69,476	4,383	73,859	3,807,995	1-1-27	5	1965
1926-27	10,995,100	99	10,885,149	123,363	10,957	134,320	10,759,115	1-7-27	5½	1957
Issued in New York.										
1926-27	\$ 15,150,986	96·25	\$ 4,944,249	...	...	\$ 154,734	\$ 4,805,553	1-2-27	5	1957
1926-27	15,136,986	96·25	4,944,319	...	...	143,796	4,810,225	1-4-27	5	1958
Issued in Sydney.										
1924-25	\$ 2,075,805	98·5	\$ 2,044,658	966	...	966	\$ 2,043,692	\$	6	1930 and 1935
1924-25	12,981,850	98·5	2,937,122	20,446	4,475	24,921	2,912,284	.....	6	
1924-25	\$ 1,428,342	99	1,414,058	1,750	...	1,750	1,412,369	\$	6	
1924-25	\$ 300,103	100	300,103	1,050	...	1,050	299,053	\$	6	
1925-26	1,800,000	98·5	1,772,000	...	...	...	1,773,000	1-7-25	6	1935
1925-26	\$ 7,770,000	100	7,770,000	...	...	...	7,770,000	\$ 31-12-25	5½	1930
1925-26	\$ 2,008,868	100	2,008,868	800	...	800	2,008,068	\$	5½	\$ 1930-36
1926-27	\$ 13,715,156	100	13,715,156	7,744	290	8,034	13,707,122	\$	5½	
1926-27	\$ 1,494,436	100	1,494,436	2,850	...	2,850	1,491,586	\$	5½	
1926-27	200,000	99·5	199,000	...	...	...	199,000	27-1-27	5½	1942
1926-27	50,000	98·5	49,250	...	...	...	49,250	\$	5½	1942

\* Allowing for adjustments from Consolidated Revenue Account and profits on exchange. † \$25,000,000.  
 ‡ Various amounts at various dates. § Commonwealth Loan for States.

## THE PUBLIC DEBT.

*Growth of Funded Debt.*

The first loans raised by New South Wales were for the promotion of immigration. From 1831 to 1841 the expenses attached to immigration were met by the Land Fund, into which were paid the proceeds of land sales, but these proved insufficient for the purposes in 1841, and it became necessary to obtain additional funds.

It was, therefore, decided by the Governor to borrow on the security of the Territorial or Land Revenue, and a debenture loan of £49,000 was offered locally on the 28th December, 1841. The loan was issued during 1842 in two instalments, the nominal rates of interest being 5½d. and 4d. per cent., respectively, per diem. This was the first loan floated in Australia, as well as the first raised by an Australian Government. It was not until 1854 that a loan was placed on the London market.

The amount of public debt outstanding at the end of each year from 1842 to 1860 was published on page 423 of the Official Year Book for 1926-27. The amount of debt at the end of each subsequent year is shown on page 744 of the "Statistical Register" for 1925-26.

The Public Debt in November, 1855, when Responsible Government was proclaimed, was £1,000,800, distributed under the following heads:—

Raised on the Security of Territorial Revenue—		£
Immigration ... ..	...	423,000
Sydney Railway Company's Loan ... ..	...	217,500
Raised on the Security of General Revenue—		
Amount for Sydney Sewerage ... ..	...	54,900
" " Sydney Water Supply ... ..	...	28,000
" " Railways ... ..	...	256,400
" " Public Works ... ..	...	21,000
Total ... ..	...	£1,000,800

Since 1855 the Funded Debt has grown steadily by reason of the expenditure of loan funds on railways, water supply and sewerage, harbour works and other public services enumerated on a previous page.

The following table shows the amount of funded Public Debt outstanding at the end of each year named, the financial year ending on 30th June in 1895 and subsequent years:—

Year.	Amount.	Year.	Amount.	Year.	Amount.
	£		£		£
1842	49,500	1885	35,564,250	1921	164,336,492
1845	97,700	1890	48,383,333	1922	176,674,387
1850	132,500	1895	58,220,933	1923	183,571,556
1855	1,000,800	1900	65,332,993	1924	194,074,971*
1860	3,830,230	1905	82,321,998	1925	201,702,327
1865	5,749,630	1910	92,525,095	1926	209,793,012
1870	9,681,130	1915	127,735,405	1927	227,724,466†
1875	11,470,637	1920	152,776,082	1928	245,247,967
1880	14,903,919				

\* Excluding £16,419,003 cash proceeds of conversion loan credited in following year.

† Excluding £10,965,100 conversion loans credited in following year.

The annual growth of the public debt cannot be traced accurately from the growth of funded debt outstanding. During recent years it has become increasingly the practice to finance loan expenditure by overdraft on the loan account against the security of special deposits which consist largely of funds made available on loan by the Commonwealth Government. In addition, since 1916, there have been in existence Closer Settlement Debentures and ministerial certificates issued in payment for some of the estates resumed for closer settlement. From time to time part of these debentures have been redeemed from loan funds.

In considering the rate of growth of the debt, attention should be paid to the effect of variations in the purchasing power of the money expended, the steady growth of population throughout the period, the economic development of the State, as measured by the growth of its wealth, income and productiveness, and the earning power of the works constructed from loan.

Furthermore, comparisons of the rate of growth of the State debt with that of other States of Australia should take into account the various distributions of governmental functions as between the State and local governments and the inclusion or non-inclusion of the capital debts of public utilities controlled by governmental authority.

Especial care should be taken in making international comparisons to make due allowance for the differing distributions of debt as between central, provincial and local governments and the existence or otherwise of reproductive assets acquired from loan funds. Superficial comparisons made without reference to these factors lead to very erroneous conclusions.

#### Existing Funded Debt.

The funded debt consists of debentures, inscribed and funded stock, and Treasury bills. The amounts outstanding, and the annual interest due were as follow:—

Description of Stock.	Amount Outstanding, 30th June, 1927.	Annual Interest, Due 1926-27.	Amount Outstanding, 30th June, 1928.	Annual Interest Due, 1927-28.
<b>Debentures and Gold Bonds</b>	£	£	£	£
(New York)... ..	...	...	...	...
Matured ... ..	8,550	...	11,050	...
Still bearing Interest ...	17,774,373*	501,140	21,779,925	918,038
<b>Inscribed and Funded Stock—</b>				
Matured ... ..	...	...	22,199	...
Still bearing Interest ...	209,813,043	9,860,165	223,306,233	10,199,815
<b>Treasury Bills—</b>				
Matured ... ..	...	...	...	...
Still bearing Interest ...	128,500	...	128,500	39,469
<b>Total, Public Debt</b> £	<b>227,724,466</b>	<b>10,361,305</b>	<b>245,247,907</b>	<b>11,156,322</b>

\* Includes £10,273,973 Gold Bonds issued in New York, interest not due till 1927-28.

The amounts shown under the heading "annual interest due" represent the interest bill for the year; that is, the amounts of interest falling due on the funded debt on dates in the years shown.

The following table shows the total funded debt outstanding on 30th June, 1927, at each rate of interest, and the annual amount payable thereon.

Nominal Interest Rate per cent.	Stock, Debentures, and Bills—Funded Debt.				Annual Interest payable.
	New York.	London.	Sydney.	Total.	
£ s. d.	£	£	£	£	£
6 10 0	...	6,496,965	3,035	6,500,000	422,500
6 0 0	...	9,567,090	9,605,926	19,173,016	1,150,381
5 15 0	...	17,974,067	1,126,144	19,100,211	1,098,262
5 10 0	...	2,999,000	30,043,692	33,042,692	1,817,348
5 6 11	...	...	250,000	250,000	13,365
5 5 0	...	10,995,100	20,786,993	31,782,093	1,668,560
5 0 0	10,273,973	40,499,750	3,182,392	53,956,115	2,697,866
4 10 0	...	10,999,700	6,000	11,005,700	495,256
4 0 0	...	20,029,242	687,247	20,716,489	828,660
3 15 0	...	...	1,500,000	1,500,000	56,250
3 10 0	...	12,067,428	1,951,028	14,018,456	490,646
3 0 0	...	12,425,113	4,201,639	16,626,752	498,802
Matured...	...	8,550	44,392	52,942	...
Total	£ 10,273,973	144,062,005	73,388,488	227,724,466	11,237,836

Of the annual liability for interest on the funded debt outstanding at 30th June, 1927, £6,888,281 were payable in London, £513,699 in New York, and £3,835,856 in Sydney. On 30th June, 1928, the corresponding amounts were £7,409,782, £687,833, and £4,024,393, the total being £12,122,008.

The whole of the loans on which the interest rate was 4 per cent or less were floated prior to 1914, mainly in London.

The dates of repayment of the funded debt extend to 1966, and the sums falling due for redemption each year vary considerably, as will be seen from the following table, which shows the latest due dates and the amount repayable in London, in New York and in Sydney:—

Due date.	Registered in—			Total.
	New York.	London.	Sydney.	
Matured ... ..	£	£ 8,550	£ 44,392	£ 52,942
Minimum date expired ... ..	...	...	7,395,208	7,395,208
1927-28 ... ..	...	...	1,311,911	1,311,911
1928-29 ... ..	...	...	911,550	911,550
1929-30 ... ..	...	...	3,340,086	3,340,086
1930-31 ... ..	...	...	11,984,042	11,984,042
1931-32 ... ..	...	...	5,424,599	5,424,599
1932-33 ... ..	...	12,992,904	5,177,415	18,170,319
1933-34 ... ..	...	12,635,846	3,464,801	16,100,647
1934-35 ... ..	...	4,981,163	15,969,992	20,951,155
1935-36 ... ..	...	12,425,113	1,394,244	13,819,357
1936-37 ... ..	...	...	877,810	877,810
1940-41 ... ..	...	16,064,055	435,945	16,500,000
1941-42 ... ..	...	...	13,832,879	13,832,879
1942-43 ... ..	...	3,998,550	501,450	4,500,000
1943-44 ... ..	...	...	500,000	500,000
1945-46 ... ..	...	10,999,700	300	11,000,000
1950-51 ... ..	...	12,067,428	182,572	12,250,000
1955-56 ... ..	...	22,000,000	...	22,000,000
1956-57 ... ..	5,136,986	...	...	5,136,986
1957-58 ... ..	5,136,986	10,995,100	...	16,132,086
1962-63 ... ..	...	10,392,396	107,604	10,500,000
1965-66 ... ..	...	14,500,000	...	14,500,000
Interminable ... ..	...	...	530,189	530,189
Permanent ... ..	...	1,200	1,500	2,700
Total ... ..	10,273,972	144,062,005	73,388,489	227,724,466

The amount of £7,395,208 described as "minimum date expired" above represents funded stock amounting to £7,275,158 which has been redeemable since 1912 at the Government's option on giving twelve months' notice and £120,050 funded stock issued under the Advances to Settlers Act, 1899, which has been redeemable by the Government since 1918 on giving twelve months' notice.

The following statement shows the amount of funded debt on each register at quinquennial intervals from 1900 to 1928. Stocks are normally transferable from London to Sydney:—

As at 30th June.	Stock, Debentures and Treasury Bills Registered in—				Funded Debt.	
	London and New York.		Sydney.		Total.	Per head of Population.
	Amount.	Proportion to Funded Debt.	Amount.	Proportion to Funded Debt.		
	£	per cent.	£	per cent.	£	£ s. d.
1900	55,060,650	84.28	10,272,343	15.72	65,332,993	48 4 9
1905	64,007,550	77.75	18,314,448	22.25	82,321,998	56 12 2
1910	67,154,805	72.58	25,370,290	27.42	92,525,095	57 6 6
1915	86,167,288	67.46	41,568,117	32.54	127,735,405	67 10 11.
1920	101,977,445	66.75	50,798,637	33.25	152,776,082	73 16 11
1925	136,064,505	67.45	65,637,822	32.55	201,702,327	88 14 4
1926	140,063,404	66.76	69,729,608	33.24	209,793,012	90 9 1
1927	154,335,977*†	67.77	73,388,489	32.23	227,724,466†	96 0 0
1928	168,296,729†	68.62	76,951,178	31.38	245,247,907	101 3 0

\* Including £10,273,973 in New York. † Excluding £10,995,100 raised for redemption purposes and proceeds to be credited in 1927-28. ‡ Includes £14,152,225 in New York.

Formerly the State Government depended principally on the London money market for the flotation of its loans and more than 84 per cent. of the loans outstanding at 30th June, 1900, were registered in London. As the State developed, however, loanable funds became available on the local market and, despite huge borrowings by the Commonwealth Government in Australia for war purposes, the State's loan capital has been provided to an increasing extent from local resources. Thus of £179,914,914 added to the funded debt of the State between 1900 and 1928 no less than £66,678,835 or 37 per cent. were subscribed locally, and at 30th June, 1928, approximately 31 per cent. of the outstanding funded debt was registered locally. Owing to the stringency on the London money market in the early part of 1927 the State raised two 25,000,000 dollar loans in New York, the total amount of principal being £10,273,973. In the following year the State received £3,955,615, part of the proceeds of a 50,000,000 dollar loan raised in New York by the Commonwealth.

#### TOTAL PUBLIC DEBT OF STATE.

The total public debt of New South Wales consists of (a) funded debt, viz., the amount of inscribed and funded stock, debentures and treasury bills outstanding; (b) unfunded debt, viz., the debit balances on general loan account and on loan expenditure suspense account and advances by the Commonwealth Government for the construction of the Grafton-Kyogle-Brisbane Railway; and (c) the amount of debentures and ministerial certificates issued in payment for estates acquired for purposes of Closer Settlement adjusted in accordance with the balance at debit or credit of the Closer Settlement Fund.

The various items are shown below:—

Items.	30th June,	
	1927.	1928
(a) <i>Funded Debt</i> (stock, debentures and bills outstanding) ...	£ 227,724,466*	£ 245,247,967
(b) <i>Unfunded Debt on Loan Account</i> —		
Debit Balance on <i>General Loan Account</i> ... ..	7,294,306	9,786,432
Debit Balance on <i>Loan Expenditure Suspense Account</i> ... ..	2,902,887	129,546
<i>Commonwealth Advances, Grafton-Kyogle-Brisbane Railway</i> ... ..	605,864	1,904,457
Total debt outstanding on <i>Loan Account</i> ... ..	237,627,523*	256,168,342
Less part proceeds of loan not yet credited ... ..	...	5,551,406
<i>Public Debt proper</i> ... ..	237,627,523*	250,816,936
(c) <i>Net liability on Closer Settlement Fund</i> † ... ..	2,324,542	2,174,451
Total <i>Public Debt on Capital Accounts</i> ... ..	239,952,065*	252,991,387

\* Excluding £10,995,100 raised for redemption purposes and proceeds not credited.  
† Excluding loans included above.

In addition the State had advanced to the Metropolitan Water, Sewerage and Drainage Board sums of £4,115,000 at 30th June, 1927, and £6,495,000 at 30th June, 1928, which had been drawn against trust accounts on deposit with the Treasury in Sydney.

The above statement omits from consideration debit balances on revenue accounts. The total Public Debt on Capital Accounts as shown for 30th June, 1927, differs from the Gross Public Debt as fixed by the Financial Agreement (and shown on page 443 hereof), because the latter excludes a sum of £581,210 representing the excess of debit balances on General Loan Account and Loan Expenditure Suspense over amounts advanced by the Commonwealth for returned soldiers' settlement and erection of wheat silos. Furthermore, only the net liability on Closer Settlement Account is included above, the credit balance of £70,508 being deducted.

The amount accumulated at credit of sinking funds was £562,060 at 30th June, 1927, and £525,667 at 30th June, 1928, so that the net public debt on capital accounts at the respective dates was £239,389,005 and £252,465,720. The net funded debt was £227,161,406 at 30th June, 1927, and £244,722,240 at 30th June, 1928.

#### *Loans Repayable to State.*

A large portion of the public debt of the State is represented by advances to various public bodies and to settlers, etc., and will eventually be repaid to the State and applied in reduction of the public debt. It is not possible to state accurately the amount of such loans outstanding, but the following statement shows the amount of expenditure debited to General Loan Account in respect of the main recoverable loans outstanding:—

Repayable Loans.	30th June,	
	1927.	1928.
	£	£
Housing Fund (in part) ... ..	965,000	857,612
Country Towns Water Supply (in part) ... ..	2,454,311	2,704,165
Country Towns sewerage (in part) ... ..	711,623	781,372
Closer Settlement* ... ..	7,391,767	7,391,767
Advances to Returned Soldier Settlers* ... ..	3,643,014	3,544,005
Advances to Irrigation Farmers* ... ..	1,741,354	1,391,542
Other advances to Settlers ... ..	987,236	1,459,744
Works transferred to Commonwealth ... ..	3,965,687†	3,965,687†

\* Anticipated losses were partly written off in 1923-27 from Commonwealth Advance for Returned Soldiers' Settlement.

† In the financial agreement these works are valued at £4,788,005.

In addition the Metropolitan Water, Sewerage and Drainage Board is required by statute to pay into sinking fund an annual sum equivalent to 5 per cent. of its gross revenue in reduction of capital debt amounting to approximately £25,000,000. Under the Main Roads Act certain sums expended from loans, both before and after commencement of the Act, are required to be repaid from the various Road Funds.

#### THE INTEREST BILL OF THE STATE.

The interest bill of the State is expressed in various ways and, as substantial differences exist between the amounts quoted, some explanation is due. On page 430 the annual interest payable on the funded debt outstanding at 30th June, 1928, is quoted at £12,122,008, a sum which represents a full year's interest calculated on the amount of stock, etc., outstanding at each of the respective rates of interest. This amount differs from the amount of interest due on funded debt during the year (viz., £11,156,322 quoted on page 429), as the latter excludes part of the interest accrued in the year which did not fall due for payment till after 30th June, 1928. This amount again differs from the amount of interest actually paid in respect of the funded debt (viz., £11,348,424, as quoted on this page) by reason of the fact that interest which fell due during the year ended 30th June, 1928, was not paid before the closing of the accounts and notably because the London account is closed on 30th April each year so that considerable amounts of interest due and actually paid on due date are treated as unpaid in the year in question, being included in the following year's accounts.

The total amount of interest paid in 1927-28 and shown in the Treasurer's accounts, inclusive of interest on funded debt, closer settlement debentures, bank overdrafts, and the trust funds, was £12,579,871, which is partly offset by the sum of £19,503 representing interest received from the State's bankers in respect of daily credit balances with the banks, mainly in respect of Special Deposits Account. As this amount of interest was paid by the State's bankers the net total interest paid by the State on all accounts was £12,560,368.

This interest was distributed approximately as follows, figures for 1926-27 being inserted for comparison:—

Interest on account of—	Amount of Interest paid.	
	1926-27.	1927-28.
	£	£
Funded and Inscribed Stock ... ..	9,778,084	10,328,830
Debentures ... ..	499,299	967,373
Treasury Bills ... ..	.....	36,096
Adjustment of Loans ... ..	(—) 29,153	16,125
Funded Debt ... ..	10,248,230	11,348,424
Advances by Commonwealth for construction of Grafton-Kyogle-Brisbane Railway ... ..	17,367	28,413
Overdraft on General Loan Account—		
Advances by Commonwealth for Returned Soldier Settlement ... ..	487,550	573,676
Other ... ..	163,020*	
Loan Expenditure Suspense Account ... ..	88,167*	
Total on Public Debt Proper ... ..	11,004,334	11,950,513
Closer Settlement Debentures ... ..	156,194	108,125
Ministerial certificates ... ..	160	160
Overdraft on Closer Settlement Account ... ..	9,042*	...
Total interest paid on Capital Accounts ... ..	11,170,630	12,058,798
Overdraft Loan to Metropolitan Water, Sewerage and Drainage Board ... ..	155,612	278,859
Overdraft on Consolidated Revenue Account ... ..	229,419*	222,711*
Grand Total, interest paid ... ..	11,555,661	12,560,368

\* Approximate estimate.



The total and most of the items shown in the above table are exact, but the amounts are approximate in respect of the items so marked. Part of the interest paid is not definitely allocated to any account, and has been allotted on a pro rata basis to the accounts shown above, ignoring the small amount of interest chargeable to Coal Purchase Suspense and Public Works Suspense Account.

*Interest Earnings of State.*

Owing to the fact that the accounts of some enterprises on which loan capital has been spent, are not kept on a commercial basis it is not possible to state fully how much net revenue accrues to the State from enterprises constructed from loan capital and is available to meet the interest charges on its loans. The following summary shows the data available in respect of the years ended 30th June, 1927 and 1928:—

	Year ended 30th June,	
	1927.	1928.
	£	£
Interest and surplus earnings actually paid to Consolidated Revenue by—		
Business undertakings ... ..	6,217,605	6,281,699
Metropolitan Water, Sewerage and Drainage Board—		
Loan Capital ... ..	1,248,000	1,268,176
Recouped from Closer Settlement Fund to Consolidated Revenue ... ..	352,648	326,092
Recouped from other funds ... ..	3,602	3,602
Industrial Undertakings ... ..	6,195	5,322
Other Undertakings... ..	193,622	231,458
Properties transferred to Commonwealth ... ..	171,475	171,470
Government grain elevators (estimated surplus earnings)	41,135	31,055
Observatory Hill resumed area (estimated surplus earnings) ... ..	57,874	52,529
Miscellaneous... ..	209,914	200,440
Total on Public Debt Proper (so far as recorded) ...	8,502,070	8,571,843
Interest paid by—		
Closer Settlement Fund on Debentures ... ..	156,194	108,125
Closer Settlement Fund on Ministerial certificates ...	160	160
Metropolitan Water, Sewerage and Drainage Board—		
Loan overdraft ... ..	143,123	264,931
Grand Total (so far as recorded) ... ..	£ 8,801,547	8,945,059

The above statement excludes the net earnings of certain loan works such as the outports, Government Tourist Resorts, public buildings, certain electric lighting enterprises and other undertakings whose accounts have not hitherto been dissected in such a manner as to show the required particulars.

The amount set down in respect of business undertakings is the net surplus earnings and not the amount of interest chargeable at the average rate. That shown for the Metropolitan Water, Sewerage, and Drainage Board is the amount actually recouped to Consolidated Revenue by the Board and is subject to further payments on completion of the assessment of the Board's capital.

*Interest and Charges Paid on Funded Debt.*

The costs incidental to the flotation of loans are charged to the General Loan Account or, more correctly, that account is credited with the net proceeds of loans after deduction of all flotation expenses.

On the other hand the whole of the interest on and expenses of management connected with the public debt are paid from revenue accounts—principally from Consolidated Revenue. Thus the interest chargeable on loan funds expended on works in course of construction is paid from revenue.

The annual payments from revenue for interest and expenses of management connected with the funded debt in recent years were as follow:—

Year ended 30th June.	Interest actually Paid on Funded Debt.*			Expenses of Management (London).	Commission Paid to Financial Agents.	Interest and Charges for Management.	
	London.	Sydney.	Total.			Total.	Per Inhabitant.
1924	£ 5,603,324	£ 3,160,331	£ 8,763,655	£ 26,678	£ 2,361	£ 8,792,694	£ s. d. 3 19 7
1925	6,081,432	3,548,557	9,629,989	25,476	2,426	9,657,891	4 5 9
1926	6,278,218	3,619,348	9,897,566	24,123	2,376	9,924,065	4 6 4
1927	6,599,457	3,677,926	10,277,383	24,885	2,448	10,304,716	4 7 10
1928	7,454,573†	3,893,851	11,348,424	29,609	3,673	11,381,706	4 14 10

\* Including adjustments on external loans.

† Including £512,954 paid in New York.

The work of management in Sydney is carried out by the State Funded Stock Office in conjunction with its other functions and data as to the cost of this work are not available.

The amount of interest shown above in respect of 1927-28 includes payments in respect of interest due in previous years, amounting to £1,294,936 and excludes payments due in 1927-28 but not included in the accounts of that year—£1,118,959. The latter amount consisted almost entirely of interest due and paid in London in May and June, 1928.

#### Average Rate of Interest.

The average rate of interest on the funded debt is calculated in two ways, showing the average nominal rate payable and the effective rate or actual rate paid.

The average nominal rate of interest payable on the funded debt outstanding at 30th June, 1928, was 4.94276 per cent., the rate on the Gold Bonds in New York being 4.86025 per cent., on the portion of the debt registered in London, 4.80704 per cent., and on the portion registered in Sydney 5.22980 per cent. The difference between the two rates lastnamed is nearly  $\frac{1}{2}$  per cent. This, however, does not represent the relative cost of borrowing on the respective markets, but simply the average rates of interest payable on the amount of debt outstanding in each centre. The reason for the difference is largely due to the fact that a considerable proportion of the London loans were raised years ago when rates of interest were much lower than in recent years.

The average effective rate of interest is calculated each year to determine the amount of interest properly chargeable to the various undertakings and enterprises. The rates calculated in recent years have been 1924-25, 5.01327 per cent.; 1925-26, 5.144 per cent.; in 1926-27, 5.1312 per cent.; and 5.12027 per cent. in 1927-28. Interest at the rates shown was charged to business undertakings in respect of loan capital used by them.

## STOCK QUOTATIONS.

The average market prices of certain New South Wales stocks in London and in Sydney are shown in the following table for each month for the year 1927-28, the London figures being taken from the *Economist*, and the Sydney quotations from the *Sydney Stock and Share List*. Accrued dividend is included, except where indicated in the table.

Date.	In London— New South Wales Stock—	In Sydney—Stock bearing Interest at— (Middle of Month.)						
		5½ per cent. Due 1932.	6 per cent. Due 1935.	5½ per cent. Due 1928.	5¼ per cent. Due 1933.	5¼ per cent. Due 1933.	5 per cent. Due 1933.	3½ per cent. Due 1912.*
1927—								
July ...	101	...	101½	103	101½	100	...	...
August ...	101	100½	...	103½	...	...	...	...
September	102	...	...	103½	101½	99½	74½	63
October ...	100†	100¾	...	102¾	101½	99½	74½	...
November	100	100¾	99½	102½	101½	99½	...	...
December	100	100¾	...	...	101½	...	...	...
1928—								
January ...	100	100¾	...	...	101½	...	74½	63½
February	101	101	...	103	101½	99½	...	63½
March ...	101	101½	99¾	...	101½	...	...	63½
April ...	99†	...	...	103	...	...	...	...
May ...	100	101	...	103½	101½	99½	75	...
June ...	100	101	...	103½	102	...	75	63½

\* Redeemable at Government's option on giving twelve months' notice.  
† Excluding dividend.

Consideration of the relationship of price of stock and rates of interest in the above table should take into account the proximity or remoteness of the dates of maturity.

## REDEMPTIONS AND SINKING FUNDS.

The amount of loans redeemed from various funds is shown on page 422.

Under the provisions of the State Debt and Sinking Fund Act, 1904, the Board of State Debt Commissioners was constituted, the members being the Treasurer, the Chief Justice, the Speaker of the Legislative Assembly, and the Under Secretary of the Treasury. Besides administering the sinking fund the Board controls certain trust funds and special accounts.

The original Act provided for a general sinking fund constituted by payment of a sum of £350,000 each year to the credit of the fund, while under the Treasury Bills Deficiency Act, 1905, an additional £50,000 was required to be transferred to the fund whenever a sufficiently large surplus enabled this to be done. The Commissioners apply the credit balance in purchasing or paying-off stock, debentures, or Treasury bills; and they are empowered to invest moneys temporarily in approved securities. The Treasury Bills issued to liquidate revenue deficiencies were all repaid before 30th June, 1913, and the State Debt and Sinking Fund (Amendment) Act, 1914, provided that where at the close of a year there is a deficiency on the Consolidated Revenue Account the Commissioners shall repay any amount, not being greater than such deficiency, which had been issued from the fund to the Commissioners during the year. Since the last-mentioned Act was passed the amount of £350,000 has been paid to the Commissioners each year, but has been returned to the Treasury, so that in effect the sinking fund has not received the benefit of this transfer from revenue since 1912-13.

It has, however, been the practice to credit the loan account with capital repaid to the State by its industrial undertakings, by local governing bodies and by settlers to whom advances have been made. Considerable sums have been received in this way (see page 424). Furthermore, it is provided that from 1st April, 1925, the Metropolitan Water, Sewerage and Drainage Board shall contribute to the State's sinking fund a sum equivalent to 5 per cent. of its annual revenue to be applied in reduction of its capital indebtedness on loan account which forms part of the public debt. The payments under this head amounted to £351,295 at 30th June, 1928.

Special arrangements were made in 1927 to create a sinking fund at  $\frac{1}{2}$  per cent. per annum in connection with a conversion loan of £10,995,100 raised in London, and at the same time it was decided to establish a sinking fund of  $\frac{1}{2}$  per cent. per annum on the balance of New South Wales loans registered in London at 30th June, 1926, viz., £129,068,304. These sinking funds were to operate from 1st July, 1928, but it is proposed to make increased provision in regard to them in the financial agreement between Commonwealth and States (described on a later page).

Sinking funds at a rate sufficient to repay half the loans by due date have been established as from 1st July, 1927, on two loans each of £5,136,988 (25,000,000 dollars) raised in New York in February and April, 1927.

The annual sinking fund commitments of the State at 30th June, 1927, were approximately:—

		£
Loans raised in New York ...	(£10,273,973) ... from 1-7-27...	73,232
Conversion loan raised in London (£10,995,100) at $\frac{1}{2}$ per cent. from 1-7-28...		54,976
Balance of loans outstanding in London at 30-6-26 ... (£129,068,304) at $\frac{1}{2}$ per cent. from 1-7-28...		322,671

in addition to contributions to the Commonwealth sinking fund in respect of Commonwealth advances. These commitments were increased by the amount of sinking fund payable on additional borrowings in 1927-28, and as from 1st July, 1928, the State will provide sinking fund payments upon the whole of its public debt.

The transactions of the sinking fund for the financial years ended the 30th June, 1927 and 1928, were as follow:—

	1926-27.	1927-28.
	£	£
<b>RECEIPTS.</b>		
Balance brought forward, ... ..	596,296	366,310
Annual contribution from Consolidated Revenue Fund ... ..	350,000	350,000
Repayments—Country Towns—		
Water Supply ... ..	14,811	16,059
Sewerage ... ..	3,956	4,404
Interest—Funded Stock ... ..	7,221	7,221
Deposit with Colonial Treasurer ... ..	5,858	3,220
Metropolitan Water, Sewerage, and Drainage Account, Contribution under sec. 70 (2) of Act No. 50 of 1924 ... ..	113,168	123,014
Total ... ..	£ 1,091,310	870,228
<b>EXPENDITURE.</b>		
Repaid to Consolidated Revenue Fund ... ..	350,000	350,000
Redemption of N.S.W. Funded Stock ... ..	375,000	180,000
Balance carried forward—		
Invested in N.S.W. Funded Stock (purchase price) ... ..	202,774	202,774
On Deposit with Colonial Treasurer (at interest) ... ..	163,536	137,454
Total ... ..	£ 1,091,310	870,228

In addition to the above, the State makes annual contributions to the Commonwealth sinking fund in respect of its share of £2,981,850 in the Commonwealth Loan for States raised in 1924, and in respect of advances made by the Commonwealth in connection with returned soldiers' settlement, and the construction of the Grafton-Kyogle-Brisbane railway. These payments commenced in 1925-26 and the amounts have been as follow:—

New South Wales Contributions to Commonwealth Sinking Fund.	1925-26.	1926-27.	1927-28.
	£	£	£
Loan raised by Commonwealth for State ... ..	14,909	14,909	14,909
Advances by Commonwealth in respect of—			
Grafton-Kyogle-Brisbane railway construction ... ..	484	1,737	4,900
Returned Soldiers' Settlement ... ..	...	20,503	10,252
Total ... ..	£ 15,393	37,149	30,061

The total amount of loans used for capital expenditure repaid by the State and the total amount accumulated at credit of sinking funds to 30th June, 1928, was £6,263,012, comprised as follows:—

	£
Repayment of Loans credited to Loan Account ... ..	5,298,483
„    Loan for advances to settlers ... ..	305,000
Accumulated credit of State Sinking Fund... ..	347,392
Redemption of Commonwealth Stock from Sinking Funds ... ..	56,499
Redemption of Gold Bonds (New York) ... ..	77,363
Credit Balances in Commonwealth Sinking Fund (£30,031)	
New York (£172) ... ..	30,233
Accumulated credit Water and Drainage Loan Redemption Fund ... ..	148,042
Total provided in reduction of Capital Debt ...	£6,263,012

In addition, a sum of £5,762,533, consisting mainly of loan funds utilised to meet revenue deficits prior to 1905, has been entirely repaid from revenue, and the following sums have been credited to capital accounts from revenue, viz.:—£175,838 to Loan Account and £2,191,182 to Closer Settlement Account. Beyond these sums an aggregate amount of £11,055,219 from the revenue paid into the Public Works Fund has been expended since 1905 on constructional work as distinct from renewals.

The above repayments, however, are exclusive of repayments credited to various votes under General Loan Account by reason of recoups from Public Works Fund; proceeds of sales of land, works and materials acquired from loan funds; repayments of loan capital from profits earned by industrial undertakings and repayment of advances made by the State from loan funds,

VALUE OF LAND AND NATURAL RESOURCES OWNED BY STATE.

The following table provides an approximate summary of the value of the extensive land and natural resources owned by the State at 30th June, 1925, and of the annual revenue derived therefrom:—

	Area.	Estimated Value, 30th June, 1925.	Revenue derived, 1924-25.
	Acres.	£	£
<b>Land—</b>			
<b>Occupied by Tenants—</b>			
Perpetual leases ... ..	4,767,500	*2,250,000	110,700
Convertible leases ... ..	14,185,400	*4,250,000	210,300
Other leases ... ..	19,801,400	†24,750,000	225,300
Western land leases ... ..	75,119,900	†15,000,000	114,400
Mining leases ... ..	201,700	*450,000	21,000
<b>Total (omitting reserves and all unoccupied Crown Lands ... ..)</b>	<b>114,075,900</b>	<b>46,700,000</b>	<b>681,700</b>
<b>Sold on Terms as—</b>			
Conditional purchases and instalment sales ... ..	18,156,200	\$9,950,000	{ Prin. 685,900 Int. 333,800
Settlement Purchases ... ..	3,100,000	†12,500,000	‡500,000
<b>Total ... ..</b>	<b>21,256,200</b>	<b>22,450,000</b>	<b>1,519,700</b>
<b>Total value of State land assets and revenue therefrom ... ..</b>	<b>.....</b>	<b>69,150,000</b>	<b>2,201,400</b>
<b>Forests—</b>			
Dedicated State Forests and Timber Reserves ... ..	6,783,400	20,000,000	210,800
<b>Mineral Rights—</b>			
Royalty on Minerals (capitalised at twenty years' purchase) ... ..	Practically whole State.	3,550,000	176,500
<b>Grand Total ... ..</b>	<b>.....</b>	<b>92,700,000</b>	<b>2,588,700</b>

\*Annual rental capitalised at twenty years' purchase. † Approximate value freehold.  
‡ Approximate. § Balance of purchase money due to State.

While the above statement is not complete, it affords some idea of the extent of the vast assets of the State apart from those acquired by the expenditure of loan moneys. The statement is exclusive of an area of 120,000 acres of irrigated lands and 250,000 acres of irrigable lands in course of development and owned by the Government within the Murrumbidgee irrigation areas and of smaller areas elsewhere. Data for a valuation are not at present available.

The table brings out the fact that the State has assets in land and natural resources valued conservatively at approximately £93,000,000, from which it derives an annual revenue of £2,600,000. This low proportional return on capital value (about 2 per cent. excluding revenue from sales) is due to the fact that rentals of lands leased to Crown tenants are fixed by law in many cases as low as 1½ per cent. of assessed unimproved value, in order to encourage settlement and facilitate development. The interest on balances due on conditional purchases is generally 2½ per cent. per annum, and the interest on closer settlement purchases, approximately 5 per cent., being the amount paid on debentures.

The resources embraced in State forests and in the mines of the State are far in excess of present-day needs and have immense prospective value though only present-day values have been attributed to them in the above calculations.

Approximately 53 per cent. of the revenue from land sales is devoted to the construction of public works of a non-revenue producing character, and one-half of the annual revenue of State forests is invested in the further development of forests.

Apart from a loan indebtedness of £9,779,183 in respect of the settlement purchases shown above and the interest charge of approximately £500,000 thereon, the above assets are entirely unencumbered and the whole of the revenue is within the unfettered disposal of the State.

#### FINANCIAL RELATIONSHIP BETWEEN COMMONWEALTH AND STATES.

The history of the financial relationships existing between the Commonwealth and States since federation in 1901 has been sketched in previous issues of this Year Book and the trend of recent discussions on proposals for the readjustment of these relationships was outlined on page 284 of the Year Book for 1925-26.

#### *Financial Agreement, 1927.*

The whole of the matters under discussion were incorporated in a comprehensive scheme propounded by the Commonwealth and placed before conferences of Premiers in Melbourne in May, 1927, and in Sydney in July, 1927.

A summary of the draft copy of the proposals was published in the last issue of this Year Book. The scheme as finally ratified was amended in some important details.

The agreement reached provided a settlement of the question of (i) an alternative to the system of per capita payments by the Commonwealth to the States incorporated by the Surplus Revenue Act, 1910; (ii) the creation of an effective Australian Loan Council to co-ordinate public borrowing; and (iii) the liability of the Commonwealth to the States in respect of transferred properties. In addition it provides for the creation of a uniform sinking fund in respect of the public debts of the Commonwealth and the States.

The following is a summary of the salient features of the agreement:

#### *Australian Loan Council.*

An integral part of the scheme is the creation of an Australian Loan Council consisting of a Minister of the Commonwealth appointed by the Prime Minister, and one Minister of each State appointed by the Premiers of the respective States. All future borrowings are to be arranged by the Commonwealth in accordance with the decisions of the Loan Council, which will determine the amount, rates and conditions of loans to be raised. The Commonwealth and each State will submit an annual programme showing the amount desired to be raised by loan for expenditure each year, and the amount of repayments estimated to be available towards meeting that expenditure. Should these loan programmes exceed in the aggregate the amount which the Loan Council decides can be borrowed at reasonable rates and conditions in the year in question, the amount raised is to be apportioned in accordance with the unanimous decisions of the Loan Council, and, failing unanimity, the Commonwealth is to be entitled to one-fifth of the total amount raised and each State to a proportion of the remaining four-fifths equal to a ratio of their respective net loan expenditures to the total loan expenditure of the States in the preceding five years. Questions other than the apportionment of loans are to be

determined by majority vote of the Council, the Commonwealth representative having two votes and a casting vote and each State representative one vote. Loans (other than for temporary purposes) raised by a State or by the sale of securities from Governmental institutions, including Savings Banks, are within the jurisdiction of the Loan Council, but loans for defence approved by the Commonwealth Parliament are excluded from it.

#### *Future Borrowing.*

All future borrowings by the Commonwealth and States are to be made in accordance with the agreement.

Subject to the decisions of the Loan Council, the Commonwealth will arrange for all borrowings on behalf of the Commonwealth and the States, and for all conversions, renewals, redemptions and consolidations of the Public Debts of the Commonwealth and States.

If, however, the Local Council unanimously decides, a State may borrow money outside Australia in its own name, and such loans will be guaranteed by the Commonwealth. Only in this case may a State invite loan subscriptions by the issue of a public prospectus.

Within its own territory the Commonwealth or any State may borrow money from any Government institution or from the public by sales of securities over the counter, or may use any available public moneys for any purpose provided that any securities issued are Commonwealth securities on terms approved by the Loan Council. Where such borrowings are not solely for temporary purposes they are to be treated as loans under the agreement, and if their amount, added to the amount of loan money raised for the Government concerned by the Loan Council, exceeds the limit (if any) of the amount to be raised for or by the Government in question, the excess is to be deducted from the Government's quota of borrowed money in the ensuing year.

Where such borrowings are for temporary purposes only the conditions as to sinking fund, etc., do not apply. Any Government may borrow for temporary purposes by way of overdraft or fixed or other deposit, subject to terms approved by the Loan Council.

#### *Payment of Interest on Public Debt.*

The Commonwealth agrees to contribute for each of the years 1927-28 and 1928-29 the following amounts towards payment of the interest on the public debt of each State:—

	£
New South Wales .. .. .	2,917,411
Victoria .. .. .	2,127,159
Queensland .. .. .	1,096,235
South Australia .. .. .	703,816
Western Australia .. .. .	473,432
Tasmania .. .. .	266,859
Total .. .. .	<u>£7,584,912</u>

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926-27 at the rate of 25s. per head of population.

Provided the agreement is validated by the Commonwealth Parliament before 1st July, 1929, under powers to be conferred by an amendment of the Federal Constitution, as proposed in the agreement, the following arrangement in respect of interest will operate:

The Commonwealth, as agent for the States, will pay to bondholders interest due on the public debt of the States and, for a period of fifty-eight years from 1st July, 1927, will contribute the amounts stated above, the States paying the balance due to the Commonwealth for interest paid to bondholders. After that period the whole of the interest due will be paid by the States to the Commonwealth.



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(ii) *Sinking Funds.*

A uniform sinking fund is to be established on the net amount of State debts existing at 30th June, 1927, to provide (if the permanent provisions of the agreement are validated by the Federal Parliament) for the extinction of these debts within a period of fifty-eight years. The net amount of State debts is defined as the gross amount, less accumulated sinking funds, at 30th June, 1927, and less the amount of liability assumed by the Commonwealth in respect of transferred properties.

The net amount of the public debt of New South Wales as at 30th June, 1927, was arrived at as follows:—

	£
Gross Public Debt as per Treasurer's Accounts ... ..	238,719,566
<i>Less</i> conversion loans to be credited ... ..	10,995,100
	227,724,466
<i>Add</i> Debts to Commonwealth (not included above)—	£
Advances for Returned Soldiers' Settlement ... ..	8,465,983
Advances for erection of Wheat Silos ... ..	250,000
Expenditure on Grafton-Kyogle-South Brisbane Railway ... ..	605,864
	9,321,847
Closer Settlement Debentures outstanding ... ..	2,395,050
	*239,441,363
Gross Public Debt (as per agreement)	
<i>Less</i> Credit Balances of Sinking Funds—	
State Debt Commissioners ... ..	373,474
National Debt Commissioners ... ..	57,225
Water, Sewerage and Drainage Redemption Fund ... ..	134,158
	564,857
Agreed value of Properties transferred to Commonwealth ... ..	4,788,005
	5,352,862
Net public debt of New South Wales existing on 30th June, 1927, for purposes of agreement ... ..	234,088,501

\*The small difference between this sum and the total public debt on capital accounts at 30th June, 1927 is explained on page 432.

The contributions paid to the sinking fund on existing debt are to be from revenue at the rate of 7s. 6d. per cent. per annum, of which 2s. 6d. will be contributed by the Commonwealth and 5s. by each of the States on their respective debts. Where commitments for sinking fund payments on State loans existing at 30th June, 1927, are in excess of 7s. 6d. per cent. the excess is to be met from the general balances of the Commonwealth National Debt Sinking Fund. It is provided that the sinking fund contributions of New South Wales over and above existing obligations shall commence as from 1st July, 1928. On conversions of existing debt the sinking contribution is to remain at 7s. 6d. per cent.

The sinking fund on new loans raised after 1st July, 1927 (other than for conversion of existing State loans) is to be at the rate of 10s. per cent. per annum payable in equal shares by the Commonwealth and States to

extinguish such new loans within fifty-three years of date of raising, provided the agreement is validated by the Federal Parliament before 1st July, 1929. Sinking fund contributions by New South Wales in respect of loans raised in 1927-28 are to commence from 1st July, 1928. It is provided that, by agreement, any State may increase its contribution in respect of loan funds expended on wasting assets and that when such loans are extinguished the State contribution in respect thereof shall cease, but the Commonwealth contribution shall continue and be treated as part of the State contribution in respect of other loans.

It is provided further that repayments made to a State in respect of recoverable advances made by it shall be credited either to loan account or to sinking fund, and that the sinking fund contribution from revenue in respect thereof shall continue. But advances repaid to the State from the revenue of public or local authorities may be used by the State to meet sinking fund contributions in respect of the loans concerned. Loans raised to meet revenue deficits accruing after 1st July, 1927, are to be repaid solely by the State concerned by annual payments of not less than 4 per cent. of the amount of such loan. Provided the agreement is validated by the Commonwealth Parliament before 1st July, 1929, under powers to be conferred by an amendment of the Federal Constitution as proposed in the agreement, the following additional provisions will operate:—

Any loan issued after 30th June, 1927, to meet revenue deficits accrued before that date will be treated as a new loan under the agreement.

All moneys and securities standing to credit of State sinking funds at 30th June, 1929, are to be paid to the credit of the respective States with the National Debt Commission or to trustees where existing contractual obligations so require.

The sinking funds are to be controlled by the National Debt Commission, and the National Debt Commission may, by arrangement, act as agent for any State in paying its bondholders.

The contributions to sinking fund are not to be accumulated but will be applied, whenever expedient, to the redemption and re-purchase of loan securities. Such redeemed or re-purchased securities will be cancelled, and the State concerned will pay to the National Debt Commission interest at the rate of 4½ per cent. per annum in addition to sinking fund contribution in respect of such cancelled securities.

#### *Transfer of States' Debts to Commonwealth.*

Provided the agreement is validated by the Federal Parliament before 1st July, 1929, by Act following on an amendment of the Constitution, the Commonwealth will take over on 1st July, 1929—

(i) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927; and

(ii) all other debts of each State existing on 1st July, 1929, other than for temporary purposes,

and in respect of the debts so taken over will assume, as between the Commonwealth and States, the liabilities of the States to bondholders.

The net public debt of each State existing on 30th June, 1927, and embraced within the agreement is as follows:—

	£
New South Wales .. .. .	234,088,501
Victoria .. .. .	136,949,942
Queensland .. .. .	101,977,855
South Australia .. .. .	84,834,364
Western Australia .. .. .	61,060,675
Tasmania .. .. .	22,434,060
<b>Total</b> .. .. .	<b>£641,345,397</b>

*Transferred Properties.*

During each of the two years ended 30th June, 1929, the Commonwealth will pay to the respective States interest at the rate of 5 per cent. per annum on the agreed value of properties in that State transferred to the Commonwealth after federation, under section 85 of the Constitution, such agreed values being—

	£
New South Wales .. .. .	4,788,005
Victoria .. .. .	2,302,862
Queensland .. .. .	1,560,639
South Australia .. .. .	1,035,631
Western Australia .. .. .	736,432
Tasmania .. .. .	500,754
Total .. .. .	£10,924,323

Provided the agreement is validated by the Federal Parliament, as explained above, all questions relating to transferred properties are to be settled on the following basis:—

As from 1st July, 1929, the Commonwealth will assume liability for principal, interest and sinking fund on an amount of the State debts equal to the agreed value of the transferred properties. The interest liability of the Commonwealth in respect of such debt is to be 5 per cent. per annum, but the particular part of the debt for which the State is to be freed of liability is to be determined by the Commonwealth.

Each State is to issue freehold titles to the Commonwealth for transferred properties, consisting of land or interests in land in the State.

*Miscellaneous Provisions.*

Separate accounts will be kept by the Commonwealth for each State, in respect of debt, interest, and sinking funds.

Each State will pay to the Commonwealth all expenses incurred on its behalf in performance of the agreement, including expenses of loan flotation, conversion, renewal and management, stamp duties, commission on payment of interest and exchange.

A certificate of the Auditor-General of the Commonwealth shall be accepted as final in the event of a dispute as to the amounts to be paid by a State to the Commonwealth.

Each State indemnifies the Commonwealth against liability in respect of its debt taken over by the Commonwealth (except on amount of transferred properties) and of loans raised on its behalf.

*Inauguration of Scheme.*

Except in certain minor matters, the scheme will operate as a whole as from 1st July, 1927, but, the continuance of the provisions as to payment of interest, sinking funds, and transferred properties in their existing form beyond 30th June, 1929, is contingent upon an amendment of the Constitution to permit the Federal Parliament to validate the agreement.

The proposed amendment consists of the insertion of the following new section in the Federal Constitution Act:—

"105A. (1) The Commonwealth may make agreements with the States with respect to the public debts of the States, including:—

"(a) the taking over of such debts by the Commonwealth;

"(b) the management of such debts;

"(c) the payment of interest, and the provision and management of sundry funds in respect of such debts;

"(d) the consolidation, renewal, conversion, and redemption of such debts;

"(e) the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and

"(f) the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.

"(2) The Parliament may make laws for validating any such agreement made before the commencement of this section.

"(3) The Parliament may make laws for the carrying out by the parties thereto of any such agreement.

"(4) Any such agreement may be varied or rescinded by the parties thereto.

"(5) Every such agreement and any such variations thereto, shall be binding upon the Commonwealth and the States parties thereto, notwithstanding anything contained in this constitution or the constitution of the several States, or in any law of the Parliament of the Commonwealth or of any State.

"(6) The powers conferred by this section shall not be construed as being limited in any way by the provisions of Section 105 of the constitution."

An Act was passed by the Federal Parliament on 2nd April, 1928, approving of the agreement, appropriating funds necessary for the purpose of carrying out the agreement, and empowering the Treasurer to borrow on behalf of, or lend money to the States in terms of the agreement. In November, 1928, the proposed amendment of the Commonwealth Constitution was submitted by referendum to the Commonwealth and approved by a majority in all the States.

The agreement was validated by the Parliament of New South Wales on 16th June, 1928, and has been validated by all State Parliaments.

#### *Financial Effects of Agreement.*

The following table, submitted to the Legislative Assembly during the discussion on the agreement, indicates the approximate financial effects of the agreement, so far as regards relationship between the Commonwealth and New South Wales. As from 1st July, 1928, the financial gain to the State (as here shown) will be diminished by the amount of sinking fund to be paid by the State, in terms of the agreement, on State debt registered in Sydney.

Year.	Contribution by Commonwealth to State in terms of agreement.				Estimated payments by Commonwealth under existing conditions.			Increased contribution by the Commonwealth, as compared with existing conditions.
	Annual contribution by Commonwealth towards interest on public debt.	Interest payable on transferred properties.	Sinking Fund Contribution due by Commonwealth.	Total amount payable.	Per capita grant, 25s. per head.	Interest on transferred properties at $3\frac{1}{2}$ per cent. per annum.	Total amount payable.	
	£	£	£	£	£	£	£	£
1927-28	2,917,411	239,400	292,610	3,449,421	2,969,553	167,580	3,137,133	312,288
1928-29	2,917,411	239,400	322,610	3,479,421	3,028,944	167,580	3,196,524	282,897
1929-30	2,917,411	239,400	352,610	3,509,421	3,089,523	167,580	3,257,103	252,318
1930-31	2,917,411	239,400	382,610	3,539,421	3,151,313	167,580	3,318,893	220,528
1931-32	2,917,411	239,400	412,610	3,569,421	3,214,340	167,580	3,381,920	187,501
1932-33	2,917,411	239,400	442,610	3,599,421	3,278,626	167,580	3,446,206	153,215
1933-34	2,917,411	239,400	467,610	3,624,421	3,344,199	167,580	3,511,779	112,642
1934-35	2,917,411	239,400	492,610	3,649,421	3,411,083	167,580	3,578,663	70,758
1935-36	2,917,411	239,400	517,610	3,674,421	3,479,305	167,580	3,646,885	27,536
1936-37	2,917,411	239,400	542,610	3,699,421	3,548,891	167,580	3,716,471	(-) 17,050

Loan raisings have been assumed to be £12,000,000 per annum for five years from 1927-28, and £10,000,000 per annum thereafter. The average annual increase in the amount which would have been received under the per capita grant is assumed to be 2 per cent. per annum.

## PRIVATE FINANCE.

## CURRENCY.

CURRENCY matters in Australia are under the supervision of the Commonwealth Government. Matters relating to the metallic currency are administered in terms of the Coinage Act, 1909, and the paper currency is controlled by the Commonwealth Bank Act, 1911-1927, and the Bank Notes Tax Act passed in 1910.

During the war period restrictions were placed upon the use of gold. The banks and the Mint ceased to issue gold coins to the public, and paper money came into general use. The removal of restrictions on the export of gold re-established the gold standard in international transactions in April, 1925, but notes are used for internal currency.

An estimate of the face value of the currency of New South Wales at five-year intervals between 1901 and 1921 was published in the 1921 issue of this Year Book in the chapter relating to Valuation of Wealth, details being given regarding the sources of data and the method used in formulating the estimate.

The face value of coins held by banks in New South Wales at 30th June, 1928, was: Gold £10,943,797, silver £915,464, and copper £50,975. In addition, the Note Issue Department of the Commonwealth Bank held, in Sydney, gold coin to the value of £2,828,005. The corresponding figures as at 30th June, 1927, were: Gold coin £10,981,563, silver £918,109, copper £50,385, and gold coin in Note Issue Department, Sydney, £2,456,005.

## COINAGE.

British or Australian gold coins are legal tender in New South Wales for the payment of any amount, silver coins up to forty shillings, and bronze up to one shilling.

A branch of the Royal Mint, London, was opened in Sydney on 14th May, 1855, for minting gold, and operated until 18th November, 1926. Branches are in operation in Melbourne (Victoria), and in Perth (Western Australia). The Commonwealth Coinage Act, 1909, empowers the Federal Treasurer to make and issue silver and bronze coins of specified denominations. A nickel coinage also was authorised, but it has not been issued.

For gold coins the standard fineness is  $\frac{11}{12}$  fine gold,  $\frac{1}{12}$  alloy; for silver coins  $\frac{27}{10}$  fine silver,  $\frac{3}{10}$  alloy; bronze coins are of mixed metal—copper, tin, and zinc. Thus, standard or sovereign gold has a fineness of 22 carats, and the gold contained in deposits sent to the Mints for melting, assaying, and coining is accounted for at the rate of £3 17s. 10½d., or 3·8937 sovereigns per oz.

The nominal value of one ounce of silver coined into sixpences is 5s. 6d., and of one pound (avoirdupois) of bronze coined into pence 4s., and into half pence 3s. 4d.

As the coinage value of an ounce of silver is 5s. 6d., a substantial profit is usually made on the coinage, after the minting and other expenses have been deducted. Under normal conditions, the price of silver is determined by transactions in the London market, and the average of the prices ruling there in recent years is shown below:—

Year.	Price of Silver per standard oz.		Year.	Price of Silver per standard oz.	
	s.	d.		s.	d.
1918	3	11·6	1923	2	7·9
1919	4	9·1	1924	2	9·9
1920	5	1·6	1925	2	8·1
1921	3	0·9	1926	2	4·7
1922	2	10·4	1927	2	2·0

In 1918 the price of silver in London was subject to regulation by the Imperial Government. It was decontrolled in May, 1919, and in the latter part of the year it commenced to rise rapidly until it temporarily exceeded the coinage value. The maximum was reached in February, 1920, when the average price for the month was 7s. 6d. per oz. Thereafter it declined rapidly, and in June of the same year the price was 3s. 4d. per oz. The annual average fell steadily between 1921 and 1923. In 1924 there was a rise of 2d. per oz., but this was not maintained. The average was high during the first six months of the year 1926, then it declined by 5½d. per oz. before the end of the year, when the price, 24½d. was lower than at any time since 1915. The price rose by 1½d. early in 1927, and remained fairly constant throughout the year, the annual average being 2½d. lower than in 1926.

#### PAPER CURRENCY.

##### *Bank Notes.*

Prior to 1910 the right to issue paper currency in New South Wales was vested in private banking institutions which had acquired the right by Royal charter or by special Act of Parliament, the bank notes being subject to a tax of 2 per cent. per annum imposed by the State. In 1910 the Federal Parliament, having authorised the issue of Australian notes, imposed a tax of 10 per cent. on the notes of the trading banks, with the object of forcing them out of circulation. Consequently the value of the bank notes current dropped from £2,213,128 in December quarter, 1910, to £400,784 in the following year. In June quarter, 1928, the amount was £64,398.

##### *Australian Notes.*

The Australian Notes Act, 1910, passed by the Commonwealth Parliament, prohibited the circulation of notes by any of the States and authorised the Federal Treasurer to issue Australian notes, in denominations of 10s., £1, £5, £10, and multiples of £10, to be legal tender throughout the Commonwealth, and to be payable on demand at the seat of Federal Government. Five-shilling notes were authorised, but have not been issued. The gold reserve in respect of the notes was fixed at an amount not less than one-fourth of the notes issued up to £7,000,000, and £ for £ in excess of that amount, but in the following year the Act was amended and the reserve was fixed at one-fourth of the issue.

In December, 1920, control of the Australian note issue was transferred to the Commonwealth Bank, in which a Note Issue department was established. Since the transfer the notes have been issued by the Commonwealth Bank and are payable at the head office of the Bank. Under the Act of 1920, the management of the note issue was entrusted to a Board, consisting of the Governor of the Bank as chairman, and three other directors appointed by the Governor-General, one being an officer of the Commonwealth Treasury. Under the provisions of the Commonwealth Bank (Amendment) Act of 1924 the note issue was placed under the control of the Board of Directors of the Bank, but a decision affecting the issue is not effective unless six of the eight directors vote for it at a meeting at which all the directors are present, or five vote for it when any of the directors is absent.

The Act of 1924 authorises the Board to issue Australian notes to banks in Australia in exchange for money or securities lodged with the London branch of the Commonwealth Bank. This provision was made to obviate monetary difficulties arising from market fluctuations in rates of exchange between Australia and London.

Of the net profits of the note issue, after paying working expenses and commission to the Commonwealth Bank for the purpose of its general business, 25 per cent. is to be paid into the Rural Credits Department of the Bank in terms of an amending Act passed in 1925—until the amount so paid reaches a total of £2,000,000. The balance of the net profits is paid to the Treasury of the Commonwealth. The money derived from the issue, apart from the gold reserve, may be invested on deposit with any bank; in securities of the United Kingdom, of the Commonwealth, or of a State; or in trade bills with a currency of not more than 120 days.

The total value of the Australian notes in circulation in New South Wales and elsewhere, and the gold reserve held by the Notes Issue Department, in each year since 1914, are shown below:—

End of June.	Notes in Circulation.			Gold Reserve.	
	Held by Banks.	Held by Public.	Total.	Total.	Proportion of Note Circulation.
	£	£	£	£	Per cent.
1914 ...	...	...	9,573,738	4,106,767	42.90
1915 ...	...	...	22,128,302	11,034,703	34.34
1916 ...	...	...	44,600,546	16,112,943	36.12
1917 ...	...	...	47,201,564	15,244,592	32.29
1918 ...	...	...	52,535,959	17,659,754	33.61
1919 ...	...	...	55,567,423	24,273,622	43.68
1920 ...	...	...	56,949,030	23,658,092	41.54
1921 ...	34,303,896	23,924,174	58,228,070	23,478,128	40.32
1922 ...	30,279,015	23,302,906	53,582,011	23,534,181	43.94
1923 ...	28,901,751	23,200,490	52,102,241	24,443,980	46.91
1924 ...	34,518,427	22,371,790	56,890,226	24,441,277	42.96
1925 ...	31,025,802	22,864,424	53,890,226	25,841,027	47.95
1926 ...	30,254,509	23,635,726	53,890,226	28,182,387	52.30
1927 ...	23,479,995	24,913,231	48,393,226	22,065,071	45.60
1928 ...	19,510,226	24,913,000	44,453,226	22,485,972	50.58

The figures shown above for 1921 and later years relate to the last Monday in June. For earlier years they are as the last Wednesday.

The amount of notes in circulation was increased in 1924, when notes to the value of £4,200,000 were issued to the banks to discharge certain liabilities incurred by the Government in connection with war financial transactions. Arrangements were made in October, 1924, by which additional notes up to £15,000,000 were to be made available to the banks, if required, to finance the export trade in wool and wheat. There was no increase in the note issue subsequent to the agreement, and at the end of May, 1925, notes to the value of £3,000,000 were cancelled. The amount of issue then remained unchanged until July, 1926, when it was reduced by £1,000,000. In August there was a further reduction of £3,000,000; in January, 1927, an increase of £503,000, and in March, 1927, a decrease of £2,000,000, reducing the total circulation to £48,393,226.

Then the issue remained unaltered until December, 1927, when there was a temporary increase of £3,400,000. This increase enabled the banks to meet the seasonal demand by the public, who require more notes for the Christmas holidays, and it is probable that it was to some extent a result of an arrangement whereby the banks agreed to underwrite a loan which was being raised by the Federal Government to redeem war loans maturing on 15th December. As the seasonal demand contracted and bank deposits expanded by reason of repayments of the matured loan, the note issue was reduced again, and by the end of January, 1928, it had fallen below the former level to £47,893,226.

Thereafter the trend was generally downwards so that at the end of June, 1928, the value of notes in circulation was lower by £7,340,000 than at the beginning of the year. The net decline monthly, taking the figures at the last Monday, was as follows:—January £3,900,000, February £2,025,000, March £500,000, April £600,000, May £140,000, June £175,000.

In comparison with the issue as at the end of June of the preceding year the value of notes in circulation in June, 1928, was lower by £3,940,000. Practically the whole of the decrease has occurred in notes of the largest denomination, viz., £1,000, which the banks used to hold in their vaults as part of their cash reserves. As it has become the policy of the Board of Directors to restrict the note circulation to immediate requirements and to provide additional currency to meet seasonal demands, the banks need no longer hold notes in excess of those required as till money and the surplus notes are deposited with the Commonwealth Bank and cancelled.

The value of the gold reserve held by the Note Issue Department is far above the proportion, 25 per cent., required by law, the excess in June, 1928, being £11,372,666.

*Money Orders and Postal Notes.*

Exchange by means of money orders and postal notes is conducted by the Post Office. The maximum amount which may be transmitted by a single money order is £20, if the place of payment is within the Commonwealth; to places outside the Commonwealth the maximum is £10, £20, or £40, as fixed by arrangement with the country concerned. The following table gives particulars of the money orders issued and paid in New South Wales during the last five years:—

Year ended 30th June.	Money Orders issued in New South Wales for payment in—				Money Orders issued elsewhere, paid in New South Wales.		
	New South Wales.	Other Australian States.	Other Countries.	Total.	In other Australian States.	Beyond the Commonwealth.	Total.
	£	£	£	£	£	£	£
1923 ..	5,200,893	655,472	361,706	6,218,071	822,959	261,112	1,084,071
1924 ...	5,274,373	679,073	368,042	6,321,488	904,943	291,373	1,196,316
1925 ...	5,522,731	726,857	367,403	6,616,991	953,194	315,294	1,268,488
1926 ...	5,813,122	769,995	390,340	6,973,457	1,010,030	292,357	1,302,387
1927 ...	6,237,444	856,821	438,340	7,532,605	905,601	274,447	1,180,048

The amount of the money orders issued in other Australian States for payment in New South Wales exceeds the amount sent from this State, but in the international money orders the balance is against New South Wales.

The maximum amount for which a single postal note is issued is £1, and particulars regarding them are shown below:—

Year ended 30th June.	New South Wales Postal Notes paid in—			Postal Notes of other Australian States paid in New South Wales.
	New South Wales.	Other Australian States.	Total.	
	£	£	£	£
1923 ...	1,331,512	370,307	1,701,819	177,183
1924 ...	1,383,017	408,289	1,791,306	163,216
1925 ...	1,476,859	458,494	1,935,353	176,329
1926 ...	1,529,254	529,413	2,058,667	186,633
1927 ...	1,617,272	651,980	2,269,252	193,301



The amount of money sent by postal notes to the other States is more than three times the aggregate value of the interstate postal notes paid in New South Wales. This method of transmitting small sums is used extensively for the purchase of shares in lotteries conducted in other States, the sale in New South Wales being prohibited.

The number of New South Wales postal notes paid in the State during the year ended June, 1927, was 4,111,734, and 2,015,254 were paid in other Australian States. The postal notes issued in other States and paid in New South Wales numbered 503,432.

#### BANKS.

Institutions which transact banking business are required under the Banks and Bank Holidays Act to furnish to the Chief Secretary quarterly statements of their assets and liabilities; also, when required, to furnish special statistical returns under the State Census Act of 1901. From these returns, and from the periodical balance-sheets issued by the banking companies, the information contained in the following tables has been prepared. Under the Commonwealth Bank Act the banks are required to supply weekly statements of their Australian business to the Commonwealth Bank.

The banking institutions which transact business in New South Wales are sixteen in number, but only twelve have more than one office in the State. All of these transact practically the whole of their business in Australia, and all except three are controlled in Australia.

The location of the head offices and the distribution of the branches of the sixteen banks operating in New South Wales at 30th June, 1928, are shown in the following table:—

Banks Operating in New South Wales.	Number of Offices in—										
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Federal Capital.	New Zealand.	London.	Elsewhere.
<b>Head Office in N.S.W.—</b>											
Commonwealth of Australia ... ..	23	16	30	5	7	4	...	1	...	2	1
Rural ... ..	183	...	...	...	...	...	...	1	...	...	...
New South Wales ... ..	193	55	52	8	66	3	...	1	63	1	7
Commercial of Sydney ... ..	220	122	31	5	...	...	...	1	...	1	...
Australian Bank of Commerce ... ..	124	1	23	1	1	...	...	...	...	1	...
Primary Producers ... ..	13	14	16	11	12	2	...	...	...	1	...
<b>Head Office in Victoria—</b>											
Commercial of Australia ... ..	89	193	90	97	25	47	1	1	46	1	...
National of Australasia ... ..	42	150	38	49	43	2	...	...	...	2	...
<b>Head Office in Queensland—</b>											
Queensland National ... ..	6	1	93	...	...	...	...	1	...	1	...
<b>Head Office in South Australia—</b>											
Adelaide ... ..	1	1	1	112	2	...	...	...	...	1	...
<b>Head Office in New Zealand—</b>											
New Zealand ... ..	1	1	...	...	...	...	...	...	233	1	3
<b>Head Office in London—</b>											
Australasia ... ..	57	70	19	8	11	11	...	1	48	2	...
Union of Australia... ..	46	50	13	15	22	3	...	...	48	1	...
English, Scottish, and Australian ... ..	116	164	57	56	4	25	1	...	...	1	...
<b>Head Office in France—</b>											
Comptoir National... ..	1	1	...	...	...	...	...	...	...	2	424
<b>Head Office in Japan—</b>											
Yokohama Specie ... ..	1	...	...	...	...	...	...	...	...	1	43
<b>Total No. of Offices</b> ...	1,116	839	468	367	193	97	2	7	438	19	478

The foregoing statement shows the total number of branches of trading banks in New South Wales, but not the total number of bank offices in other States, because banks which have no offices in New South Wales are excluded from account.

The Commonwealth Bank of Australia is controlled by the Federal Government, and it functions partly as a trading bank and partly as a central bank, besides handling the business of the Federal Government, floating its local loans, and managing the note issue. The Rural Bank is a department of the Government Savings Bank of New South Wales, which receives deposits and operates cheque accounts for customers, besides making advances to and conducting ordinary banking business for persons engaged in rural industries.

*Capital and Profits of Trading Banks.*

Particulars relating to the aggregate capital and profits of the Australasian banks operating in New South Wales, as listed in the foregoing statement, are shown in the following table. The particulars relate to the whole of the business of the banks in New South Wales and elsewhere. The French and Japanese banks are excluded from account, as they have only one branch, each doing a small business in the State.

Year.	Number of Banks.	Capital paid up.	Reserve fund and balance of Profit and Loss.	Net profits.	Dividends.†	
					Total.	Percentage to paid-up capital.
		£	£	£	£	
1895	13	19,704,957	4,338,861	750,755	540,409	2·74
1900	13	16,807,069	4,742,026	1,257,403	689,969	4·10
1910	14	16,193,550	9,292,715	2,085,004	1,297,885	8·01
1920	14	22,944,369‡	18,217,295‡	3,442,582‡	2,299,379	10·02
1921	13	27,040,770‡	17,057,163‡	4,339,157‡	2,735,923	10·11
1922	13	32,988,895‡	21,862,254‡	4,319,230‡	2,887,692	10·06
1923	13	35,838,234‡	23,231,144‡	4,583,567‡	3,166,360	10·48
1924	14	38,806,332‡	25,808,097‡	5,396,333‡	3,409,756	10·33
1925	15	46,696,991	29,371,289	5,731,142	3,738,747	10·14
1926	15	47,893,382	31,292,248	6,199,057	4,201,372	11·11
1927	14	50,256,627	34,088,603	6,701,708	4,410,981	11·06

† Private trading banks only.

‡ Excluding Commonwealth Bank.

The Commonwealth Bank and the Rural Bank are conducted under the auspices of the Federal and State Governments respectively, consequently they do not pay dividends. The amount of capital included in respect of the Commonwealth Bank in 1927 was £4,560,097, and for the Rural Bank £5,814,229, the latter amount being interest-bearing stock and debentures issued to the Government Savings Bank of New South Wales and the general public.

During the first decade of the period under review the capital of some of the banks was written down. Between 1905 and 1910, the capital of the

existing banks was increased by calls on the shareholders, and two new institutions commenced operations in New South Wales. The increase has continued, and the paid-up capital has more than doubled since 1920, an additional sum of £27,312,258 having been added during the last seven years. The increases include the addition of stock and debentures issued by the Rural Bank, and shown as £4,273,973 paid up capital in 1922, and the capitalised reserve funds of the Commonwealth Bank shown as £4,000,000 paid-up capital in 1925. The reserve funds have been built up steadily in recent years, and have been augmented by nearly £16,000,000 since 1920.

In 1895 the banks had not recovered from the effects of the financial crisis of 1893; some did not pay a dividend, and others paid on preferential shares only, consequently the average rate was very low. Fifteen years later conditions had improved greatly, and the banks were able to allocate a substantial sum to reserves, and to distribute a large portion of their profits, the average rate of dividend being nearly three times as great as in 1895. In recent years the financial situation has continued to improve steadily, and both reserve funds and profits have shown sustained growth.

*Liabilities within New South Wales.*

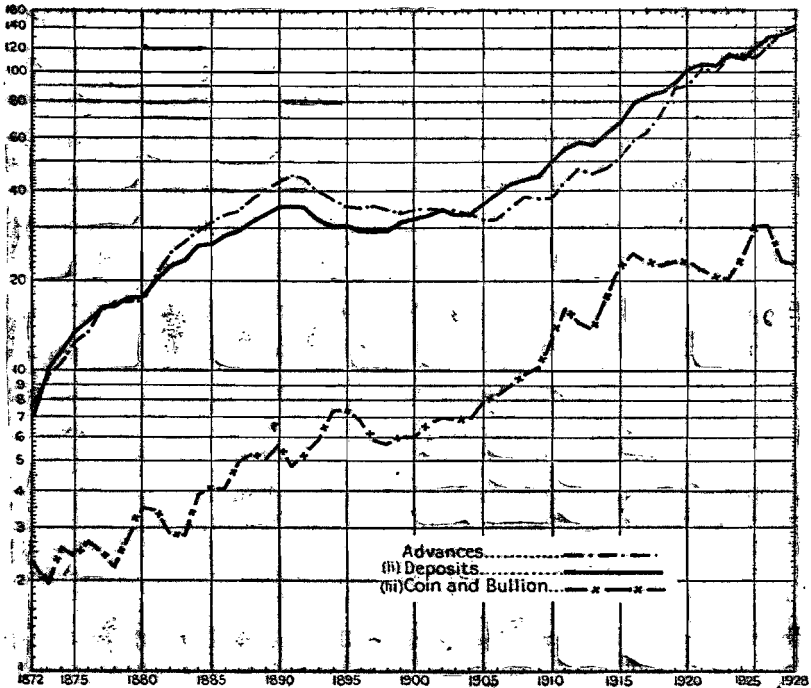
The following statement shows the average liabilities of all the banks within New South Wales, exclusive of those to shareholders. Since 1920 the interest-bearing deposits include savings bank deposits in the Commonwealth Bank of Australia which amounted to £9,890,238 in June quarter, 1927, and to £10,434,395 in June quarter, 1928.

June Quarter	Bank Notes.	Deposits.			Other Liabilities.	Total Liabilities within N.S.W.
		Bearing Interest.	Not Bearing Interest.	Total Deposits.		
	£	£	£	£	£	£
1895*	1,223,864	20,406,822	10,222,437	30,629,259	183,929	32,037,052
1900*	1,447,641	20,009,081	12,224,510	32,233,591	288,499	33,969,731
1910	1,801,807	26,642,873	23,512,712	50,155,585	471,233	52,428,625
1915	95,505	35,031,367	33,186,317	68,217,684	1,655,801	69,968,990
1920	73,266	50,495,134	52,878,126	103,373,260	2,562,273	106,008,799
1921	71,654	54,631,451	53,044,965	107,676,416	3,661,412	111,409,482
1922	68,953	54,086,297	52,276,678	106,362,975	2,511,109	108,943,037
1923	67,556	62,163,919	54,005,932	116,169,851	2,097,534	118,334,941
1924	66,590	58,164,886	53,655,365	111,820,251	2,431,726	114,318,567
1925	65,724	65,139,919	55,771,102	120,911,021	4,162,802	125,139,547
1926	64,990	70,956,687	59,255,212	130,211,899	5,332,475	135,609,364
1927	64,681	76,067,917	56,468,226	132,536,143	5,124,571	137,725,395
1928	64,398	83,155,876	55,357,004	138,512,880	6,050,474	144,627,762

\*December quarter.

The decline in the value of bank notes in circulation is the result of their replacement by Australian notes. The remarkable growth of deposits between 1910 and 1920 was largely due to the war expenditure and increase in prices. Since 1921 the rise and fall of deposits have been determined mainly by fluctuations in the volume and value of production. The deposits include Government deposits which in June, 1927, consisted of £4,716,915 at interest and £4,790,908 on current account, and in June, 1928, of £4,929,031 and £2,310,119, respectively.

**TRADING BANKS, 1872 TO 1928.**  
(Ratio Graph.)



- NOTE.--(i) The numbers at the side of the graph represent £1,000,000. The particulars for 1900 and earlier years relate to December quarter, those for 1901 and later years to June quarter.
- (ii) In 1913 and subsequent years savings bank deposits in Commonwealth Bank are included.
- (iii) In 1911 and subsequent years the amount of Australian notes held by the banks is included.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

*Assets within New South Wales.*

The following table shows the average assets within New South Wales of all banks operating in the State. In order to institute a comparison between the figures of the various banks, necessary adjustments have been made by excluding from the assets the balances due from branches and agencies outside New South Wales:—

June Quarter	Coin and Bullion.	Australian Notes.	Advances, etc.	Landed Property.	Other Assets.	Total Assets within N.S.W.
	£	£	£	£	£	£
1895†	7,516,278	...	35,707,153	1,919,017	479,881	45,622,329
1900†	6,126,126	...	34,385,388	1,874,099	650,814	43,036,427
1910	12,980,593	...	37,482,907	1,824,349	1,014,456	53,302,305
1920	10,452,526	13,032,195	89,063,144	2,477,601	4,246,969	119,272,435
1921	10,151,949	11,812,417	104,709,314	2,573,628	3,186,025	132,433,933
1922	10,617,998	10,176,664	98,335,071	2,620,237	3,625,187	125,375,157
1923	10,279,648	10,055,027	113,053,795	2,780,285	3,713,762	139,882,517
1924	11,711,112	12,111,578	112,873,479	2,960,035	5,004,755	144,660,959
1925	15,403,463	14,683,177*	111,475,369	3,026,704	4,365,365	148,954,078
1926	14,659,610	16,114,987*	123,950,187	3,112,343	3,924,044	161,761,171
1927	12,243,797	10,762,818*	135,439,590	3,025,719	4,813,069	166,284,993
1928	12,132,148	10,374,870*	140,690,523	2,987,197	4,756,964	170,941,702

\* Includes cash deposited with the Commonwealth Bank by other banks. † December Quarter.

Under the heading "Advances, etc." are included funds invested in Government and municipal securities. In June quarter of the successive years from 1925 to 1928 these amounted to £19,884,098, £24,425,503, £26,959,511, and £34,235,388, respectively. Corresponding particulars for earlier years are not available.

The increase in holdings of coin and bullion in 1925 was due to heavy importation of gold from oversea in the early part of that year. In 1926 and 1927 large consignments of gold were exported.

The advances increased rapidly after 1914, owing to inflation of the currency and rising prices, as many producers and traders required a larger accommodation in proportion to the volume of business. In addition the banks undertook various forms of advances to meet special emergencies arising from war conditions, *e.g.*, assistance to enable customers to invest in war loans and advances in connection with the marketing of staple products.

The cash reserves of the banks consist of coin and bullion and Australian notes. The amount of coin and bullion held in 1914 was £15,500,000. During the war period the banks transferred a large amount of gold to the Federal Treasury and rendered assistance to the Government in other ways in connection with war loans, etc., receiving in exchange Australian notes, or the right to obtain notes on demand. Under these circumstances the

gold reserve of the banks in New South Wales declined by over £5,000,000, and the amount of Australian notes, which before the war had not exceeded £2,000,000, increased very rapidly.

The proportion of reserves which banking institutions should keep constantly on hand is not fixed by any enactment, and consequently it varies considerably. The ratios of coin, bullion, and Australian notes to liabilities in New South Wales for various periods from 1895 are shown below:—

Year.	Proportion of Coin, Bullion, and Australian Notes—		Year.	Proportion of Coin, Bullion, and Australian Notes—	
	To Total Liabilities.	To Deposits at Call and Banknotes.		To Total Liabilities.	To Deposits at Call and Banknotes.
	per cent.	per cent.		per cent.	per cent.
1895	16·5	34·7	1923	17·2	37·6
1900	18·0	44·8	1924	20·8	44·3
1910	24·8	51·3	1925	24·0	53·9
1920	19·7	44·4	1926	22·7	51·9
1921	19·7	41·3	1927	16·7	40·7
1922	19·1	39·7	1928	15·6	40·6

The significance of the ratio of reserves to total liabilities and to deposits has been diminished by the steady extension of banking operations interstate. The location of head offices and the frequent interstate transfers of cash to meet fluctuating needs modify conclusions to be drawn from a table showing ratios for only one State.

Furthermore, in making comparisons on the basis of reserves held by the banks, it is necessary to take into consideration arrangements made from time to time between the authority controlling the Australian note issue and the banks, by which the latter were given the right to obtain a certain amount of Australian notes on demand. In recent years the cash resources available to banks have been really greater than the amount of cash actually held. During the last two years the comparisons have been affected also by the central banking operations of the Commonwealth Bank. The trading banks are discontinuing a former practice of holding large amounts of Australian notes, but deposit them with the Commonwealth Bank, and that institution apparently passes the surplus notes beyond its immediate requirements to the note issue department for cancellation.

Excluding the figures relating to the Commonwealth Bank the ratio of cash reserves to total liabilities during June quarter of the last three years was 20·4 per cent., 17·9 per cent., and 17·3 per cent., respectively; and the corresponding ratios to deposits at call and bank notes were 46·8 per cent., 42·2 per cent., and 42·6 per cent.

#### *Deposits and Advances.*

Under the head of advances are included overdrafts and loans of all kinds, notes and bills discounted, sums invested in Government and municipal securities and all other debts due to the banks. The bulk of the advances

are secured by the mortgage of real estate, or by the deposit of deeds over which the lending institutions acquire a lien, but the extent to which trade bills are discounted is not disclosed. The following table shows the ratio of advances to deposits, and to total assets, at various dates from 1895:—

June Quarter.	Deposits. ‡	Advances, etc. †	Ratio of Advances, etc.†		Amount of Deposits per head of Population.‡
			To Deposits.	To Total Assets.	
	£	£	per cent.	per cent.	£ s. d.
1895*	30,629,258	35,707,158	116·8	78·3	24 5 4
1900*	32,233,591	34,385,388	101·2	79·9	23 12 5
1910	50,155,585	37,482,907	74·7	70·3	31 1 6
1920	103,373,260	89,063,144	86·2	74·7	49 19 2
1921	107,676,416	104,709,314	97·2	79·1	51 3 8
1922	106,362,975	98,335,071	92·4	78·4	49 9 5
1923	116,169,851	113,053,795	97·3	80·9	53 0 6
1924	111,820,251	112,873,479	100·9	78·0	50 3 9
1925	120,911,021	111,475,369	92·2	74·8	53 3 7
1926	130,211,899	123,950,187	95·2	76·6	56 2 10
1927	132,536,143	135,439,590	102·2	81·4	55 17 5
1928	138,512,880	140,690,523	101·6	82·3	57 4 9

\* December quarter.

† Including sums invested in Government securities.

‡ Including deposits in Commonwealth Savings Bank.

The deposits shown above include Government deposits, which amounted to £16,375,313 in June quarter, 1926, and to £9,507,823 and £7,239,150 in the succeeding years. They include also deposits in the Commonwealth Savings Bank incorporated in the accounts of the Commonwealth Bank of Australia, viz., £8,928,872, £9,890,238 and £10,434,395 in the last three years.

The advances include amounts invested in Government securities, as shown on page 454. The amount advanced to Governments other than amounts for which securities were issued cannot be stated. Deposits and advances fluctuate from year to year with changes of seasonal and industrial conditions. Deposits increased during the last four years under the stimulus of bountiful production following on favourable seasons. At the same time an active investment market and industrial and commercial expansion caused a heavy demand for advances.

It is noteworthy that the comparison relates to June quarter for each year since 1910 and that, owing to the incidence of shearing and harvesting operations, deposits are usually at a maximum and advances at a minimum in the first half of the year.

#### *Banking Statistics in relation to general business activities.*

A statement of the liabilities and assets of the trading banks would indicate more clearly their relation to general business conditions in New South Wales if the particulars of the Commonwealth Bank were

excluded, on account of the special nature of its activities, *e.g.*, savings bank and Federal Government business, the control of the note issue and other functions of central banking. For this purpose the following statement has been prepared to show the liabilities, exclusive of shareholders' capital, and assets within New South Wales of the trading banks, other than the Commonwealth Bank, in June quarter of the last four years:—

## Liabilities in New South Wales (excluding Commonwealth Bank).

June Quarter	Deposits Bearing Interest.		Deposits not Bearing Interest.		Total Deposits.	Bank Notes and Other Liabilities.	Total Liabilities in N.S.W.
	Government.	Other.	Government.	Other.			
1925	£ 9,388,218	£ 46,400,631	£ 679,550	£ 45,866,777	£ 102,335,176	£ 2,382,071	£ 104,717,247
1926	8,177,574	52,265,323	813,016	47,686,308	108,942,221	2,562,105	111,504,326
1927	4,703,083	59,070,042	600,303	48,325,414	112,698,842	2,890,296	115,589,138
1928	4,916,303	65,168,475	825,204	49,250,191	120,160,173	3,168,638	123,328,811

## Assets in New South Wales (excluding Commonwealth Bank).

June Quarter	Coin, Bullion, Australian Notes, and Cash with Commonwealth Bank.	Advances, etc.			Landed Property.	Other Assets.	Total Assets in N.S.W.
		Government and Municipal Securities.	Other Advances, etc.	Total Advances.			
1925	£ 23,645,947	£ 7,537,352	£ 86,598,289	£ 94,135,641	£ 2,714,704	£ 2,274,317	£ 122,760,609
1926	22,751,383	9,460,449	94,464,624	103,925,073	2,796,691	2,231,764	131,704,911
1927	20,683,686	8,820,165	101,808,395	110,628,560	2,730,849	3,589,396	137,632,491
1928	21,361,627	12,703,705	100,359,352	113,063,057	2,702,948	3,963,368	141,091,000

The statement shows that there has been a fairly steady expansion of non-governmental deposits. The increase, exceeding £7,000,000 in each year, has occurred for the most part in the deposits at interest, which rose by £18,800,000 between 1925 and 1928, as compared with an increase of £3,400,000 in non-interest bearing deposits.

The amount of advances, apart from public securities, increased in 1926 and 1927 as much as the non-governmental deposits. In the following year they declined by £1,450,000, and investments in public securities increased by £3,880,000. The increase in public securities was a result of the underwriting by the banks of the Federal loan raised at the end of 1927. This affected the supply of credit for other advances, and at the same time the fact that weather conditions in 1927 tended to decrease primary production caused the banks to restrict credit so as to discourage speculation and extravagance arising from a succession of bountiful seasons. The distribution in November, 1927, of £8,000,000 to Australian woolgrowers in respect of Bawra operations had the effect of increasing deposits and lessening the demand for advances.



The following statement shows the ratio of advances, etc., to deposits and to total assets on the basis of the figures in the preceding table, that is excluding particulars of the Commonwealth Bank:—

June Quarter,				Ratio of Advances to Deposits.	Ratio of Advances to Total Assets.
				per cent.	per cent.
1925	...	...	...	92.0	76.7
1926	...	...	...	95.4	78.9
1927	...	...	...	98.2	80.4
1928	...	...	...	94.1	80.1

#### *Size of Depositors' Accounts.*

A classification of accounts according to the amount of deposit at or about 30th June, 1928, is shown below, the figures being exclusive of particulars of the Commonwealth Bank, which are not available.

Classification.	Current Accounts.		Fixed Deposit Accounts.		Current and Fixed Deposit Accounts.	
	Number.	Amount at Credit.	Number.	Amount at Credit.	Number.	Amount at Credit.
		£		£		£
£200 and under ...	189,703	8,193,718	37,079	4,082,549	226,782	12,276,267
£201- £500 ...	22,938	7,291,006	26,397	8,809,537	49,335	17,100,543
£501- £1,000 ...	9,182	6,330,975	15,580	12,355,932	24,762	18,686,907
£1,001-£2,000 ...	4,205	5,801,662	6,668	9,981,465	10,873	15,783,127
£2,001-£3,000 ...	1,241	3,009,237	1,756	4,532,327	2,997	7,541,564
£3,001-£4,000 ...	579	1,982,251	691	2,524,804	1,270	4,507,055
£4,001- £5,000 ...	280	1,255,801	631	3,013,943	911	4,269,744
£5,001-£10,000 ...	540	3,650,020	776	5,977,720	1,316	9,627,740
£10,001-£15,000 ...	124	1,469,152	143	1,850,783	267	3,319,935
£15,001-£20,000 ...	65	1,116,000	79	1,494,552	144	2,610,552
Over £20,000 ...	105	8,571,232	210	13,578,958	315	22,150,190
<b>Total</b> ...	<b>228,962</b>	<b>48,671,054</b>	<b>90,010</b>	<b>69,202,570</b>	<b>318,972</b>	<b>117,873,624</b>

Accounts with balances not exceeding £500 represented 86.6 per cent. of the total number of accounts and 24.9 per cent. of the deposits. Accounts of £2,000 and under represented 98 per cent. of the total accounts and 54 per cent. of the deposits, 46 per cent. of the aggregate amount of the deposits being held in 2 per cent. of the accounts. Small deposits were more numerous in current accounts, as persons wishing to place small sums of money at interest generally avail themselves of the facilities offered by the savings banks. The number of accounts does not represent the number of individual persons who have accounts with the banks.

The proportion of accounts and of deposits in each group are shown below:—

Classification.	Proportion of Accounts in each Group.			Proportion of Deposits in each Group.		
	Current Accounts.	Fixed Deposit Accounts.	Total.	Current Accounts.	Fixed Deposit Accounts.	Total.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
£200 and under ...	82·8	41·2	71·1	16·8	5·9	10·4
£201- £500 ...	10·2	29·3	15·5	15·0	14·2	14·5
£501- £1,000 ...	4·0	17·3	7·8	13·0	17·9	15·9
£1,001- £2,000 ...	1·8	7·4	3·4	12·0	14·4	13·4
£2,001- £3,000 ...	·5	2·0	·9	6·2	6·5	6·4
£3,001- £4,000 ...	·2	·8	·4	4·1	3·6	3·8
£4,001- £5,000 ...	·1	·7	·3	2·6	4·4	3·6
£5,001-£10,000 ...	·2	·9	·4	7·5	8·7	8·2
£10,001-£15,000 ...	·1	·1	·1	3·0	2·6	2·8
£15,001-£20,000 ...	·1	·3	·1	2·2	2·2	2·2
Over £20,000 ...				17·6	19·6	18·8
Total ...	100·0	100·0	100·0	100·0	100·0	100·0

*Banks' Exchange Settlement.*

The Banks' Exchange Settlement Office was established in Sydney on the 18th January, 1894.

Exchanges are effected daily between the metropolitan banks. The results of the operations are notified to the secretary of the Banks' Exchange Settlement, who notifies each institution daily of the amount of its balance with the "pool." It is not permissible for the balance of any bank to remain below 25 per cent. of the fixed contribution. In the event of it reaching this margin, the bank is required to make up the deficiency with gold or Australian notes. The Commonwealth Bank Act of 1924 provided that, after a date to be proclaimed, the exchange balances between the banks must be settled by cheques drawn on and paid into the Commonwealth Bank. Pending the issue of the proclamation, the banks inaugurated the system voluntarily as from 27th April, 1925, and for this purpose established current accounts with the Commonwealth Bank. The daily clearances are still made through the Settlement Office.

The following table shows the growth in the volume of exchanges made through the Settlement Office. The figures represent the aggregate value of cheques drawn on one bank and paid by another in the metropolitan area and the net balances of transactions at country interbank clearings:—

Year.	Amount of Exchanges.	Year.	Amount of Exchanges.
	£		£
1895	108,509,860	1922	726,582,809
1900	144,080,314	1923	805,032,221
1905	189,826,381	1924	845,854,661
1910	274,343,666	1925	909,114,483
1915	357,803,425	1926	954,253,166
1920	764,546,357	1927	1,031,894,890
1921	709,734,554		

These exchanges do not represent all the cheque operations of the banks, but may be considered an indication of the comparative intensity of business activity from year to year, though their volume is appreciably affected by marked changes in price levels.

The transactions have grown rapidly, and, in 1920, when prices were at the highest level, the amount of exchanges was more than twice the sum in 1915. The decline in the following year was due partly to a fall in prices and partly to a diminution of business due to the diminished production caused by the drought. The increase in 1923 was due partly to a rise in price levels, but the volume of business also expanded. In 1924, when prices fell by  $3\frac{1}{2}$  per cent., there was an increase of 5 per cent. in the bank clearings. Since that year wholesale prices have been fairly stable, and the rapid increase in the exchanges reflects the large turnover resulting from the sale of primary products and transactions in connection with the conversion or redemption of Federal loans. A small part of the increase is attributable to the change in the method of adjusting the clearances which from the end of April, 1925, were settled by means of cheques drawn on the Commonwealth Bank, the amount of these cheques being included in the clearances.

### *Interest, Discount, and Exchange Rates*

The annual rates of interest generally paid by the trading banks on fixed deposits since 1921 have been:—4 per cent. for sums deposited for six months;  $4\frac{1}{2}$  per cent. for twelve months, and 5 per cent. for two years. Under normal conditions the rate of interest paid on fixed deposits is uniform for all banks, and discount and overdraft rates fluctuate with the interest paid to depositors.

The interest rates allowed on deposits for twelve months, and charged on overdrafts, also the discount and exchange rates at intervals from 1890 to 1927, were as follow:—

Year.	Bank Rates of Interest.		Bank Discount Rates.		Exchange Rate on London at 60 Days' Sight.	
	Allowed on Deposits for Twelve Months.	Charged on Overdrafts.	Bills at Three Months.	Bills over Three Months.	Buying.	Selling.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
1890	$4\frac{1}{2}$	9	7	8	99 $\frac{3}{4}$ to 100	100 $\frac{1}{4}$ to 101 $\frac{1}{2}$
1900	3	6 to 7	5 to 5 $\frac{1}{2}$	5 $\frac{1}{2}$ to 6 $\frac{1}{2}$	95 $\frac{3}{4}$ „ 99 $\frac{1}{2}$	100 $\frac{1}{4}$ „ 106 $\frac{3}{4}$
1910	3	6 „ 7 $\frac{1}{2}$	5 „ 6	6 „ 7	98 $\frac{1}{4}$ „ 99	99 $\frac{3}{4}$ „ 99 $\frac{3}{4}$
1920	4 to 4 $\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	98 „ 99 $\frac{1}{2}$	99 $\frac{3}{4}$ „ 100 $\frac{3}{4}$
1921	$4\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	98 $\frac{3}{4}$ „ 99 $\frac{1}{2}$	100 $\frac{3}{4}$ „ 100 $\frac{3}{4}$
1922	4 $\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	97 $\frac{3}{4}$ „ 99	99 $\frac{3}{4}$ „ 100 $\frac{1}{2}$
1923	4 $\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	97 $\frac{3}{4}$	99 $\frac{3}{4}$
1924	4 $\frac{1}{2}$	6 „ 8	5 $\frac{1}{2}$ „ 7	5 $\frac{1}{2}$ „ 7	95 $\frac{3}{4}$ to 97 $\frac{3}{4}$	96 $\frac{1}{2}$ to 99 $\frac{1}{2}$
1925	4 $\frac{1}{2}$	6 „ 8	5 $\frac{1}{2}$ „ 7	6 „ 7	95 $\frac{3}{4}$ „ 98 $\frac{3}{4}$	96 $\frac{1}{2}$ „ 98 $\frac{1}{2}$
1926	4 $\frac{1}{2}$	6 „ 8	5 $\frac{1}{2}$ „ 7	6 „ 7	98 „ 98 $\frac{3}{4}$	98 $\frac{3}{4}$ „ 99 $\frac{1}{2}$
1927	4 $\frac{1}{2}$	6 „ 8	5 $\frac{1}{2}$ „ 7	6 „ 7	98 $\frac{1}{4}$ „ 98 $\frac{3}{4}$	99 „ 99 $\frac{3}{4}$

The Commonwealth Bank increased its rate for general overdrafts from  $6\frac{1}{2}$  per cent. to 7 per cent. as from 1st January, 1925, and reduced it to  $6\frac{1}{2}$  per cent. six months later.

Early in the year 1924 the exchange rates on London, which had remained constant throughout the preceding year, began to advance rapidly. The discount on sixty days' sight drafts (buying) rose from 47s. 6d. in January, 1924, to 92s. 6d. in October, when high prices were being realised for staple products. Restrictions upon the movement of gold and the relative position of the exchanges of other countries prevented the inflow of gold into Australia which otherwise would have been a natural sequence when the exchange rates between Australia and London became so favourable for such importation. In 1925, however, it became practicable to import gold, and several large shipments were received from the United States, from South Africa, and from London.

On 29th April, 1925, the Commonwealth Government withdrew the embargo on the export of gold, thus restoring the gold standard of exchange concurrently with Great Britain, and on 6th May the exchange rates quoted by the Australian banks were revised, the discount on sixty days' sight drafts (buying) being reduced to 50s.

The variations in the rates of exchange, Australia on London during the last two years are shown below. The rates are discounts per £100 except where marked par or "p" to indicate premium.

Usance.	1924.				1927.				1928.
	9 June.	12 July.	5 Aug.	1 Oct.	20 April.	27 June.	25 July.	7 Nov.	19 Mar.
Buying—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
T.T. ...	5 0	2 6	par.	5 0	2 6p	5 0p	7 6p	7 6p	10 0p
O.D. ...	17 6	15 0	12 6	17 6	10 0	7 6	5 0	7 6	5 0
30 days ...	27 6	25 0	22 6	27 6	20 0	17 6	15 0	17 6	15 0
60 " ...	37 6	35 0	32 6	37 6	30 0	27 6	25 0	27 6	25 0
90 " ...	47 6	45 0	42 6	47 6	40 0	37 6	35 0	37 6	35 0
120 " ...	...	55 0	52 6	57 6	50 0	47 6	45 0	...	...
Selling—									
T.T. ...	2 6p	5 0p	7 6p	2 6p	10 0p	12 6p	15 0p	15 0p	20 0p
O.D. ...	5 0	2 6	par.	5 0	2 6p	5 0p	7 6p	7 6p	12 6p
30 days ...	12 6	10 0	7 6	12 6	5 0	2 6	par.	par.	5 0p
60 " ...	20 0	17 6	15 0	20 0	12 6	10 0	7 6	7 6	2 6
90 " ...	...	...	...	...	...	...	...	...	...

p signifies premium, otherwise rates are discounts.

The rates of exchange Australia on London were raised by 7s. 6d. per cent. in April, 1927, and were maintained at a high level in view of the great volume of imports as compared with exports. The margin between the buying and selling rates for telegraphic transfers was increased from 5s. per cent. to 7s. 6d. in June, 1926, and to 10s. per cent. in March, 1928.

*The Commonwealth Bank of Australia.*

The Commonwealth Bank of Australia was established under an Act passed by the Federal Government in 1911, and amended in 1914, 1920, 1924, 1925, and 1927. The bank commenced operations on 15th July, 1912, by opening a savings bank department. Ordinary banking business was commenced on 20th January, 1913. The head office is in Sydney, and branches have been established in the principal cities and towns of Australia, in London, and in the territory of New Guinea, and an agency in New York.

The Commonwealth Government is responsible for the payment of all moneys due by the bank, and debts due to the bank by other banks have the same priority as debts due to the Commonwealth. The affairs of the bank are subject to inspection and audit by the Auditor-General of the

Commonwealth. The bank is authorised to conduct general banking business, to exercise the functions of an ordinary bank of issue, and, with the approval of the Treasurer of the Commonwealth, it may take over the business of banking corporations. Since 1920 the control of the Australian note issue has been one of the functions of a separate department of the Commonwealth Bank. The Savings Bank Department was separated from the bank in June, 1928, and it will be managed by a Commission of three persons, one being a director of the Commonwealth Bank. Further details regarding the Commonwealth Savings Bank thus established are stated on page 469.

The scope of the bank's operations is being enlarged as a result of the amending Act of 1924, with the object of making it a central bank. An important amendment lies in the change of management, entrusted previously to a governor. Under the new arrangement, the institution is controlled by a Board of Directors, composed of the Governor of the Bank, the Secretary of the Commonwealth Treasury, and six other directors with experience in agriculture, commerce, finance, or industry. The last-mentioned are appointed by the Governor-General for terms ranging, in the case of the first appointments, from two to seven years, so that one will retire in each year, but will be eligible for reappointment. Subsequent appointments will be for seven years. The Governor of the Bank is its chief executive officer and is appointed for a term of seven years, with eligibility for reappointment. A Board of Advice in London, consisting of three members selected by the Board of Directors, exercises such powers as the latter delegates to it. A director or officer of any other bank may not be appointed as a director of the bank nor as a member of the London Board.

The Board of Directors may be authorised by proclamation to fix and publish the rate at which it will discount and rediscount bills of exchange. The settlement of balances between the banks trading in Australia is conducted by means of cheques drawn on the Commonwealth Bank, and for this purpose the other banks keep funds with the Commonwealth Bank.

The capital of the Bank is limited to £20,000,000, consisting of £4,000,000 from accumulated profits, a sum not exceeding £6,000,000 which the Federal Treasurer is authorised to borrow, and such sum as may be raised by the sale and issue of debentures up to £10,000,000. The Bank will pay the interest on any loan raised for its purposes. It has not yet exercised its authority to issue debentures.

Of the net profits of the Bank—except those of the Note Issue and the Rural Credits Departments—half are payable to the Bank reserve fund and half to the National Debt Sinking Fund. Three-fourths of the annual profits from the Note Issue Department are paid to the Commonwealth Treasury and one-fourth to the capital account of the Rural Credits Department, the limit of these latter payments being £2,000,000. At 30th June, 1928, the capital of the bank stood at £4,000,000 (being capitalised profits) and the reserve fund stood at £389,273. In addition, the capital account of the Rural Credits Department amounted to £842,189, and the reserve fund to £30,633, and the reserve fund of the Savings Bank to £1,165,295.

The Rural Credits Department was established towards the end of 1925 to assist the marketing of products of the rural industries. This department may make advances upon the security of primary produce, viz., wool, grain, butter, cheese, fruits, hops, cotton, sugar, and any other produce as may be prescribed. The advance may not be for a period of more

than one year. The advances may be made upon the security of primary produce to the general banking section of the Commonwealth Bank, to other banks, to co-operative associations, and to such other bodies as may be specified by proclamation. In lieu of making advances the department may discount bills secured upon primary produce on behalf of any of these institutions.

Capital for the Rural Credits Department was provided from the profits of the note issue, as already indicated, and additional capital may be provided by loans from the Federal Government up to a limit of £3,000,000. The Commonwealth Bank may raise further funds for the department by issuing debentures up to an amount not exceeding the greater of the following, viz., (a) advances on primary produce outstanding at the date of the issue of the debentures; or (b) four times the sum of (i) outstanding loans to the department from the Federal Government, (ii) moneys received from the profits of the note issue, (iii) the credit balance of the Rural Credits Department Reserve Fund. The dates for the redemption of the debentures are to coincide, as nearly as practicable, with the dates for the repayment of the advances made. In addition, the general banking department of the Commonwealth Bank may make advances to the Rural Credits Department of such amounts and subject to such terms and conditions as the Board of Directors determines. The assets of the Rural Credits Department are available, firstly, for meeting liabilities other than loans from the Federal Government and interest thereon; and secondly, for repaying such loans with interest. One half of the net profits are payable to the reserve fund of the Department, and one half to a fund to be used, at the discretion of the Board of Directors, for the promotion of primary production.

The following statement shows the liabilities and assets of the Commonwealth Bank (including the Rural Credits Department in 1926 to 1928) in New South Wales in the June quarter of each of the last five years:—

Particulars.	1924.	1925.	1926.	1927.	1928.
	£	£	£	£	£
<b>Liabilities—</b>					
Deposits at interest—					
Savings Department	7,693,565	8,123,194	8,928,872	9,890,238	10,434,395
Government ...	1,825,675	4,568	25,444	13,832	12,728
Ordinary ...		1,223,308	1,559,474	2,390,722	2,623,975
Deposits not bearing interest—					
Government ...	8,790,623	6,361,849	7,359,279	4,190,605	1,484,915
Ordinary ...		2,862,926	3,396,609	3,351,904	3,796,694
Total deposits	18,309,863	18,575,845	21,269,678	19,837,301	18,352,707
Other liabilities ...	57,936	1,846,455	2,835,360	2,298,956	2,946,234
<b>Total Liabilities</b> ...	<b>18,367,799</b>	<b>20,422,300</b>	<b>24,105,038</b>	<b>22,136,257</b>	<b>21,298,941</b>
<b>Assets—</b>					
Coin and Bullion ...	590,035	1,954,445	2,480,241	204,358	147,349
Australian Notes ...	4,105,571	4,486,248	5,542,973	2,118,571	998,042
Advances, etc. ...	5,385,654	4,992,982	5,030,060	6,671,684	6,095,783
Government Securities	13,681,503	12,346,746	14,965,054	18,139,346	21,531,683
Landed Property ...	315,910	312,000	315,652	294,870	284,249
Other Assets ...	2,307,224	2,101,048	1,692,280	1,223,673	793,596
<b>Total Assets</b> ...	<b>26,395,897</b>	<b>26,193,469</b>	<b>30,056,260</b>	<b>28,652,502</b>	<b>29,850,702</b>

The increase in other liabilities after 1924 is due to the inclusion there of amounts deposited with the Commonwealth Bank by the trading banks in connection with the clearing transactions. The deposits in the Savings Department have been used in the ordinary business of the bank.

The total liabilities and assets of the bank in New South Wales and elsewhere at 30th June, 1913, amounted to £5,055,382. At 30th June, 1928, the liabilities and assets of the general bank and rural credits departments amounted to £52,420,705, and those of the Savings Bank to £50,001,529, and of the Note Issue Department to £41,493,226. The aggregate net profit, excluding the Rural Credits and Note Issue Departments, earned up to 30th June, 1928, was £6,382,337.

#### *Wool and Wheat Exchange Pool.*

In October, 1924, when funds could only be transferred from London at high cost and it was anticipated that the expansion of exports would exert an influence still more unfavourable to exporters, arrangements were made for the organisation of the exchange business in respect of wool and wheat. The Commonwealth Bank, as the authority controlling the Australian note issue, undertook to make available to Australian banks additional currency, up to £15,000,000 for seasonal requirements. The banks agreed to lodge securities in Australia or in London against any notes issued to them, to pay interest at Bank of England discount rate, which was then 4 per cent., and to repay the notes before the end of August, 1925. The banks agreed also to pool the wool and wheat exchange upon a basis which allowed for the varying incidence of the business of the several banks, each bank, including the Commonwealth Bank, taking up a certain quota.

The pool operated through the medium of the Commonwealth Bank, which might buy London securities from any bank which had bought wool or wheat bills in excess of its quota, and sell London securities to a bank which did not reach its quota, adjustments being made fortnightly.

The pool was designed primarily to obviate difficulties in respect of exchange which disappeared with the restoration of the gold standard, but it was continued until 23rd August, 1928, though two banks withdrew at the commencement of the season 1926-27 and three banks did not participate in the following season. The amount of exchange transacted through the pool in each season was as follows:—

	1924-25.	1925-26.	1926-27.	1927-28.	Total.
	£	£	£	£	£
Wool ... ..	53,418,000	42,946,000	42,753,000	38,110,000	182,227,000
Wheat ... ..	30,543,000	12,425,000	16,132,000	9,140,000	68,240,000
Total ...	88,961,000	55,371,000	58,885,000	47,250,000	250,467,000

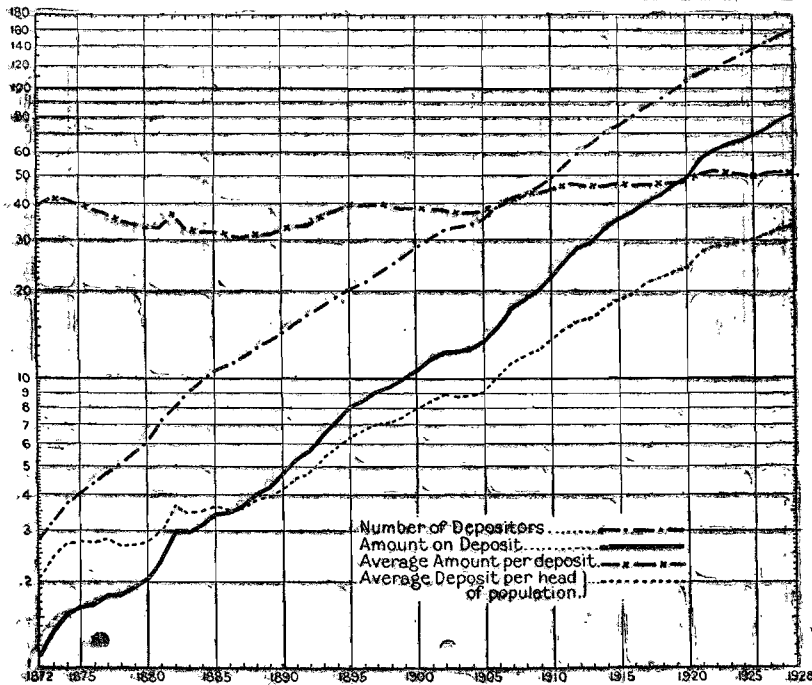
The figures in the statement cover the transactions in all the Australian States.

#### SAVINGS BANKS.

Savings bank business in New South Wales is conducted by the Government Savings Bank of New South Wales, and by the Commonwealth Savings Bank, and extensive use is made of the facilities offered for the accumulation of small sums on which interest is paid.

Under reciprocal arrangements, transfers may be made on behalf of depositors between the banks and similar institutions in other States of the Commonwealth and the Post Office Savings Banks of the United Kingdom and New Zealand.

SAVINGS BANKS, 1872 to 1928.  
(Ratio Graph.)



The numbers at the side of the graph represent 10,000 depositors, £1,000,000 of deposits, £1 of average amount per depositor, and £1 of average deposit per head of population. The diagram is a ratio graph, and the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

The following statement shows the number of accounts and the amount of deposits in the State and Commonwealth savings banks in New South Wales at the end of various years. The figures exclude School Savings Bank accounts, which numbered 78,205, with credit balances of £100,987 at 30th June, 1927, and 92,772 accounts with £133,877 at credit on 30th June, 1928:—

At 30th June.	Accounts.	Savings-Bank Deposits.				
		State Bank.	Commonwealth Bank.	Total.	Per Account.	Per head of Population.
	No.	£	£	£	£ s. d.	£ s. d.
1880*	61,531	2,075,856	...	2,075,856	33 14 9	2 17 0
1890*	143,826	4,730,469	...	4,730,469	32 17 10	4 5 0
1900*	282,643	10,901,382	...	10,901,382	38 11 5	8 2 4
1910*	478,006	20,823,764	...	20,823,764	43 11 3	12 18 0
1915	755,835	33,536,257	2,026,392	35,562,649	47 1 0	19 0 7
1921	1,126,157	50,802,437	6,592,304	57,394,741	50 19 4	27 5 8
1922	1,186,948	54,581,592	7,209,881	61,791,473	52 1 2	28 14 11
1923	1,246,191	56,643,452	7,681,217	64,324,669	51 12 4	29 7 2
1924	1,366,948	57,992,304	8,169,750	66,162,054	50 12 5	29 13 10
1925	1,374,976	60,546,786	8,602,647	69,149,433	50 5 10	30 8 3
1926	1,446,432	64,906,726	9,486,886	73,743,112	50 19 8	31 15 11
1927	1,528,287	67,787,101	10,493,944	78,281,045	51 4 0	32 19 9
1928	1,596,657	70,518,948	10,974,932	81,493,880	51 0 10	33 12 2

\*As at 31st December.



In 1926-27 a sum of £2,701,016 interest was added to depositors' accounts by the banks, and the net increase in the amount at depositors' credit was £4,507,633. In 1927-28 interest amounted to £2,840,381 and the net increase to £3,243,135.

The number of accounts does not represent individual depositors, as a certain amount of duplication is caused by persons having deposits in both banks, and by the inclusion of joint accounts and accounts of societies, trusts, etc., whose members have personal accounts also.

It is apparent that a large and increasing proportion of the people practise thrift through the medium of the savings banks. The aggregate amount of deposits has increased very rapidly, the increase in the five years ended 30th June, 1928, being £17,170,000. Notwithstanding the inflation of the currency, the average amount per account did not vary greatly between 1915 and 1920, but in 1921 and 1922 there was an increase followed by a decline and a recovery. The average amount per head of population has risen steadily.

#### *The Government Savings Bank of New South Wales.*

An institution named the Savings Bank of New South Wales was established in 1832 under the control of trustees nominated by the Government. This bank continued in operation until absorbed by the Government Savings Bank of New South Wales in 1914.

The Government Savings Bank of New South Wales was established in 1871 as a post office savings bank under the control of the Postmaster-General of New South Wales. In 1901, when the Postal department was transferred to the Commonwealth, the control of the bank was vested in the State Treasurer, and in 1907 it was placed under the control of three commissioners. By agreement with the Commonwealth the agencies of the bank were retained at post offices until the establishment of the Commonwealth Savings Bank in 1912. In that year separate branches and agencies were opened by the Government Savings Bank throughout New South Wales.

The scope of the bank was enlarged by the addition of an Advances to Settlers Department in 1907, to take over the functions of the Advances to Settlers Board. This department was merged into the Rural Bank in 1921. In 1914 the Advances for Homes Department was created, and in 1925 the administration of the outstanding loans of the Government Housing Department was transferred to the Bank. In 1910 a Closer Settlement Promotion Department was opened in the bank to finance intending settlers out of the proceeds of debentures issued under Government guarantee by the bank. These activities were amalgamated with other closer settlement operations under the control of the Lands Department on 1st July, 1919.

#### *Savings Bank Department.*

In the Savings Bank Department deposits of one shilling upwards are received, and interest is paid on the minimum monthly balances. From 1st July, 1920, to 30th September, 1928, interest was calculated at the rate of 4 per cent. per annum on balances up to £500, and 3½ per cent. on any excess up to £1,000 on personal accounts. The rates of interest paid on accounts of institutions not carried on for profit were 4 per cent. up to £1,000 and 3½ per cent. beyond that limit. Since 1st October, 1928, the rates have been 4 per cent. up to £1,000 on personal and trust accounts,

and on municipal and shire accounts, other than sinking funds; and 4 per cent. on total balances in respect of the sinking funds of municipalities and shires, and on accounts of institutions not conducted for profit.

The Commissioners are required by law to hold 20 per cent. of the deposits at call or short notice.

The balance-sheet at 30th June, 1927, showing how the funds were held, is as follows:—

<i>Liabilities.</i>		£	<i>Assets.</i>		£
Depositors' Balances ...	...	67,858,088	Cash ...	...	1,979,360
Reserve Fund ...	...	1,125,000	Deposits at Call ...	...	3,215,125
Profit and Loss Account	...	32,728	Fixed Deposits ...	...	12,089,303
Other Liabilities ...	...	1,020,314	Government Securities—		
			New South Wales ...	...	31,150,469
			Commonwealth ...	...	2,178,949
			Municipal Council Loans ...	...	2,869,911
			Rural Bank Stock ...	...	4,674,760
			Advances for Homes Stock ..	...	7,860,626
			Loans on Mortgage and Con-		
			tracts of Sale ...	...	2,364,905
			Bank Premises ...	...	1,400,000
			Other Assets ...	...	252,722
Total ...	...	£70,036,130	Total ...	...	£70,036,130

Approximately 25 per cent. of the assets of the bank consisted of cash and bank deposits, 52 per cent. comprised Government and Municipal securities, 7 per cent. were used in the Rural Bank Department, and 11 per cent. in the Advances for Homes Department.

The gross earnings of the Savings Bank Department for the year ended 30th June, 1927, were £3,158,397, of which £2,384,812 were credited as interest to depositors' accounts, and £410,539 were absorbed as expenses of management. The net profits for the year were £363,046.

At 30th June, 1927, there were 179 branches and 583 agencies of the bank, and the classification of depositors' balances at that date was:—

Deposit Series.	Accounts.	Amount of Deposits.
	No.	£
Under £1* ...	245,605	45,766
£1 to £19 ...	565,515	2,445,515
£20 to £99 ...	208,807	10,060,365
£100 to 499 ...	151,147	33,483,753
£500 to £749 ...	20,895	12,195,483
£750 to £999 ...	5,687	4,920,646
£1,000 and over ...	3,913	4,605,572
Total ...	1,201,569	67,757,100
School Savings Banks ...	78,205	100,987

\*Inoperative and non-interest bearing.

#### *Rural Bank Department.*

An account of the origin and operations of the Rural Bank is given in the chapter, "Rural Settlement," of this Year Book.

The bank receives fixed deposits as well as deposits at current account operated on by cheque and subject to the usual trading bank conditions. Advances are made to persons engaged in primary industries by way of overdraft, loans repayable by instalment and fixed loans for limited terms.

The balance-sheet of the bank at 30th June, 1927, was:—

<i>Liabilities.</i>		£	<i>Assets.</i>		£
Inscribed Stock issued to Savings Bank ... ..	...	4,674,760	Cash ... ..	...	170,893
Rural Bank Stock and Debentures, etc.* ... ..	...	1,142,869	Investments—		
Deposits—			Government Securities ...	...	297,385
Fixed ... ..	...	4,661,925	Fixed Deposits ... ..	...	927,950
On Current Account ...	...	1,533,220	Advances—		
Other Liabilities to Customers	...	449,530	Long Term and Fixed ...	...	5,783,776
Reserve Fund ... ..	...	356,854	Overdrafts ... ..	...	4,746,220
Balances due to other Banks ..	...	83,363	Other debts of Customers ...	...	162,394
			Due by other Departments ..	...	813,903
Total ... ..	...	£12,902,521	Total ... ..	...	£12,902,521

\* Special loan raised for Rural Bank.

The items shown above, with the exception of inscribed stock issued to the Savings Bank, and Treasury stock, are included in the particulars of trading banks published on page 452 *et seq.*

The net profit for the year was £68,140, which was transferred to the reserve fund.

#### *Advances for Homes Department.*

An account of the operations of the Advances for Homes Department appears in the chapter "Social Condition" of this Year Book.

The Department does not receive deposits, and its funds have been obtained mainly by loan from the Savings Bank Department and by the issue of a special Treasury loan.

The balance-sheet at 30th June, 1927, was as follows:—

<i>Liabilities.</i>		£	<i>Assets.</i>		£
Inscribed Stock issued to Savings Bank ... ..	...	7,860,626	Loans for Homes ... ..	...	9,279,900
*Treasury Stock, etc. ...	...	1,125,070	Invested in Government Securities ... ..	...	284,383
Liability to Borrowers ...	...	283,680	Cash at Bankers ... ..	...	2,586
Reserve Fund ... ..	...	356,405	Due by other Departments	...	10,912
Total ... ..	£	9,577,781	Total ... ..	£	9,577,781

\* First Homes Loan.

The net balance of profit in 1926-27 was £77,822, which was transferred to reserve fund.

The Government Housing Department of the bank was created in terms of the Housing (Amendment) Act of 1924, which provided for the abolition of the Housing Board, whose operations are described in the chapter of this volume entitled "Social Condition," and for the transfer to the Commissioners of the Savings Bank of properties subject to agreement for

sale and securities for advances under the Housing Act. At 30th June, 1927, the number of loans current was 927 and the amount of principal outstanding £537,518.

The following statement shows the growth of loans current in each department of the bank in recent years, excluding from account Government and Municipal securities held:—

30th June.	Savings Bank.	Rural Bank.		Advances for Homes.	Government Housing Department.	Total Loans administered by Government Savings Bank.
		Long Term & Fixed Loan.	Overdrafts.			
	£	£	£	£	£	£
1921	2,219,908	3,423,871	...	2,173,751	...	8,817,530
1922	2,177,973	4,525,374	728,584	4,223,505	...	11,655,436
1923	2,244,896	4,953,314	1,381,113	5,085,882	...	13,665,205
1924	2,198,824	5,526,744	2,144,333	6,042,697	...	15,912,598
1925	2,179,456	5,721,678	2,830,915	7,145,187	262,916	18,140,152
1926	2,135,808	5,661,868	3,618,597	8,283,940	616,717	20,316,928
1927	2,364,905	5,783,776	4,746,220	9,244,990	587,518	22,727,418

\* Excluding accrued interest.

#### Commonwealth Savings Bank.

The Savings Bank Department of the Commonwealth Bank was opened on 15th July, 1912, and its business has been transacted at all branches of the Commonwealth Bank as well as at numerous post offices and agencies. Legislation was passed in 1927 and proclaimed on 9th June, 1928, for the purpose of establishing this department of the Commonwealth Bank as a separate institution—the Commonwealth Savings Bank of Australia. It is to be controlled by a commission consisting of a chief commissioner and two other persons, and its funds will be available for long-term investments, e.g., loans on the security of land, advances for homes or for warehouses and stores for primary products, as well as for primary products, in debentures of the Rural Credits Department of the Commonwealth Bank and on fixed deposits with the Commonwealth Bank. One member of the Savings Bank Commission will be a director of the Commonwealth Bank nominated by the Board of Directors. This will facilitate co-operation between the two institutions and will enable the Commission to obtain the advice of the Board of Directors regarding the investment of the savings bank funds.

Deposits are received in sums of one shilling or more, and interest has been allowed on the minimum monthly balances at the rate of  $3\frac{1}{2}$  per cent. per annum up to £1,000 and at 3 per cent. for an additional £300 on personal accounts, and at the rate of  $3\frac{1}{2}$  per cent. per annum on the whole credit balance of bodies such as friendly societies not operating for profit. On 1st October, 1928, the rate on personal accounts up to £500, and on the deposits of friendly societies, etc., was raised to 4 per cent. The growth of deposits since 1915 is shown in the table on a previous page.

The total liabilities of the Commonwealth Savings Bank at 30th June, 1928, amounted to £50,001,529, including reserve fund £1,165,295, and depositors' balances £48,124,152. The assets consisted of Government and other public securities £43,833,009, fixed deposits £2,149,000; coin and cash balances, £3,093,586; other, £925,934.

§ *Savings' Bank Deposits in Australia.*

The number of accounts and the amount of deposits in savings banks in each State of Australia as at 30th June, 1927, are shown in the following table. The figures are inclusive of the School and Penny Saving Banks:—

State.	Accounts.	Deposits.		
		Total.	Per Account.	Per head of Population.
	No.	£	£ s. d.	£ s. d.
New South Wales ...	1,606,492	78,351,733	48 15 5	33 1 0
Victoria ... ..	1,455,581	65,352,619	44 17 11	37 17 1
Queensland ... ..	438,232	22,452,749	51 4 7	25 2 1
South Australia... ..	512,332	23,600,397	46 1 4	41 6 10
Western Australia ... ..	309,546	9,694,396	31 6 4	25 3 7
Tasmania... ..	138,474	5,073,544	36 12 9	24 7 5
Northern Territory ... ..	1,197	48,025	40 2 5	11 5 6
Total ... ..	4,461,904	204,573,963	45 17 0	33 3 5

The amount on deposit in the savings banks in New South Wales was far in excess of that in any other State, but the average per account was exceeded in Queensland, and the amount per head of population in South Australia and in Victoria. In comparison with the figures for the previous year there was an increase of £9,122,423 in the savings bank deposits in Australia, the increase in New South Wales being £4,544,083.

*Deposits in all Banks in New South Wales.*

In June, 1927, the net amount of deposits at credit of private and public accounts in the savings and the trading banks in New South Wales was £189,203,089, or £79 15s. 2d. per head of population after deducting from the combined totals a sum of £11,693,561 deposited with trading banks by the Government Savings Bank of New South Wales. A similar deduction amounted to £10,575,717 in June, 1928, when the net amount of deposits was £198,996,648, or £82 1s. 5d. per head. The figures for the savings banks in the following table represent the deposits on 30th June in each year, and those for the trading banks are the averages of the June quarter:—

June	Net Deposits bearing Interest.			Net Deposits not bearing Interest.*	All Deposits.	
	Savings Banks.	Trading Banks.*	Total.		Total.	Per head of Population.
	£	£	£	£	£	£ s. d.
1919	47,070,342	39,669,666	86,740,008	44,578,700†	131,318,708†	65 14 10
1920	49,933,535	41,608,028	91,541,563	52,087,465†	143,629,028†	69 8 5
1921	57,394,441	42,599,893	99,994,334	52,448,198†	152,442,532†	72 9 4
1922	61,791,273	41,387,762	103,179,035	51,529,372†	154,708,407†	71 19 5
1923	64,324,669	47,751,791	112,076,460	52,822,524†	164,898,984†	75 5 3
1924	66,162,054	43,748,948	109,911,002	52,514,431†	162,425,432†	72 18 0
1925	69,149,433	48,628,465	117,777,898	54,466,766†	172,244,664†	75 15 6
1926	73,743,112	52,148,006	125,891,118	58,135,332	184,026,450	79 6 10
1927	78,250,745	55,888,031	134,138,776	55,064,313	189,203,089	79 15 2
1928	81,493,880	63,483,867	144,977,747	54,018,901	198,996,648	82 1 5

\* Excluding deposits lodged by Savings Bank of New South Wales in Trading Banks. † Approximate.

In addition there were deposits by children in the School Savings Bank which amounted to £100,978 at 30th June, 1927, and to £133,787 at 30th June, 1928.

The amounts of interest-bearing deposits in the trading banks shown above differ from the figures in preceding tables, which include the savings deposits in the Commonwealth Bank and the deposits of the Government Savings Bank of New South Wales in the trading banks.

## INCORPORATED COMPANIES.

The legislation relating to incorporated companies in New South Wales is contained principally in the Companies Act, 1899, the amending Acts of 1900, 1906, and 1907, the Companies (Death Duties) Act, 1901, and the Companies (Registration of Securities) Act, 1918, providing for the registration of debentures issued by companies. These enactments follow the general provisions of Imperial Acts relating to companies, with variations embodying the results of local experience.

The formation of a company, association, or partnership of more than ten persons in a banking business, or of twenty in any other business trading for profit, is prohibited, unless it is registered under the Companies Act, or incorporated under some other enactment, by royal charter, or by letters patent, or as a no-liability company.

The liability of members of a company may be limited by shares or by guarantee, or it may be unlimited. Under certain conditions associations formed for the purpose of promoting commerce, art, science, religion, charity, or other useful object, may be registered with limited liability. Special provision is made to regulate the formation of no-liability mining companies, and the liability of members for calls and for contributions to meet debts and liabilities in the event of winding-up ceases upon registration, shares upon which calls are unpaid being forfeited.

Local limited companies (*i.e.*, those whose original registration is in New South Wales) are required to file an annual summary statement of their capital, and a list of shareholders with the amount of their shares, besides an original copy of their memorandum and articles of association and amendments thereto and other particulars as to the location of their registered office. In addition to the foregoing particulars no-liability mining companies and foreign companies, *i.e.*, those whose original registration is outside New South Wales, are required to file an annual balance-sheet and a list of debentures or other securities secured on the property of the company.

Particulars relating to the registration of new companies in New South Wales and of increases of capital are shown below, the figures for the quinquennial periods representing the annual average:—

Period.	Limited Companies.				No-Liability Mining Companies.			
	New Companies.		Increases of Capital.		New Companies.		Increases of Capital.	
	No.	Nominal Capital.	No.	Nominal Amount.	No.	Nominal Capital.	No.	Nominal Amount.
		£		£		£		£
*1901-05 ...	113	3,104,766	13	483,990	25	301,766	5	24,175
*1906-10 ...	231	5,184,658	23	1,010,710	45	430,112	7	29,634
*1911-15 ...	383	10,263,455	58	3,468,139	20	308,017	3	31,395
*1916-20 ...	321	17,465,293	93	3,624,272	14	284,271	1	11,400
1921 ...	462	20,255,150	93	5,454,507	10	234,625	6	50,950
1922 ...	445	10,897,919	81	4,868,357	21	442,500	1	1,000
1923 ...	563	18,625,061	105	6,452,000	20	276,875	1	5,000
1924 ...	561	15,301,727	91	5,080,233	15	170,750	5	18,000
1925 ...	607	19,648,524	99	6,074,786	13	242,000	1	8,500
1926 ...	695	42,732,975	119	15,669,740	27	490,150	1	5,000
1927 ...	774	29,413,417	116	9,520,500	9	485,500	...	...

\* Average per annum.

The total number of limited companies in active existence in New South Wales at the end of 1927 was 6,194, of which 5,364 were local and 830 were "foreign," as already defined. During 1927 there were registered 275 winding-up orders and resolutions in respect of local companies.

Between 1901 and 1915 there was a steady increase in the promotion of limited companies, principally joint-stock companies, and a large amount of capital was invested in the expansion of existing enterprises, especially in the years immediately preceding the outbreak of the war. In 1915 and 1916 there was a noticeable slackening, and regulations under the War Precautions Act prohibited the issue or subscription of fresh capital unless under permit, the object being to encourage the flow of capital into loans for war purposes. After 1917 the number of registrations began to rise again, as industrial and commercial enterprises prospered in consequence of war expenditure.

In 1920 there was a remarkable expansion of company promotion; the registrations of limited companies numbered 801, and the nominal capital amounted to £61,654,857. The figures are inflated by reason of the reconstruction of many companies to meet altered conditions of industry and rises in prices and wages, but the Registrar-General has estimated that 648 entirely new companies were registered during the year, with a nominal capital of £38,700,000.

In 1921 and 1922, which were years of economic re-adjustment to the altered level of prices, the number of registrations was low, but they have increased rapidly since. In 1925 the number (including reconstructions) was 607, with a nominal capital of £19,648,524. The companies registered in 1926, viz., 695 with nominal capital of £42,732,975, included an unusual number with very large capital, e.g., one with £5,000,000 and five with £1,000,000 or more. In the following year the number of registrations was 774 and the aggregate capital, £29,413,417, was exceeded in only two earlier years, viz., 1920 and 1926.

During the period 1911 to 1920 the number of foreign companies registered was, on an average, about 56 per annum. The number registered in each of the past seven years was as follows:—

	No.	Nominal Capital £		No.	Nominal Capital £
1921	72	31,121,396	1925	78	94,833,857
1922	68	29,143,312	1926	83	17,752,806
1923	69	34,971,400	1927	69	15,192,065
1924	83	14,131,711			

The particulars for the year 1925 include the Canadian Pacific Railway with a nominal capital of £75,000,000.

#### CO-OPERATIVE SOCIETIES.

The effete laws relating to co-operation in New South Wales were replaced on 31st December, 1923, by the Co-operation, Community Settlement, and Credit Act, which, with amendments passed in 1924 and 1928, is known now as the Co-operation Acts, 1923-1928.

The Act is a comprehensive measure, affording ample scope for co-operative development. It authorises co-operative societies to engage in all forms of economic activity except banking and insurance.

Societies may be of various kinds, viz.: (a) rural societies to assist producers in conducting their operations and in marketing products; (b) trading societies to carry on business, trade, or industry; (c) community settlement societies to acquire land and settle or retain persons thereon and to provide any common service or benefits; (d) community advancement societies to provide any community service, e.g., water, gas, electricity, transport, recreation, etc.; (e) building societies—terminating or per-

manent—to assist members to acquire homes or other property; (f) rural credit societies to make or arrange loans to members for the purpose of assisting rural production; (g) urban credit societies to assist members to acquire plant, furniture, etc., or to commence business or trade; (h) investment societies to enable members to combine to secure shares in a company or business or to invest in securities. Societies of the same kind may combine into co-operative associations, and such associations of all kinds may form unions.

Societies are corporate bodies with limited liability except that a rural credit society may be formed with unlimited liability. Existing societies (with the exception of seven permanent building societies) were deemed to have applied for registration under the new Act, and were required to alter their rules to conform thereto.

Co-operative companies registered as limited companies under the Companies Act, 1899, are permitted to transfer their registration to the Co-operation Act, without winding up or loss of identity. The use of the word "co-operative" by any company not specially authorised in that regard or by any person or firm as part of a trade or business name is prohibited, and such bodies may not in any manner hold out that their trade or business is co-operative.

Adequate provision is made to safeguard the funds and financial interests of the societies, the issue of shares and the disposition of the funds are regulated, the power to raise loans and to receive deposits is limited, reserve funds must be established, and the accounts of the societies are subject to inspection and audit. A member may not hold more than one-fifth of the shares. No dividend may be paid in respect of shares in a rural credit society with unlimited liability, and in other cases the maximum rate of dividend is 8 per cent. per annum. Powers of supervision are vested in the Registrar, who registers the societies and their rules, adjudicates upon matters in dispute, and may inspect accounts if necessary.

An Advisory Council has been appointed to submit recommendations to the Minister with respect to regulations and model rules of co-operative societies, the appointment of committees, and other action for promoting co-operation. The Council consists of the Registrar and of persons appointed by the Governor to represent different forms of co-operative enterprise.

Co-operative effort for production is a prominent feature of the dairying industry, most of the butter factories being organised on a co-operative basis, but numerous societies of this class and other organisations of producers have been registered under the Companies Act.

The following table shows particulars relating to various classes of co-operative societies, other than building societies, at 30th June, 1927:—

Type of Society.	Number at end of Year.	Number supplying Returns for Year.	Number of Members.	Amount of Share Capital Paid-up.	Surplus and Reserves.
				£	£
Rural ... ..	90	82	13,490	235,960	98,295
Trading ... ..	58	51	54,610	868,395	435,315
Community Settlement ...	1	1	310	692	(—) 261
Community Advancement ...	14	8	1,865	1,718	2,535
Investment ... ..	3	3	634	24,214	1,100
Total ... ..	166	145	71,209	1,130,979	538,984



The difference between the number of societies in existence at the end of the year and the number of returns received represents mainly societies registered during the year or in liquidation. From these returns were not due.

Further details regarding the co-operative movement are set forth in the chapters of this book relating to agriculture, the dairying industry, and rural settlement.

*Trading Societies.*

The transactions of co-operative trading societies during the last five years are given in the following table:—

Particulars.	1922.	1923.	1924-25.	1925-26.	1926-27.
Number of Societies ... ..	89	91	53	57	58
„ Returns ... ..	49	49	40	46	51
Number of Members ... ..	48,738	50,418	45,197	51,649	54,610
<b>Liabilities—</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
Share Capital ... ..	543,725	563,162	643,609	791,002	868,395
Reserves and Net Profits ..	256,070	283,732	323,904	366,882	435,315
Other Liabilities ... ..	303,457	279,490	241,725	277,685	367,388
Total Liabilities	£ 1,103,252	1,126,384	1,209,238	1,435,569	1,671,098
<b>Assets—</b>					
Freehold, Plant, etc. ... ..	324,624	344,121	373,053	428,876	718,160
Stock ... ..	465,880	452,936	468,041	445,582	490,703
Other Assets ... ..	312,748	329,327	368,144	561,111	462,235
Total Assets	£ 1,103,252	1,126,384	1,209,238	1,435,569	1,671,098
Value of Stocks at beginning of year... ..	461,530	470,007	442,605	445,709	449,135
Purchases ... ..	2,923,763	2,727,781	2,858,321	2,658,153	2,772,383
Expenses, Interest, etc. ..	508,612	383,321	476,541	551,222	595,051
Balance of Surplus on trade of year... ..	294,966	380,734	367,231	366,412	411,214
Total ... ..	£ 4,188,871	3,961,843	4,144,698	4,021,496	4,227,783
Sales, etc. ... ..	3,676,571	3,468,870	3,629,441	3,520,904	3,680,785
Discounts, etc. ... ..	46,420	40,037	47,216	55,010	56,295
Value of Stocks at end of year	465,880	452,936	468,041	445,582	490,703
Total ... ..	£ 4,188,871	3,961,843	4,144,698	4,021,496	4,227,783

The above societies are mainly consumers' distributive societies organised on the Rochdale plan of "dividend upon purchase," conducting retail stores. They buy their supplies largely from a wholesale co-operative society with which a considerable number of them are affiliated. The societies have

met with success in the Newcastle and other mining districts, and in the parts of the metropolitan area where large numbers of industrial workers reside.

The apparent decrease in the number of societies in 1924-25 was due to the deregistration of a considerable number which had been defunct for a number of years.

*Rural Societies.*

There were ninety rural societies at 30th June, 1927. Their objects covered a variety of activities, including the manufacture and distribution of butter, cheese and bacon, the packing and marketing of fruit, and the purchase of poultry feed or general requisites.

Returns were received from eighty-two of these societies in respect of their operations during 1926-27, and from the final accounts the following statement has been prepared:—

<i>Dr.</i>	£	<i>Cr.</i>	£
Stock at beginning of year ...	97,020	Proceeds of products sold ...	2,676,168
Manufacturing charges ...	233,523	Other income ...	43,944
Expenses ...	225,921	Stocks at close of year ...	75,742
Interest paid ...	9,897		
Payments to suppliers ...	2,209,312		
Surplus ...	20,181		
Total ...	2,795,854	Total ...	2,795,854

A statement of the liabilities and assets of the rural societies in the last three years is shown below. The comparison cannot be extended to cover earlier years because data are not available, the rural societies being for the most part new societies formed since the commencement of the Co-operation Act of 1923 or organisations which had been registered previously as companies under the Companies Act.

Particulars.	1924-25.	1925-26.	1926-27.
<b>Societies—</b>			
Number at 30th June ...	36	64	90
Returns received ...	27	41	82
Members ...	2,602	6,547	13,490
<b>Liabilities—</b>	£	£	£
Share Capital ...	36,876	107,252	235,960
Other liabilities ...	112,408	254,317	513,906
Balance of Surplus and Reserves ...	20,764	58,379	98,295
Total ...	170,048	419,948	848,161
<b>Assets—</b>			
Land, Buildings, Plant, etc. ...	92,860	245,135	549,974
Stock ...	15,181	63,142	75,742
Other Assets ...	62,007	111,671	222,445
Total ...	170,048	419,948	848,161

*Investment Societies.*

There are three investment societies, viz., two which were formed during 1923 amongst employees of the Australian Gas Light Company and one formed in 1926 by employees of the City of Newcastle Gas and Coke Works. The object of these societies is to purchase shares in the respective companies by means of periodical subscriptions from the members. These shares are transferred to the names of individual shareholders when the contributions to their credit amount to the market value of the shares. At the middle of 1927 the amount of members' share capital was £24,214, and shares to the value of £24,413 were held in public companies.

*Permanent Building Societies.*

The aggregate liabilities and assets of permanent building societies for the last five years are shown in the following statement:—

Particulars.	1922.	1923.	1924-25.	1925-26.	1926-27.
Number of Societies ...	8	7	7	7	7
<b>Liabilities—</b>					
Deposits ... ..	£ 566,763	£ 522,329	£ 550,116	£ 540,658	£ 567,111
Share Capital ... ..	347,603	364,440	401,277	417,652	455,310
Reserves and net profits	251,299	263,325	269,571	280,193	313,769
Other Liabilities ..	56,788	51,403	19,069	40,002	19,943
<b>Total ... ..</b>	<b>1,165,453</b>	<b>1,201,497</b>	<b>1,240,033</b>	<b>1,278,505</b>	<b>1,356,133</b>
<b>Assets—</b>					
Advances ... ..	978,452	1,040,854	1,080,494	1,114,144	1,156,368
Other Assets ... ..	187,001	160,643	159,539	164,361	199,765
<b>Total ... ..</b>	<b>1,165,453</b>	<b>1,201,497</b>	<b>1,240,033</b>	<b>1,278,505</b>	<b>1,356,133</b>

The income during the year 1926-27 amounted to £121,886, of which the largest item was interest, £106,880, and the expenditure, which amounted to £114,488, included £84,422 paid as dividend on shares and interest on deposits and as bonuses.

*Starr-Bowkett and other Terminating Building Societies.*

Starr-Bowkett building societies are terminating societies, in which the rights of members to appropriation are determined by ballot or by sale. The usual procedure is that the member pays a subscription of 6d. per share per week for 15 years, or in some cases until the last appropriation is made, and is entitled to a loan of £50 in respect of each share held by him. Loans are repayable by instalments spread over 10 to 12½ years without interest. The duration of societies varies, but frequently over 20 years elapse before the last loan is made. When an advance has been made to all members remaining in the society the process of winding-up commences and share capital is repaid as instalments in respect of loans accumulate. The life-time of a society of this type often extends to about 28 years. Particulars relating to their operations during the last five years are shown below:—

Particulars.	1922.	1923.	1924-25.	1925-26.	1926-27.
Number of Societies ...	136	139	169	154	156
Number of Returns ...	117	126	126	132	133
<b>Liabilities—</b>					
Members' Subscriptions	£ 1,751,296	£ 1,824,566	£ 2,125,379	£ 2,294,421	£ 2,449,876
Other Liabilities ...	84,200	70,616	26,974	26,892	42,968
Balance of Profit ...	225,054	244,025	268,617	304,885	305,964
<b>Total ... ..</b>	<b>2,060,550</b>	<b>2,139,207</b>	<b>2,420,970</b>	<b>2,626,198</b>	<b>2,798,808</b>
<b>Assets—</b>					
Advances ... ..	1,897,666	1,958,023	2,027,175	2,185,125	2,355,978
Other Assets ... ..	162,884	181,184	393,795	441,073	442,830
<b>Total ... ..</b>	<b>2,060,550</b>	<b>2,139,207</b>	<b>2,420,970</b>	<b>2,626,198</b>	<b>2,798,808</b>

The subscriptions received from shareholders in 1926-27 amounted to £279,949, and the withdrawals to £173,396; the advances on mortgage amounted to £547,735, and repayments to £426,201, and the sum due on account of advances at the end of the year was £2,355,978. The income during the year amounted to £75,391, and the expenses to £36,688.

Besides the Starr-Bowkett building societies there is another class of terminating building societies which work principally on a bank overdraft, and loans are made available to members practically as soon as they require them, the ballot being very rarely resorted to. A member receiving a loan does not repay the actual amount borrowed, but is required to pay an increased rate of contribution for the remainder of the life of the society, consequently a balance-sheet in the usual sense of the term cannot be prepared. Although a maximum period of twelve years is fixed as the life of the society, it is usual to wind up before the expiration of the theoretical time.

There are ten such societies in existence, of which nine furnished returns in 1926-27, and their transactions during the last three years were as follows:—

Particulars.	1924-25.	1925-26.	1926-27.
<b>Receipts—</b>			
Subscriptions from Members ...	£ 31,182	59,165	63,336
Fines and other Charges ...	£ 1,281	1,835	1,584
Interest received from borrowers ...	£ 2,080	2,382	3,345
<b>Expenditure—</b>			
Advances to members ...	£ 47,945	81,943	48,772
Withdrawals of share capital ...	£ 4,126	1,619	5,109
Interest paid by society ...	£ 6,029	6,874	7,412
Management Expenses ...	£ 1,328	2,149	1,916
Number of shares at end of year ...	No. 8,761	14,109	17,190

#### FRIENDLY SOCIETIES.

The affairs of the friendly societies in New South Wales are conducted in accordance with the Friendly Societies Act of 1912 and its amendments. The societies are compelled to register, and are required to furnish periodical returns, giving details relating to membership, sickness, mortality, benefits, and finances. In this chapter finances only are discussed, and the figures in the following tables relate to the societies which provide benefits such as medical attendance, sick pay, and funeral donations, and are exclusive of the particulars of miscellaneous societies registered under the Friendly Societies Act, such as dispensaries, medical institutes, and accident societies. Other matters relating to friendly societies are discussed in the chapter entitled "Social Condition."

Early legislation did not make adequate provision for maintaining the solvency of the friendly societies, but in 1899 an Act was passed to bring their affairs under State supervision and to make provision for the actuarial certification of tables of contributions, for valuations at least once within five years, the investigation of accounts, and other measures for safeguarding the funds. The Act and its amendments were consolidated in 1912. Amending Acts passed in 1913, 1916, and 1920 render less rigid a clause which requires the moneys received or paid on account of a particular benefit to be kept in a separate account and to be used only for the specific purpose. Where the sickness and funeral funds of a society are administered by one central body for the whole society they may be treated now

as one fund, and on valuation being made the Registrar may authorise surplus moneys belonging to a fund to be used in any manner for the purposes of any other fund.

#### *Actuarial Valuations.*

In the quinquennial valuations between 1904 and 1919 all the societies were valued as at the same date, and particulars of the results were published in earlier issues of this Year Book. Under more recent arrangements the societies are to be valued by groups in successive years. Nine affiliated and fifteen single societies were valued as at 31st December, 1922, two affiliated societies as at 31st December, 1923, and the remainder as at 31st December, 1924.

Of fifteen affiliated societies which have been valued, nine showed surpluses of assets amounting to £92,018, and six societies showed deficiencies amounting in the aggregate to £67,941. The total liabilities amounted to £6,967,303, as compared with accumulated funds, £2,506,138, and future contributions valued at £4,485,242. In the case of fifteen single societies the assets, £66,189 (including funds £38,581), exceeded the liabilities by £11,615. Four of these societies, with accumulated funds amounting to £4,307, showed deficiencies amounting to £580 in respect of liabilities valued at £9,241.

The next valuation is being made as at 30th June and will be divided over the four years 1926 to 1929. Five affiliated and fourteen single societies were valued as at 30th June, 1926. Three affiliated societies showed surpluses of assets amounting to £17,079 and two showed deficits amounting to £37,172. The aggregate liabilities of the five societies amounted to £943,662 and the assets to £923,569, viz., accumulated funds £313,488, future contributions £610,081.

Of the single societies valued at 30th June, 1926, twelve showed a surplus of assets amounting to £16,435; their aggregate liabilities were £59,078 and assets £75,513 included accumulated funds £53,087. The assets of two single societies showing deficits amounted to £2,376, viz., funds £1,176 and future contributions £1,200, as compared with liabilities £2,568.

#### *Accumulated Funds.*

The following statement illustrates the growth of the funds of the Friendly Societies since 1911:—

At 30th June.	Sickness and Funeral Funds.	Medical and Management Fund.	Other Funds.	All Funds.	
				Total.	Per Member.
	£	£	£	£	£
1911*	1,378,722	78,264	49,852	1,506,838	9·14
1916*	1,820,708	101,092	48,471	1,970,271	11·02
1921	2,134,339	194,358	83,065	2,411,762	12·08
1922	2,268,655	204,304	105,978	2,578,937	12·61
1923	2,410,208	208,397	109,386	2,727,991	12·71
1924	2,548,517	214,248	108,803	2,871,568	13·11
1925	2,707,763	221,919	112,372	3,042,054	13·43
1926	2,866,486	237,296	111,688	3,215,470	13·70
1927	3,055,187	249,305	114,307	3,418,799	14·22

\*At 31st December.

During the twelve months ended 30th June, 1927, the total funds of the societies increased by £203,329, the increases being common to all the societies.

*Receipts and Expenditure.*

The receipts and expenditure of the friendly societies during the last six years are shown in the following statement:—

Year. ended 30th June.	Receipts.				Expenditure.					
	Contributions.	Interest.	Other.	Total.	Sick Pay.	Funeral Donations.	Medical Attendance and Medicine.	Expenses of Management.	Other.	Total.
	£	£	£	£	£	£	£	£	£	£
1922	661,620	142,205	94,556	898,381	222,586	56,353	262,269	137,994	53,936	733,138
1923	673,650	146,106	56,072	875,828	230,241	50,246	269,223	139,268	31,856	726,774
1924	711,053	150,427	58,373	920,363	247,567	61,548	280,327	145,977	37,867	776,786
1925	732,194	160,801	52,573	945,568	249,915	63,302	238,456	145,634	27,775	775,032
1926	766,772	172,039	61,850	1,000,661	269,768	65,913	307,350	143,808	35,376	827,245
1927	795,542	191,758	83,467	1,070,767	232,216	69,136	319,325	154,115	42,141	867,433

\* Eighteen months ended June, 1921.

The figures show a steady growth of the societies, the annual income exceeding £1,000,000 for the first time in 1925-26. The total amount disbursed in benefits in the year ended June, 1927, was £671,177, as compared with £330,000 in 1911 and £541,208 in 1921-22. The cost of medical attendance and medicine has increased, as additional charges were made by medical practitioners and pharmacists, and the average cost per adult member rose from 18s. 3d. in 1911 to 27s. 7d. in 1922-23, and to 29s. 4d. in 1926-27.

There was a marked increase in the cost of management between 1911 and 1921, but, though still increasing absolutely, these costs have diminished relatively since 1921. In the year 1926-27 the total expenses, £154,115, were equal to 13s. per head of mean membership as compared with 7s. 6d. per head in 1911, and 13s. 6d. in 1921-22. In proportion to contributions and to total income, expenses in 1926-27 represented 19.4 per cent. and 14.4 per cent. respectively, as compared with 14.4 per cent. and 11.5 per cent. in 1911.

## INSURANCE.

Insurance in New South Wales, apart from Government pension funds, is mainly the province of private organisations. The question of national insurance was investigated by a Royal Commission appointed by the Government of the Commonwealth in September, 1923, the final report being issued in March, 1927. The subjects referred to the Commission for report were (a) national insurance as a means of making provision for casual sickness, permanent invalidity, old age, and unemployment; (b) the operation of the maternity allowance system, with a view to the incorporation with national insurance of a scheme for securing effective pre-natal and other assistance to mothers; (c) the question of amending the Invalid and Old-age Pensions Act so as to provide for destitute allowances. The Commission recommended the creation of a national insurance fund applicable to all wage and salary earners over 16 years of age in Australia, and to such other workers and small proprietors as elected to come within its scope, the requisite funds to be provided by flat rate contributions paid by the Commonwealth Government, the employee and the insured person, and calculated on an actuarial basis with provision for reserves. Under the scheme persons insured would receive sickness, invalidity, maternity, and superannuation benefits. It was recommended that persons receiving equal benefits from mutual insurance schemes be exempt from contributing

to the fund. Further recommendations favoured (a) the creation of an Unemployment Council to eliminate avoidable unemployment; (b) the institution of a scheme of insurance against unavoidable unemployment; (c) the making of provision for destitute allowances.

A National Insurance Bill was introduced into the Federal Parliament in September, 1928, but it was not taken beyond the early stages in view of an impending dissolution of Parliament. It contains provisions for insurance against sickness and disablement, with allowances for dependent children and widows and orphans, marriage allowances and superannuation.

#### *Legislation.*

In New South Wales there is no legislation dealing specifically with the conduct of insurance business, the insurance companies being subject to the Companies Acts. The Life, Fire and Marine Insurance Acts of 1902 and 1917 were enacted in the State Parliament to provide for the protection of life insurance policies and annuities against creditors, and for the issue of special policies in substitution for those lost or destroyed. The section of the 1902 Act relating to marine insurance was superseded by the Commonwealth Marine Insurance Act of 1909, which defines the limit of marine insurance and regulates the terms of the contracts, the liability of the insurers, etc.

A Commonwealth Act passed in 1905 limits the amount of assurance payable on the death of children. The maximum amount ranges from £5 in respect of children under 1 year to £45 in the case of children between the ages of 9 and 10 years, the sums being payable only to parents or their personal representatives. The provisions of the Act do not apply, however, to any insurance effected by persons having an insurable interest in the lives insured or to insurances, *e.g.*, industrial assurances, effected by parents, in which the amount payable on the death of a child does not exceed the total amount of premiums actually paid, plus interest up to 4 per cent. per annum.

#### LIFE ASSURANCE.

The volume of life assurance business transacted in New South Wales has increased very rapidly in recent years both absolutely and in proportion to the population. At the same time there has been a marked tendency for the local business of non-Australian assurance companies to diminish, and, especially since the war, the number of local assurance institutions has increased very rapidly.

Particulars relating to life assurance are obtained from the reports published by the companies and from official returns collected under the Census Act of 1901.

Life assurance business in New South Wales is conducted generally on the principle of premiums which remain constant throughout the term for which they are payable. The rates quoted by the companies transacting new business in the State vary considerably, being affected by the conditions relating to bonuses and the age of the institutions.

#### *New South Wales Business—Ordinary Branch.*

The following tables relate only to assurances effected in New South Wales, and the extent of the business in force in the ordinary branch, exclusive of annuities, during the years 1925-26 and 1926-27 is shown below.

The business may be classified broadly in three categories—(1), whole-life assurance payable at death only; (2), endowment assurance payable at the end of a specified period or at death prior to the expiration of the period; (3), pure endowment payable only in case of survival for a specified period.

Classification.	1925-26.				1926-27.			
	Policies in Force.	Amount Assured exclusive of Bonuses and Re-assurances.	Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured exclusive of Bonuses and Re-assurances.	Bonus Additions.	Annual Premiums Payable.
Assurance... Endowment Assurance Pure Endowment.	No. 112,163 129,557 16,024	£ 53,290,443 24,650,228 2,336,273	£ 7,840,925 3,066,666 48,909	£ 1,609,722 935,995 93,319	No. 102,004 145,271 17,157	£ 52,788,381 29,710,803 2,475,276	£ 9,228,204 4,007,047 60,979	£ 1,557,615 1,157,961 97,826
Total...	258,644	80,276,944	10,953,500	2,659,036	264,432	84,973,960	13,291,230	2,812,902

The majority of the policies, viz., 55 per cent., represented endowment assurances; whole-life policies were 39 per cent., and endowments 6 per cent. of the total number. The amount assured under the whole-life policies represented 62 per cent. of the total (exclusive of bonus additions), the average per policy being £518; endowment assurance policies, with an average of £205 per policy, covered 32 per cent. of the total amount assured; and endowment policies, with an average of £144 per policy, 3 per cent.

*Industrial Assurance.*

A large business in industrial assurance has developed in New South Wales during recent years. The policies in this class are for small amounts, and the premiums in most cases are payable weekly or monthly. Industrial business in the State is transacted by the Australasian companies only.

A classification of the industrial business in force in New South Wales is shown below:—

Classification.	1925-26.			1926-27.		
	Policies in Force.	Amount Assured Inclusive of Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured Inclusive of Bonus Additions.	Annual Premiums Payable.
Assurance ... ..	No. 78,190	£ 2,132,261	£ 119,582	No. 78,541	£ 2,397,975	£ 122,381
Endowment Assurance ... ..	381,083	15,906,815	984,515	417,326	18,294,046	1,109,348
Pure Endowment...	25,581	1,024,848	68,632	28,733	1,160,681	77,378
Total ...	484,854	19,063,924	1,172,729	524,600	21,852,702	1,309,107

Transactions in annuities are not numerous, the business in force in New South Wales in 1926-27 being 582 policies for an aggregate amount of £44,052 per annum in the ordinary branch, and five policies representing £362 per annum in the industrial department. The amount of premiums payable annually on these policies was £5,001.



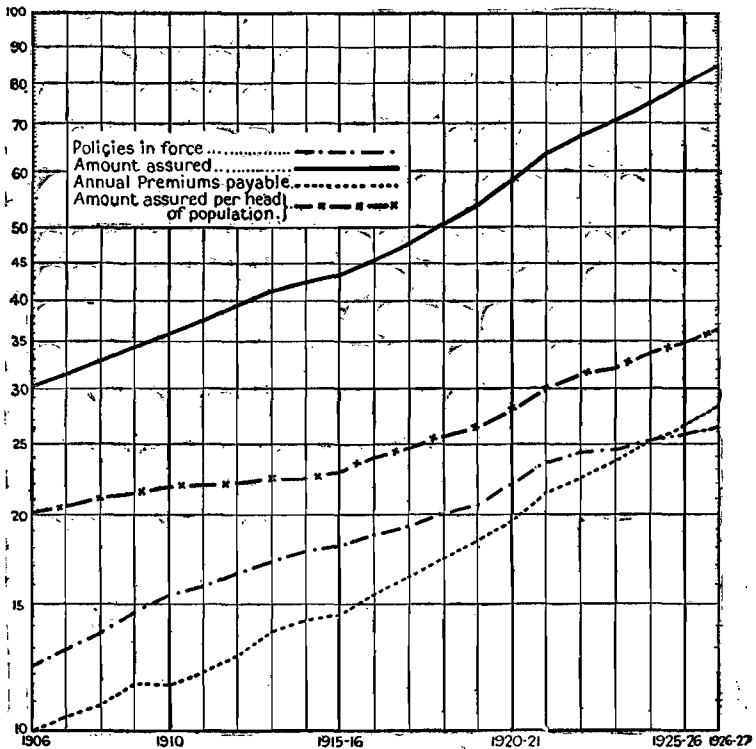
## New Business.

The new life assurance business, ordinary and industrial, effected in New South Wales during the last ten years, is compared in the following table:—

Year.	Ordinary Branch.			Industrial Branch.		
	Number of Policies.	Amount Assured.	Annual Premiums Payable.	Number of Policies.	Amount Assured.	Annual Premiums Payable.
1917-18	18,010	£ 4,914,896	£ 192,308	53,491	£ 1,720,790	£ 115,738
1918-19	21,643	5,972,028	252,052	62,279	2,138,259	145,630
1919-20	21,543	6,483,990	236,541	64,199	2,437,850	160,699
1920-21	28,837	7,973,324	281,379	70,305	2,986,482	187,560
1921-22	27,705	8,693,745	306,867	79,318	3,819,905	225,134
1922-23	25,441	8,544,638	301,447	88,316	4,302,371	266,166
1923-24	26,557	9,474,386	322,676	94,633	4,736,141	292,765
1924-25	28,318	10,677,767	370,667	111,211	5,549,595	353,937
1925-26	25,147	9,958,776	340,001	106,633	5,247,712	329,684
1926-27	26,360	10,643,262	368,417	107,844	5,608,112	338,090

The amount assured under new policies in the ordinary branch rose in every year of the period under review, except 1922-23 and 1925-26. The increase was most marked in the year 1918-19, when arrangements were

**LIFE ASSURANCE—ORDINARY BUSINESS, 1906 to 1927.**  
(Ratio Graph.)



The numbers at the side of the graph represent 10,000 policies, £1,000,000 of Assurances, £100,000 of Premiums, and £1 of Assurances per head of population.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual values are shown by means of the numbers at the side of the graph.

made by some of the societies for combining life assurance with war loan subscriptions, and in 1920-21 when expansion was evident in all classes of business activities. In the industrial branch new business has expanded in a remarkable degree, and during the decade the annual rate of increase in the amount assured ranged from 28 per cent. in 1921-22 to 8 per cent. in 1926-27. The year 1925-26 was the only period in which the volume of new business failed to exceed that of the preceding year.

A comparative statement of the amount of ordinary and industrial business, excluding bonuses and annuities, in force in New South Wales during each of the last ten years is shown below—

Year.	Ordinary Branch.			Industrial Branch.		
	Policies.	Amount Assured, excluding Bonus Additions.	Annual Premiums Payable.	Policies.	Amount Assured, excluding Bonus Additions.	Annual Premiums Payable.
	No.	£	£	No.	£	£
1917-18	192,962	47,636,307	1,644,692	248,037	6,298,106	404,836
1918-19	201,559	50,812,701	1,741,249	273,716	7,301,713	472,448
1919-20	207,906	53,953,151	1,828,780	294,573	8,275,956	535,666
1920-21	222,166	58,510,165	1,973,847	323,386	9,742,791	621,908
1921-22	236,973	64,017,662	2,154,782	358,493	11,710,567	730,561
1922-23	244,074	67,736,939	2,263,097	389,652	13,374,191	838,215
1923-24	247,042	71,287,168	2,383,019	419,250	15,156,155	944,239
1924-25	252,966	75,951,505	2,523,522	457,876	17,327,951	1,076,382
1925-26	258,644	80,276,944	2,659,036	484,854	19,019,590	1,172,729
1926-27	264,432	84,973,960	2,812,902	524,600	21,431,152	1,309,107

The bonus additions effective in 1926-27 amounted to £13,291,230 in the ordinary branch and those in the industrial branch were estimated at £421,550.

The amount assured in the ordinary branch increased by approximately £39,514,000, or by 87 per cent., in the ten years ended 30th June, 1927, and in the industrial branch by £15,831,000, or by 283 per cent. The development of life assurance in relation to the population is shown in the following statement, which illustrates also the increase in the average amount per policy and in the premium payable.

Year.	Policies per 1,000 of Population.		Amount Assured per Head of Population.		Average Amount Assured Per Policy.		Average Annual Premium payable per Policy.	
	Ordinary.	Industrial.	Ordinary.	Industrial.	Ordinary.	Industrial.	Ordinary.	Industrial.
	No.	No.	£ s. d.	£ s. d.	£	£	£ s. d.	£ s. d.
1917-18	100	129	24 15 10	3 5 7	247	25	8 10 6	1 12 8
1918-19	103	139	25 17 7	3 14 5	252	27	8 12 9	1 14 6
1919-20	102	144	26 9 2	4 1 2	260	28	8 15 11	1 16 4
1920-21	106	154	27 19 1	4 13 1	260	30	8 17 8	1 18 6
1921-22	111	168	30 1 3	5 10 0	270	33	9 1 10	2 0 9
1922-23	112	179	31 3 0	6 3 0	277	34	9 5 5	2 3 0
1923-24	112	190	32 4 10	6 17 1	289	36	9 12 11	2 6 1
1924-25	112	203	33 13 4	7 13 7	300	38	9 19 6	2 7 0
1925-26	113	211	34 18 7	8 5 7	310	43	10 5 8	2 8 5
1926-27	113	223	36 3 10	9 2 7	321	41	10 12 9	2 8 11

While ordinary insurance business is growing steadily at a rate more rapid than the growth of population industrial business is growing at a much faster rate. Whereas ten years ago there was approximately one industrial and one ordinary policy for every ten inhabitants to-day there are two industrial and one ordinary policy for every ten inhabitants. In addition to the increase in number of policies there has been a substantial growth in the amount assured and the annual premium payable per policy.

*Australasian Assurance Societies—Total Business.*

The life assurances undertaken in New South Wales by foreign companies represent a very small proportion of their total business and an insignificant proportion of the business done in New South Wales.

A summary of the total business—ordinary and industrial—of the Australasian societies operating in New South Wales, and of the amount of receipts, expenditure, and accumulated funds, at intervals since 1895, is shown below.

Year.	Societies.	Policies in Force.	Receipts.	Expenditure.	Accumulated Funds, including Paid-up Capital and Reserves.	Interest and Rents.	
						Amount Received.	Average Rate Realised on Mean Funds.
1895-96	No. 10	No. 268,242	£ 000 3,392	£ 000 2,334	£ 000 20,438*	£ 000 1,037	per cent. 5.21
1900-01	11	331,868	4,093	2,648	26,491*	1,162	4.81
1905-06	14	756,585	5,437	3,834	34,916	1,528	4.48
1910-11	11	1,056,173	7,131	4,619	45,668	1,963	4.46
1915-16	14	1,424,186	9,474	6,085	61,572	2,836	4.74
1920-21	14	1,944,845	14,079	7,944	83,029	4,116	5.76
1921-22	22	2,095,728	15,388	8,950	90,208	4,571	5.23
1922-23	24	2,245,338	16,661	9,994	97,408	5,022	5.35
1923-24	28	2,379,784	19,115	11,281	106,007	5,507	5.41
1924-25	33	2,531,366	19,849	11,794	114,496	6,039	5.48
1925-26	33	2,678,790	22,189	12,860	124,361	6,595	5.52
1926-27	31	2,819,352	23,525	13,788	134,163	7,290	5.64

\*Exclusive of capital and reserve funds, etc.

The annual additions to the funds have shown a considerable increase since 1910. A gradual increase in earning power of funds continued from 1910-11, when 4.46 per cent. was realised, until a rate equal to 5.64 per cent. was reached in 1926-27.

The following table shows details of the total receipts and disbursements of the Australasian institutions during 1926-27 for both classes of business:—

Particulars.	Ordinary Branch.	Industrial Branch.	Total.
<b>Receipts—</b>			
Premiums—			
New ... ..	£ 1,832,811	} 3,950,338	15,825,049
Renewal ... ..	10,041,900		
Consideration for Annuities ... ..	82,937		82,937
Interest on Investments* ... ..	6,234,317	960,805	7,095,122
Rents ... ..	167,848	26,729	194,577
Other Receipts ... ..	294,737	32,944	327,701
<b>Total Receipts ... ..</b>	<b>18,654,570</b>	<b>4,870,816</b>	<b>23,525,386</b>
<b>Expenditure—</b>			
Claims and Policies matured ... ..	6,135,017	1,124,753	7,259,770
Surrenders ... ..	1,409,010	123,793	1,532,803
Annuities ... ..	128,821	295	129,116
Cash Bonuses and Dividends ... ..	519,568	81,477	601,045
Expenses, incl. commission, and brokerage ... ..	2,106,967	1,482,078	3,589,045
Taxes ... ..	262,157	31,414	293,571
Amount written off to Depreciation, Reserves, Transfers, etc. ... ..	269,570	79,118	348,688
<b>Total Expenditure ... ..</b>	<b>10,860,210</b>	<b>2,927,928</b>	<b>13,788,138</b>

\* Includes rent in some cases.

The receipts of the societies consist mainly of premiums on policies and of interest arising from investments. The former represented 67 per cent. of the receipts in 1926-27 and the latter 30 per cent. Payments on account of death claims, policies matured and surrendered, and cash bonuses and dividends amounted in 1926-27 to £8,192,416, or 75 per cent. of the total expenditure in the ordinary branch, and £1,335,318, or 41 per cent., in the industrial branch. Expenses of management constituted 21.8 per cent. of the expenditure in the ordinary branch, and 51.7 per cent. in the industrial.

#### *Expenses of Management.*

The ratio between management expenses and premium income must necessarily vary with the volume of new business transacted, and with the age of the society, quite apart from the competition for new business. The following figures show in respect of the ordinary and industrial departments of the Australasian societies the cost of management, including commission and taxes, and its proportion to premium income and gross receipts.

Year.	Management Expenses.	Premium Income.	Gross Receipts.	Management Expenses.	
				Per cent. of—	
				Premium Income.	Gross Receipts.
	£	£	£		
1895-96	438,524	2,380,167	3,392,423	18.42	12.93
1900-01	565,880	2,799,512	4,093,376	20.19	13.81
1905-06	858,741	3,500,448	5,437,589	24.53	15.79
1910-11	1,016,153	5,074,204	7,131,250	20.08	14.25
1915-16	1,252,438	6,591,572	9,474,126	19.00	13.22
1921-22	2,643,403	10,649,745	15,387,948	24.82	17.48
1922-23	2,872,387	11,453,770	16,661,049	25.08	17.29
1923-24	3,156,872	13,380,582	19,115,434	23.59	16.51
1924-25	3,469,908	13,568,017	19,849,146	25.57	17.48
1925-26	3,727,350	14,635,673	22,169,345	25.47	16.80
1926-27	3,881,716	15,825,049	23,525,386	24.53	16.60

The expenses of management of the ordinary business in 1926-27 represented in the aggregate 12.7 per cent. of the total receipts, and 19.9 per cent. of the premium income; and of the industrial branch, 31.1 and 38.3 per cent. respectively.

The expenses of the industrial branch are necessarily very high in proportion to the receipts, on account of the house-to-house method of collection, which is an essential feature of the system.

Particulars regarding the management expenses of the ordinary and industrial branches are stated separately in the following table for each of the past ten years:—

Year.	Ordinary Branch.		Industrial Branch.	
	Proportion of Management Expenses to—			
	Premium Income.	Total Receipts.	Premium Income.	Total Receipts.
	per cent.	per cent.	per cent.	per cent.
1917-18	16.34	10.86	36.23	33.21
1918-19	16.65	11.05	38.06	32.80
1919-20	18.06	11.91	38.33	32.90
1920-21	18.60	12.48	38.40	32.80
1921-22	20.88	13.80	39.70	33.40
1922-23	21.02	13.75	39.32	33.00
1923-24	18.82	12.49	41.58	34.53
1924-25	20.70	13.33	41.57	34.41
1925-26	20.78	12.89	39.94	32.76
1926-27	19.94	12.70	38.31	31.07

*Liabilities and Assets.*

The following table gives a summary of the total liabilities and assets of the Australasian societies in the year 1926-27:—

Liabilities.		Assets.	
Assurance Funds—	£	Loans—	£
Participating in Profits ...	123,138,642	On Mortgage ...	27,668,319
Not participating in Profits ...	948,978	„ Municipal and Other	„
Claims Investment Fund ...	22,565	Local Rates ...	26,083,192
Other Assurance Funds ...	6,581,911	„ Reversionary, Life, and	„
		Other Interests ...	653,199
Total ...	130,692,096	„ Policies ...	14,969,606
Other Funds—		„ Personal Security ...	25,561
Guarantee and Contingency		„ Government Securities..	250,680
Funds ...	85,805	„ Other Debentures and	„
Investment Fluctuation		Bonds ...	1,159,515
Fund ...	723,958	„ Miscellaneous Loans ...	449,541
Paid-up Capital ...	2,191,204	Total ...	71,259,613
Reserve Funds ...	469,830		
Total Funds ...	134,162,893		
Other Liabilities—		Government Securities ...	53,290,694
Claims admitted but not		Real Estate ...	5,750,531
paid ..	1,293,511	Other Assets ...	7,985,199
Outstanding Accounts ...	258,239		
Miscellaneous ...	2,571,394	Total Assets ...	£138,286,037
Total Liabilities ...	£138,286,037		

In some of the States companies are obliged by law to deposit certain sums with the Treasury as a guarantee of good faith, and these amounts are included in their balance-sheets under the head of Government securities or of deposits.

In former years insurance companies sought only such forms of investment as loans on mortgage, municipal securities, policies of members, etc., but in more recent years attention has been given to Government securities and investments in shares, and since 1915 large sums have been subscribed to war loans. Considerable sums are deposited also with banks, or invested in freehold and leasehold property. Investments on personal security are unusual, and are generally combined with life policies, the total amount under this heading in the year 1926-27 being only £25,561.

The following comparison relating to liabilities and assets of Australasian life assurance institutions illustrates the rapid growth of the funds, etc., of the assurance societies:—

Year.	Liabilities.			Assets.		
	Paid-up Capital and Accumulated Funds.	Other Liabilities.	Total.	Loans on Mortgages, Policies, etc.	Securities, Freehold Property, etc.	Total.
	£	£	£	£	£	£
1895-96	21,497,059*	...	21,497,059	15,600,229	5,896,830	21,497,059
1900-01	27,471,223*	...	27,471,223	19,013,579	8,457,644	27,471,223
1905-06	34,915,842	951,520	35,867,362	22,072,061	13,795,301	35,867,362
1910-11	45,668,204	775,785	46,443,989	30,625,778	15,818,211	46,443,989
1915-16	61,572,309	1,619,028	63,191,337	45,535,992	17,655,345	63,191,337
1920-21	83,028,808	6,992,147	90,020,955	40,127,817	49,893,138	90,020,955
1921-22	90,207,633	6,533,051	96,740,684	42,073,513	54,667,171	96,740,684
1922-23	97,408,397	4,920,478	102,328,875	45,518,207	56,810,668	102,328,875
1923-24	106,007,373	5,361,675	111,369,048	50,158,033	61,211,015	111,369,048
1924-25	114,495,550	6,143,587	120,639,137	56,028,101	64,611,036	120,639,137
1925-26	124,361,308	4,576,073	128,937,381	62,530,516	66,397,865	128,937,381
1926-27	134,162,893	4,123,144	138,286,037	71,259,613	67,026,424	138,286,037

\* Includes other liabilities.

The ratio of loans on the security of mortgages, local rates, policies, etc., to total assets, which was between 60 and 70 per cent. up to the year 1915-16, has been reduced since to 52 per cent., and Government securities which, in 1915-16, represented only 17 per cent. of the assets, showed a ratio of 39 per cent. in 1926-27. The change was due mainly to large investments in war and other loans of the Commonwealth.

FIRE, MARINE, AND GENERAL INSURANCE.

The aggregate liabilities in New South Wales and elsewhere of the companies which were transacting fire, marine and general insurance in the State in 1926-27 amounted to £391,993,305, of which £39,916,461 represented shareholders' capital; reserve funds amounted to £43,314,316; reserve for unearned premiums, £58,276,916; insurance funds, £87,358,759; and other funds, £61,119,604; outstanding losses, £31,612,381; and other liabilities, £70,394,868. The assets consisted of the following items:—Mortgages and other loans, £14,834,667; Government securities, £134,861,756; municipal and other debentures, £50,235,106; and other securities, £89,309,004; land and house property, £25,931,393; agents' balances, £30,332,265; cash on deposit, current account, and in hand, £26,254,967; and other assets, £20,234,147.

The nature of the local insurances effected during the year 1926-27 is shown in the following table. The particulars relate to New South Wales risks only. Premiums exclude re-insurances and returns; and treaty arrangements are not taken into consideration. In the case of losses, amounts recovered from Australasian re-insuring offices are excluded also. Interest receipts cannot be distributed among the various classes of insurance and are included in one item:—

Nature of Insurance.	Premiums in New South Wales, less Re-insurances in Australia and New Zealand.	Expenditure in New South Wales.						
		Losses, less Re-insurances.	Expenses of Management.		Total.	Proportion of Premium Income.		
			Commission and Agents' Charges	Other.		Losses.	Commission and Agents' Charges	Other Management Expenses.
	£	£	£	£	£	percent.	percent.	percent.
Fire .. .. .	2,272,476	1,657,760	369,985	585,232	2,612,977	72·95	16·23	25·75
Marine .. .. .	519,194	235,450	44,113	113,820	393,383	45·35	8·50	21·92
Accident .. .. .	144,889	67,062	32,404	28,124	127,590	46·29	22·37	19·41
Employers' Liability and Workmen's Compensation ..	1,527,078*	1,051,861	109,241	272,793	1,433,895	68·88	7·15	17·86
Public Risk, Third Party ..	38,863	12,123	5,464	7,526	25,113	31·19	14·06	19·37
Plate-glass .. .. .	57,011	19,499	9,769	12,073	41,346	34·20	17·14	21·19
Motor Car and Motor Cycle ..	931,676	530,396	144,692	167,578	843,166	57·04	15·55	18·01
Hallstone .. .. .	97,519	33,924	18,410	19,993	77,327	39·91	18·88	20·50
Boiler Explosion .. .. .	10,254	3,035	334	4,095	7,464	29·60	3·26	39·94
Live Stock .. .. .	21,055	12,304	3,512	5,784	21,600	58·44	16·68	27·47
Burglary .. .. .	49,901	16,927	7,318	10,595	34,840	33·92	14·67	21·23
Guarantee .. .. .	43,173	14,773	5,973	8,790	29,506	34·22	13·84	20·29
Loss of Profits .. .. .	61,208	32,539	8,493	13,282	54,314	53·16	13·88	21·70
Elevator .. .. .	1,987	3	291	468	702	0·15	14·65	23·55
Sprinkler .. .. .	1,997	112	279	348	739	5·61	13·97	17·43
Other .. .. .	10,537	7,650	1,505	9,614	18,769	72·60	14·23	91·24
Total Premiums .. .. .	5,787,818	..	..	..	..	..	..	..
Total Interest, etc. . . .	269,784	..	..	..	..	..	..	..
Total .. .. .	6,057,602	3,700,918	761,783	1,260,090	5,722,791	63·94	13·16	21·77

\* Net premiums after deduction of £945,974 in respect of rebates, etc.

The total losses amounted to 63.9 per cent. of the premiums. The expenses for commission and agents' charges were £761,783, and for general management £1,260,090, making a total of £2,021,873, or 34.9 per cent. of the premium income and 33.4 of the gross revenue.

The principal classes of insurance, according to the amount of net premiums in 1926-27, were fire, employers' liability and workmen's compensation, motor vehicles, and marine.

The total amount of the fire insurance written was £475,391,000 in 1923, £501,380,478 in 1924, £520,473,844 in 1925, £525,252,189 in 1926, and £556,093,507 in 1927. The measures taken for the prevention of fire are described in the chapter "Local Government."

Insurance relating to the liability of employers has grown rapidly as wages have risen, and as the scope of workers' compensation has been extended by legislation. The Workers Compensation Act which commenced on 1st July, 1926, increased the amount of compensation payable, extended the benefits to a large body of workers previously excluded, and placed upon employers the obligation of insuring against liability in respect of practically all classes of employees.

At the commencement of the Act uncertainty prevailed as to the probable cost of the extended benefits, and it was announced on behalf of local associated underwriters that their new rates would be 150 per cent. higher than for insurance under the earlier Act, with an additional charge of 40s. per cent. to cover compensation in respect of diseases. After three months' experience, however, there was a general reduction of 33½ per cent. on 1st October, 1926, and at the end of the year employers renewing their insurances were granted a bonus discount, usually at the rate of 20 per cent. of the premiums for the year 1926-27. These reductions and rebates amounted to £945,974, and after deducting this sum the net premiums for 1926-27 amounted to £1,527,078 as compared with £655,073 in the preceding year.

The Government Insurance Office of New South Wales transacts workers' compensation insurance for employers generally, as well as fire and other classes of insurance (except life assurance) for Government departments and statutory bodies and their employees. The establishment of the office was an outcome of the extension of workers' compensation benefits under the Act of 1926. An internal insurance fund was created in the Treasury in 1911 for the insurance of Government buildings against fire risks, the funds being administered by the Treasury Insurance Board. From time to time its operations were extended to provide other classes of insurance for Government and public bodies. With the commencement of the Workers Compensation Act of 1926, the Government decided to establish the Government Insurance Office to take over the business of the Treasury Insurance Board and to provide workers' compensation insurance in respect of private as well as public employment in order that the employers would be enabled to fulfil at the lowest cost their obligations to insure their employees as prescribed by the Act. The scope of the activities of the Government Office is defined by the Government Insurance (Enabling and Validating) Act, 1927, deemed to have commenced on 30th June, 1926. The substantial reductions in the rates for workers' compensation insurance as noted above, were initiated by the Government Office.

The insurance of motor cars also has developed rapidly, its growth being due to the increased use of these vehicles. The premiums received in 1923-24, viz., £253,231, were more than four times the amount in 1918-19, and there was a further rapid increase to £930,676 in 1926-27. The premiums for accident insurance are increasing steadily.

For marine insurance the premium receipts, which declined from £630,910 in 1920-21 to £471,273 two years later, rose gradually to £552,202 in 1925-26, then showed another reduction to £519,194 in 1926-27.

A summary of the revenue and expenditure in respect of general insurance transactions in New South Wales in each of the last five years is shown below:—

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Revenue—	£	£	£	£	£
Net Premiums ... ..	3,466,603	3,779,037	4,432,787	4,581,496	5,787,818
Interest, etc. ... ..	165,920	175,671	198,477	214,442	269,784
Total ... ..	3,632,523	3,954,708	4,631,264	4,795,938	6,057,602
Expenditure—					
Losses ... ..	2,073,434	2,436,946	2,185,560	2,439,149	3,700,918
Management—					
Commission and Agents' Charges ... ..	483,306	546,806	633,952	640,384	761,788
Other Expenses ... ..	842,342	885,941	999,397	1,069,053	1,260,090
Total ... ..	3,399,082	3,869,693	3,818,909	4,148,586	5,722,791
Excess of Revenue..	233,441	85,015	812,355	647,352	334,811
Proportion to Premium Income—	per cent.	per cent.	per cent.	per cent.	per cent.
Losses ... ..	59·81	64·48	49·30	53·24	63·94
Expenses—					
Commission, etc. ... ..	13·94	14·47	14·30	13·98	13·16
Other ... ..	24·30	23·46	22·55	23·23	21·77

In 1926-27 the premium income showed an increase of £1,206,322, to which employers liability and workmen's compensation contributed £372,005, motor vehicle insurance £153,794, fire £124,551 and hailstone £61,975. Marine insurance was the only class in which there was a substantial decrease, the premium income being £30,088 less than in 1925-26.

During the five years shown above approximately 58 per cent. of the premiums have been repaid to insurers to cover losses. The excess of revenue was very small in 1923-24 and very large in the following year. It has declined since by reason of a relative increase in losses which was most marked in fire insurance in 1926-27.

Many policies are for a period of twelve months, and the majority of the insurance companies set aside annually a reserve for unexpired risks. In the case of fire insurance the amount so set aside is usually 40 per cent. of the net premium income of the year. By reviewing the figures to calculate a reserve on that basis, it is found that fire business in New South Wales showed a marked improvement during 1924-25 and 1925-26, the results being in contrast with those of the preceding four years. In 1926-27 transactions showed a net underwriting deficit, but this would be made good to some extent by interest earnings, etc.



In proportion to premium income the losses and expenses vary greatly in the different classes of insurance and from year to year according to seasonal and other conditions. The following table shows a comparison under these heads for the past five years:—

Class.	Proportion per cent. of Losses to Premiums.					Proportion per cent. of Expenses to Premiums.				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Fire ... ..	69.0	69.6	43.3	56.4	72.9	41.5	41.1	40.0	42.3	42.0
Marine ... ..	41.1	65.8	46.4	40.1	45.4	29.2	28.7	31.0	30.6	30.4
Accident ... ..	45.7	47.2	39.5	39.2	46.3	51.6	47.5	45.6	44.3	41.8
Employers' Liability and Workmen's Compensation ... ..	61.8	65.6	60.7	64.4	68.9	30.0	31.8	28.5	26.6	25.0
Public Risk, Third Party	31.2	28.7	37.6	33.1	31.2	36.8	35.6	33.7	38.3	33.4
Plate Glass ... ..	30.7	32.2	33.2	28.9	34.2	40.5	41.5	39.7	38.7	38.3
Motor Car and Motor Cycle ... ..	58.4	64.3	62.7	55.6	57.0	37.7	36.8	34.5	34.6	33.6
Hailstone... ..	20.3	23.5	79.3	27.3	39.9	43.3	50.4	45.2	53.0	39.4
Boiler Explosion ... ..	29.2	46.2	33.1	40.0	29.6	58.3	50.3	82.7	69.7	43.2
Live Stock ... ..	37.1	45.8	55.1	44.6	58.4	49.8	48.6	42.2	43.2	44.2
Burglary ... ..	51.5	37.6	44.4	42.0	33.9	39.2	38.0	37.6	35.2	35.9
Guarantee ... ..	46.3	29.8	22.7	34.0	34.2	26.9	38.8	34.3	35.7	34.1
Loss of Profits ... ..	18.6	30.4	21.4	20.9	53.2	36.2	33.5	30.3	32.9	35.6
Elevator ... ..	3.5	...	1.1	...	0.2	37.2	...	35.5	36.9	38.2
Sprinkler ... ..	19.3	28.8	14.3	17.0	5.6	34.0	32.2	21.3	18.6	31.4
Other ... ..	20.2	19.4	24.2	23.6	72.6	153.4	27.5	175.1	99.2	105.5
Total ... ..	59.8	64.5	49.3	53.2	63.9	38.2	36.9	36.0	37.3	34.9

The comparison shows that if premium income be considered a fair measure of exposure to risk the proportion of losses (i.e. of payments in satisfaction of claims in respect of risks against which insurances are affected) varies considerably in all classes of business. In some cases the losses and expenses of management combined exceed the amount of premium income. This does not necessarily mean an aggregate loss on the class of business concerned, because societies have other sources of income, such as interest, which it is not possible to allocate to respective classes of insurance.

#### BANKRUPTCY.

Some particulars of the Bankruptcy jurisdiction in New South Wales are given in the chapter "Social Condition" of this Year Book.

Statistics relating to the sequestration of estates by persons who are unable to pay their debts, afford some indication of the fluctuations in the business conditions of the community. Petitions for sequestration orders may be made to the Supreme Court of New South Wales by the debtor, or by a creditor. The effect of an order is to vest the property of the bankrupt in an official assignee for division amongst the creditors, the bankrupt being required to lodge with the Registrar in Bankruptcy a statement of his affairs. Creditors may accept proposals for a composition in satisfaction of the debts due to them, or for a scheme of arrangement of the bankrupt's affairs, which becomes binding if approved by the Court and by a majority of creditors representing three-fourths of the proved claims.

A Bankruptcy Act, passed by the Federal Parliament in October, 1924, and amended in 1927, was brought into operation on 1st August, 1928. It supersedes the Bankruptcy and Insolvency Acts of the States, with the exception of any provisions relating to matters not dealt with in the Federal Act.

Particulars of petitions in bankruptcy during each of the past ten years are shown in the following table:—

Year.	Petitions in Bankruptcy.			Petitions With-drawn, Refused, etc.	Sequestrations.			
	Voluntary.	Compulsory.	Total.		Orders Granted.	Liabilities.	Assets.	Ratio of Assets per £ of Liabilities.
						£	£	s. d.
1918	184	113	297	33	264	221,928	115,776	10 5
1919	193	123	316	34	282	323,222	189,920	11 9
1920	210	134	344	55	289	204,594	139,550	13 8
1921	208	186	394	70	324	311,900	166,457	10 8
1922	247	234	481	78	403	440,856	251,185	11 5
1923	360	308	668	98	570	659,314	282,657	8 7
1924	421	397	818	150	668	742,079	303,315	8 2
1925	341	375	716	138	578	878,708	438,796	10 0
1926	437	344	781	134	647	736,149	353,028	9 7
1927	476*	289*	765*	117	765	770,992	358,668	9 4

\* Excluding petitions withdrawn, etc.

The annual number of bankruptcies and the amount of liabilities increased in nearly every year of the past decennium. It is difficult to reconcile this fact with the unusually prosperous conditions of recent years, unless it be due to excessive speculation. The ratio of assets to liabilities varies considerably, but the amounts stated in the table are those shown in the bankrupts' schedule, and differ widely from the values established after investigation by the Court.

A bankrupt may apply to the Court, three months after the date of sequestration, for a certificate of discharge to release him from his debts. Estates may be freed from sequestration also if the creditors accept a composition or a scheme of arrangement, or if they are paid in full or give a legal quittance of the debts due to them. It is remarkable, however, that only about one-fifth of the estates are freed by certificate of discharge or release, though the property of an uncertificated bankrupt, even if acquired after sequestration, is liable to seizure on behalf of unsatisfied creditors.

#### TRANSACTIONS IN REAL ESTATE.

The procedure in regard to land transfers is regulated under the Real Property Act, which was passed in 1862 and, with its amendments, consolidated in 1900. The title conferred by this Act is known as "Torrens" title, and the main features of the system are transfer of real property by registration of title instead of by deeds, absolute indefeasibility of the title when registered, and protection afforded to owners against possessory claims, as the title under the Act stands good notwithstanding any length of adverse possession. Lands may be placed under the Real Property Act only when the titles are unexceptional. All lands alienated by the Crown since the commencement of the Act are subject to the provisions of the Real Property Act, but transactions in respect of earlier grants are governed by the Registration of Deeds Act unless the land has been brought under the operation of the Real Property Act.

The area of Crown grants registered under the Real Property Act and the total consideration expressed in the grants in each of the past five years are shown below, also the area and value of private lands brought under the Act:—

Year.	Area.			Value.		
	Crown Lands.	Private Lands.	Total.	Crown Lands.	Private Lands.	Total.
	acres.	acres.	acres.	£	£	£
1923	865,238	45,085	910,323	806,066	2,889,081	3,695,147
1924	749,764	35,341	785,105	708,130	1,919,658	2,627,788
1925	683,652	38,562	722,214	622,897	1,973,257	2,596,154
1926	747,949	27,766	775,715	659,530	2,664,898	3,324,428
1927	794,400	34,263	828,663	625,071	2,431,050	3,056,121

At the close of 1927 lands of a total area of 46,502,028 acres were registered under the Act, the declared value as at date of registration being £105,878,492. The greater part of this land consists of Crown grants issued since 1863, but it includes also 2,720,294 acres of land originally under the Registration of Deeds Act, but now under the Real Property Act.

The volume of transactions in respect of transfers and conveyances of private lands usually reflect the general condition of business throughout the State, but the published records, showing the amount of consideration paid on sales, do not indicate the actual volume of the transactions, as the figures are swollen in some years by reason of inflation of values or the prevalence of speculation, and the consideration shown is not always the real consideration.

The following table shows for each year of the past decade the amount paid as money consideration on sales of private lands, that is, of lands absolutely alienated with titles registered under the statutes shown. Transfers of conditional purchases and of leases from the Crown are excluded:—

Year.	Conveyances or Transfers.			Year.	Conveyances or Transfers.		
	Under Registration of Deeds Act.	Under Real Property (Torrens) Act	Total.		Under Registration of Deeds Act.	Under Real Property (Torrens) Act.	Total.
	£000	£000	£000		£000	£000	£000
1918	3,995	16,835	20,830	1923	9,682	44,204	53,886
1919	4,859	21,070	25,929	1924	9,417	38,554	47,971
1920	9,705	45,271	54,976	1925	8,874	39,311	48,185
1921	9,298	35,966	45,264	1926	9,851	48,915	58,766
1922	10,710	31,622	42,332	1927	8,857	47,844	56,701

An increase of 112 per cent. in the value of land sales in 1920 reflects the condition of unusual activity noted in regard to other phases of the financial affairs of the State. The volume of sales has remained very high during the last eight years, and the value of transfers in 1926 was higher than ever before recorded.

As already mentioned, the Real Property Act provides that on the issue of a certificate the title of the person named in the certificate is indefeasible. If a transfer has been made in error, the holder of a certificate cannot be dispossessed of the property concerned unless he has acted fraudulently, therefore provision has been made to enable the Government to compensate persons erroneously deprived of property. An assurance fund was created

by means of a contribution of one halfpenny in the pound on the declared capital value of property when first brought under the Act and upon transmission of titles of estates of deceased persons. In 1907 the fund, amounting to £255,059, was amalgamated with the Closer Settlement Fund, to which subsequent contributions have been paid.

#### REGISTRATION OF MONEY-LENDERS.

Under the Money-lenders and Infants Loans Act, 1905, money-lenders must be registered at the Registrar-General's Office, and they must conduct their business only under their own or their firms' names, and at their registered offices. The term "money-lender" includes every person or company transacting the business of money-lending, but it excludes licensed pawnbrokers, registered friendly societies, institutions incorporated by special Act of Parliament to lend money, and banking and insurance companies. The number of registrations and renewals during the year 1927 was 135.

#### MORTGAGES OF REALTY AND PERSONALTY.

Mortgages, except those regulated by the Merchant Shipping Act, may be registered at the Registrar-General's Office, but there is a large number of unregistered mortgages of which records are not obtainable.

Mortgages of land are registered under the Registration of Deeds Act or the Real Property Act, according to the title of the property at the date of mortgage. The consideration given generally represents the principal owing, but in some cases it stands for the limit within which clients of banks and of other loan institutions are entitled to draw.

Liens on wool, mortgages on live stock, and liens on growing crops are registered under a special Act. Mortgages on live stock are current till discharge, and liens on wool mature at the end of each season, terminating without formal discharge. The duration of liens on agricultural and horticultural produce may not exceed one year. Such advances do not usually reach large sums, as there is an element of uncertainty in the security offered.

Mortgages on personalty other than ships and shipping appliances, wool, live stock, and growing crops are registered at the office of the Registrar-General in terms of the Transfer of Records Act, 1923, which was proclaimed on 18th October, 1925. Previously they had been filed at the Supreme Court. A bill of sale comprising household furniture actually in use by husband and wife living together is ineffective unless the consent of the wife or the husband of the maker or the giver of the bill is endorsed thereon. The law requires that each document must be filed within thirty days after it is made or given, otherwise the transaction is void as against execution creditors and against the official assignee or the trustee of a bankrupt estate. The registration must be renewed every twelve months, and in order to prevent fraud and imposition the records are open to the inspection of the public. Information is not readily available to show the total amount of advances made annually on bills of sale.

Mortgages of registered British vessels are arranged under the Imperial Merchant Shipping Act of 1894. Transactions of this nature are divided into two classes, one in which the vessel is the sole security, and the other in which the advances are made on the security of the "account current," which may consist of ships, land, and other properties.

Particulars of the mortgages of land, crops, wool, and live stock, and of ships effected during each of the last five years, are shown below. The figures relating to ships refer to the period of twelve months ended in June of the year stated:—

Year.	Mortgages of Land.		Mortgages on Crops, Wool, and Live Stock.				Mortgages of Ships.	
	Number.	Consideration.	Number.			Consideration.	Number.	Consideration.
			Crops.	Wool.	Live Stock.			
		£				£		£
1923	46,876	42,031,310	6,117	1,517	4,446	3,001,316	16	8,450
1924	43,698	42,935,204	6,692	1,855	4,783	4,484,137	30	427,192
1925	43,208	42,768,753	4,842	1,904	4,109	4,495,119	13	54,365
1926	48,078	52,980,451	6,153	2,455	4,190	4,901,483	9	41,400
1927	48,868	50,624,554	5,190	3,170	4,223	5,205,903	*	*

\* Not available.

The amounts shown under the heading "Consideration" include only the cases in which a specific amount is stated in the deeds, whether the amount was actually advanced or not. Where the sum advanced is liable to fluctuation, it is usual to insert the words "valuable consideration" or "cash credit," etc., instead of a definite sum. In view of the number of mortgages in which the amount is omitted, it is probable that the totals are understated. Complete records of discharges and foreclosures are not available.

#### PRIVATE WEALTH.

Estimates of the wealth of New South Wales at intervals since 1891 were reviewed in detail in the 1921 issue of the Year Book, and the following statement supplies a brief summary of the estimates relating to private wealth at ten-year intervals since 1901, the total value of the main classes of property being shown, and the value per head:—

Item.	Estimated Value.					
	Total.			Per Head of Population.		
	1901.	1911.	1921.	1901.	1911.	1921.
	£000	£000	£000	£	£	£
Land (unimproved value) ...	112,895	169,232	263,363	82·6	101·7	124·9
Houses, etc., and other permanent improvements ...	151,798	213,057	392,073	111·1	128·0	186·0
Live Stock ...	31,937	41,999	51,347	23·4	25·2	24·4
Coin and Bullion ...	8,780	15,879	10,918	6·4	9·5	5·2
Merchandise ...	27,190	47,268	105,297	19·9	28·4	50·0
Private Railways ...	584	958	1,510	·4	·6	·7
Mines and Mining Plant ...	6,960	10,120	13,500	5·1	6·1	6·4
Machinery and Implements ...	10,448	19,777	43,107	7·6	11·9	20·4
Shipping ...	2,528	2,910	5,332	1·8	1·8	2·5
Household effects, Vehicles, etc.	11,845	26,450	43,416	8·7	15·9	23·0
Personal effects ...	3,603	6,166	13,067	2·6	3·7	6·2
Total Private Property ...	368,568	553,816	947,930	269·6	332·8	449·7

The composition of the private wealth changed little between 1901 and 1921. In point of value, land has become a less important item of wealth, and permanent improvements to land have become the most valuable class of property. The proportions of the private wealth represented by trading stocks and machinery, respectively, increased considerably, and the relative values of livestock, metallic currency, and mining properties declined. The large increase in the value of household and personal effects illustrates the growth of domestic and personal comfort.

A preliminary estimate has been made in respect of the private wealth in 1925, the result being £1,132,000,000, or £498 per head of population.

Particulars of the distribution of wealth amongst the citizens of New South Wales may be obtained from the result of a census taken by the Commonwealth Government in 1915, when all persons aged 18 years and over were required to furnish returns if they possessed property, or held property, or were in receipt of income.

The results, which were published in detail in the 1918 and 1921 issues of the Year Book, indicate that 792,556 persons in New South Wales who furnished returns owned assets amounting in the aggregate to £468,994,322; 17·1 per cent. did not possess any assets; 80·9 per cent. had assets worth less than £5,000, constituting 48·3 per cent. of the aggregate value; and 2 per cent. owned 51·7 per cent. of the wealth. The figures are exclusive of the value of interest in trust estates, assurance policies and annuities, and prospective benefits from friendly societies, but they include assets located outside New South Wales owned by residents of the State.

*Estates of Deceased Persons.*

Further information relating to the distribution of wealth may be gleaned from returns relating to the estates of deceased persons which are valued for the purpose of assessing death duties. In accordance with the provisions of the Stamp Duties Act of 1920 the estates are deemed to include all the property of the deceased persons which is situated in New South Wales, including property which, within three years prior to death, was transferred as a gift, or vested in a private company or trust in consideration of shares or other interest, and moneys payable under life assurance policies, etc.

The following table shows the number of estates and the value as assessed for probate duty during the ten years ended 30th June, 1927, including intestate and other estates administered by the Public Trustee:—

Year ended 30th June.	Estates.	Amount.	Year ended 30th June.	Estates.	Amount.
	No.	£		No.	£
1918	6,476	11,859,375	1923	5,681	15,441,378
1919	6,873	11,818,222	1924	6,281	16,429,860
1920	7,172	17,106,876	1925	6,410	17,970,385
1921	5,731	12,199,419	1926	6,909	18,390,924
1922	5,458	13,883,674	1927	7,064	18,138,133

A rough test of the diffusion of wealth may be made by relating the number of people who died possessed of property to the total number of deaths, as in the following statement. The figures in this and in the succeeding table are exclusive of estates administered by the Curator of Intestate Estates for the years prior to 1911, and the figures for 1919 and subsequent years indicate the relations between the number of deaths in the calendar year stated and the number of estates on which probate was granted in the twelve months ended six months later. The particulars showing estates in calendar years are not available since 1918, and probate is not granted usually until several months after the death of a testator:—

Period.	Proportion of Deceased Persons with Estates per 100 Deaths.	Period.	Proportion of Deceased Persons with Estates per 100 Deaths.
1880-84	11·0	1920	27·3
1885-89	11·6	1921	27·2
1890-94	13·2	1922	29·6
1895-99	14·9	1923	29·8
1900-04	17·0	1924	30·8
1905-09	19·1	1925	33·2
1910-14	22·9	1926	31·8
1915-19	30·1		

The figures indicate a wide diffusion of property, but the deaths include those of a large number of minors at ages when the proportion of property owners is small. The next table shows the proportion of estates per 100 deaths of adult males, and as a large number of women are possessors of property in their own right, the ratio of estates to the deaths of adults of both sexes.

Period.	Ratio of Estates per 100 Deaths of Adult Males.	Ratio of Estates per 100 Deaths of Adult Males and Females.	Period.	Ratio of Estates per 100 Deaths of Adult Males.	Ratio of Estates per 100 Deaths of Adult Males and Females.
1880-84	34·6	22·3	1920	67·6	39·5
1885-89	37·5	23·8	1921	66·3	38·4
1890-94	41·2	25·8	1922	69·5	39·9
1895-99	42·7	26·2	1923	71·0	40·5
1900-04	46·0	27·8	1924	71·7	41·3
1905-09	48·8	29·2	1925	75·1	43·7
1910-14	56·6	34·0	1926	72·9	41·7
1915-19	71·3	42·1			

During the five years ended June, 1925, the proportion of estates of male testators to deaths of adult males was 46·6 per cent.; and the proportion of estates of female testators to deaths of adult females was 30·9 per cent.

The foregoing figures include the estates of persons who died abroad, but usually the number is not sufficient to cause an appreciable degree of error. The proportions during the war period, however, were increased considerably by reason of the inclusion of a large number of estates left by members of the naval and military forces, and the deaths which occurred abroad were not included in the number on which the ratios shown in the table are based. Making due allowance for the deaths of absentees, the apparent tendency is that the proportion of property-owners in the State is increasing.

An indication of the proportionate distribution of wealth may be gained from an analysis of the value of the estates of deceased persons, and in the following statement the estates on which probate was granted during the ten years ended 30th June, 1927, have been graded according to value:—

Value of Estate.	Number of Deceased Persons leaving Property.	Value of Estates of Deceased Persons.	Proportion in each Group.	
			Number.	Value.
		£	Per cent.	Per cent.
Under £1,000 ... ..	41,802	13,858,547	65·26	9·04
£1,000 to £5,000 ... ..	16,265	34,652,850	25·40	22·69
£5,000 to £12,500 ... ..	3,663	28,122,874	5·72	18·33
£12,500 to £25,000 ... ..	1,438	24,263,300	2·24	15·82
£25,000 to £50,000 ... ..	565	19,374,944	·88	12·63
Over £50,000 ... ..	322	32,965,731	·50	21·59
<b>Total ... ..</b>	<b>64,055</b>	<b>153,238,246</b>	<b>100·00</b>	<b>100·00</b>

The average value per estate during the period was £2,392, but of the property-owners who died 65 per cent. did not possess £1,000, the total value of their property being only 9 per cent. of the aggregate. On the other hand, half the property devised was contained in 3·6 per cent. of the estates. These figures support the evidence of the War Census of 1915 concerning the distribution of wealth in New South Wales.

#### PRIVATE INCOMES.

Formerly the narrow scope of the State income-tax and latterly the inadequacy of statistical data relating to the incomes assessed for purposes of State income tax rendered it impossible to formulate estimates of the

national income, and, for various reasons, the information published by the Commissioner of Federal Taxation could not be turned to account. However, satisfactory results have been obtained for the year 1920-21 by using the returns of occupations and breadwinners obtained at the census of 3rd April, 1921, in conjunction with statistics relating to income derived during the year ended 30th June, 1921, obtained by the Commissioner of Taxation from returns supplied for purposes of Federal income tax. An estimate based on these data was set forth in detail in the 1924 issue of this Year Book and a brief summary is shown hereunder.

#### *Number of Incomes, 1920-21.*

The total number of breadwinners in New South Wales recorded at the census of 4th April, 1921, was 884,104, including 10,948 persons assisting others in their work but not receiving wages or salary, leaving 873,156 persons who may be considered to have been in receipt of incomes. It is apparent, however, that a considerable number of partly dependant persons, including most invalid pensioners and female old-age pensioners, as well as some war pensioners, were returned at the census as dependants. Adding 29,600 as the number of such pensioners, it is estimated that the total number of resident persons in receipt of incomes at the census was approximately 902,800. There were in addition 485 males and 513,313 females engaged in domestic duties for which monetary remuneration was not paid. No allowance was made for the value of the services rendered by persons who were working but not directly receiving monetary income.

Of the 873,156 breadwinners receiving incomes, it would appear that approximately 74 per cent., or 646,988, were wage and salary earners, 121,644 were working on their own account, 47,849 were employers, and the remainder, 56,675, derived income from property, from pensions, or from other sources.

#### *Amount of Income, 1920-21.*

The amount of private income derived in New South Wales in 1920-21 is estimated to have been as follows:—

	£
Incomes of resident individuals .. .. .	187,800,000
Companies' undistributed income .. .. .	10,300,000
Income derived by absentees .. .. .	10,100,000
<b>Total .. .. .</b>	<b>£208,200,000</b>

The total amount of income received by resident individuals in New South Wales in 1920-21 may be stated at approximately £187,800,000, inclusive of approximately £8,100,000 distributed as dividends by companies. This represents an average of nearly £90 per head of population, £298 per person in receipt of income, and £218 per breadwinner other than old-age and invalid pensioners.

The total amount of net income received by companies, assurance societies, and kindred profit-making bodies, other than partnerships, was £19,900,000, consisting of £9,400,000 not distributed to shareholders, £8,100,000 dividends distributed to local shareholders, £1,500,000 to foreign shareholders, and £900,000 non-taxable interest. This total represented 9 per cent. of the total income derived in the State.

Combining the incomes derived by resident individuals and by companies, the total amount of private incomes of residents was estimated to be £198,100,000, of which £10,300,000 were not distributed to individuals during the year.



The total amount of income accruing to absentees from New South Wales in 1920-21 may be set down at £10,100,000 viz., £6,700,000 as interest on Government loans, and £3,400,000 from private investments and other operations.

*Approximate Distribution of Income, 1920-21.*

Data are not available regarding the distribution of the whole of the income in detail, but from the report of the Federal Commissioner for Taxation considerable information may be deduced in respect of the distribution of incomes of individual taxpayers who embrace all those possessed of incomes in the higher grades. By combining these with an estimate of the incomes of non-taxpayers, it has been possible to compile the following table to show the approximate distribution of income derived by individuals in New South Wales in 1920-21. The figures do not include non-taxable interest on war loans which is included in the statement on page 497.

Grade of Net Income.*	Where whole income is derived in N.S.W.		Where part of total income is derived in other States.	
	Number of Persons.	Income.*	Number of Persons.†	Income derived in N.S.W.*
		£		£
Under £700... ..	881,731	158,250,000	2,800	550,000
£701-£1,000 ... ..	6,930	6,028,000	800	330,000
£1,001-£2,000 ... ..	5,634	8,016,000	1,080	750,000
£2,001-£3,000 ... ..	1,312	3,275,000	420	530,000
£3,001-£5,000 ... ..	690	2,663,000	350	670,000
Over £5,000 ... ..	351	3,128,000	350	1,895,000
<b>Total ... ..</b>	<b>896,648</b>	<b>181,360,000</b>	<b>5,800</b>	<b>4,725,000</b>

\* Omitting non taxable interest on war loans. † According to grade of total income derived in Australia.

The principal feature of this table is the overwhelming preponderance of incomes under £700 per year. No less than 98 per cent. of the incomes, embracing nearly 72 per cent. of the total income, fall into this group. There were comparatively few individuals with incomes over £5,000, and no individual deriving the whole of his income in the State had an income exceeding £50,000, excluding from account interest derived from non-taxable war loans.

*Comparative Statement—Incomes 1892 to 1926.*

The estimate of the income derived in New South Wales during 1920-21 is shown below in comparison with an estimate based on the war census of income derived in the year ended 30th June, 1915, and with results obtained for the years 1892, 1898, and 1901, by employing census data in conjunction with State income-tax returns. A preliminary estimate for 1925-26 is inserted for comparison.

Year.	Net Income of Resident Individuals.	Undistributed Income of Local Companies, etc.	Income accruing to absentees.		Private Income derived in New South Wales.
			From Private Investments and Property.	From investment in Government Loans. †	
	£	£	£	£	£
1892	*	*	3,050,000	1,870,000	68,270,000
1898	57,649,000	2,250,000	2,530,000	1,975,000	64,404,000
1901	*	*	2,832,000	1,976,000	66,912,000
1914-15	102,100,000	*	*	3,100,000	114,100,000
1920-21	187,800,000	10,300,000	3,400,000	6,700,000	208,200,000
1925-26‡	234,000,000	16,500,000	3,500,000	8,100,000	262,100,000

\* Not available.

† Commonwealth and State.

‡ Preliminary totals.

The estimate of 1892 relates to a year in which the financial boom had reached its highest point and the income of that year consequently appears unduly inflated. In 1898 and 1901 the State was slowly recovering from an industrial depression consequent on the financial crisis of 1893 and a succession of adverse seasons. The income of the year 1914-15 was affected by the dislocation caused by the outbreak of war and by the occurrence of a very bad season.

The decrease in the amount of income derived in the years 1898 and 1901 as compared with 1892 may be readily understood. The subsequent increase has been occasioned by the depreciation in the purchasing power of money, and is in some measure nominal, though it is certain that the growing prosperity of the community has had a very favourable influence.

The following table shows the number of persons deriving income, their proportion to the total population of the State, and the average amount of income derived per inhabitant and per person deriving income:—

Year.	Resident Persons receiving Income.	Proportion of Persons receiving Income to Total Population.	Average amount of Income per person receiving Income. †	Average amount of Income per Inhabitant. †	Proportion of Total Income received by Absentees.
	No.	Per cent.	£	£	Per cent.
1892	446,190	37·4	139·8	53·8	7·2
1898	534,315	40·4	112·1	45·6	7·0
1901	*	*	*	45·4	7·2
1914-15†	788,600	41·7	138·2	57·3	*
1920-21	902,400	42·9	219·5	94·8	4·9
1925-26§	995,200	42·9	251·7	109·0	4·4

\* Not available.

† Excluding absentees and their income.

‡ The figures for 1914-15

relate to the incomes of persons resident in, and companies with head offices in, New South Wales.

§ Preliminary.

With the growth of population the number of persons receiving income has shown a very pronounced increase and its proportion to the total population has risen steadily. This is probably due, in part, to the increase in the employment of women in commercial and industrial occupations, but it is also a consequence, in part, of the increase in the proportion of adults in the population.

It is practically impossible with existing data to obtain a satisfactory measure of comparison between the real income of post-war and earlier years, because of the difficulty of properly assessing the effect of the inflation of prices, which reached a maximum in 1920.

The foregoing estimates represent, as nearly as may be, the sum of the net incomes derived by private individuals and by companies from sources within New South Wales. They are, therefore, in excess of the value of goods produced and remunerated services rendered, by reason of the duplication of amounts paid from the proceeds of taxation to old-age, invalid and war pensioners and to bondholders in war and other Government loans. On the other hand, appreciable amounts of income derived by the various Governments from State lands, forests and mines and from governmental business enterprises are excluded from account.

## LOCAL GOVERNMENT.

### GROWTH OF LOCAL GOVERNMENT.

**THE first step towards Local Government in New South Wales may be said to have been taken in 1840, when the Parish Roads Act was passed, authorising proprietors of lands adjacent to or within 3 miles of parish roads to elect trustees, who were empowered to levy rates, establish tolls, and borrow money for making or repairing such roads and the bridges thereon. Particulars of the subsequent development will be found in the Year Book for 1922.**

Local Government in New South Wales is conducted under the provisions of the Local Government Act of 1919 and its amendments, except in the City of Sydney, where it is regulated by the Sydney Corporation Acts. Slight modification has been made in the system by the Main Roads Act and other laws. The system extends over the whole of the Eastern and Central Land Divisions of the State, with the exception of the Federal Capital Territory. The Murrumbidgee Irrigation Area also was excluded until the year 1928. The sparsely-populated Western Division, embracing two-fifths of the area of the State, is unincorporated, with the exception of the portions included in the municipalities of Bourke, Brewarrina, Broken Hill, Cobar, Wentworth, and Wilcannia, and parts of the municipalities of Balranald and Hillston which lie within its boundaries.

Local governing areas are of two main kinds, viz., municipalities and shires. At the end of 1926 there were 181 municipalities, including the City of Sydney, and their aggregate area was 1,617,693 acres. The smallest municipality is Darlington, a suburb of Sydney, with 54 acres, and the largest is Central Illawarra, 83,054 acres. There are 136 shires, extending over an area of about 181,582 square miles. The smallest, Ku-ring-gai, 33 square miles, is in the metropolitan district, and the largest is Lachlan, with headquarters at Condobolin, 5,883 square miles. Certain of the municipalities and shires have combined to form county councils, which are local governing bodies constituted to administer specific services.

In this chapter the particulars relating to municipalities and shires are shown conjointly in a summarised form and separately in greater detail. In making a distinction between the metropolitan and country districts, the metropolitan district, unless otherwise specified, is the area defined by Schedule IV of the Local Government Act of 1919. It embraces the municipalities of Auburn, Bankstown, Dundas, Ermington and Rydalmere, Granville, Lidcombe, and Parramatta, and the shires of Hornsby, Sutherland, and Warringah, in addition to the area usually designated the metropolis, viz., the City of Sydney, forty suburban municipalities and the shire of Ku-ring-gai.

#### *Sydney Corporation Acts.*

In terms of the Sydney Corporation Act of 1902, and its amendments, the local government of the City of Sydney was vested in the City Council, which was composed of twenty-six aldermen, elected every third year, two for each of the thirteen wards. The Lord Mayor was elected annually by the aldermen from their own number.

In November, 1927, however, an Act was passed to place the administration of the city in the hands of a temporary Commission, and no elections of aldermen or Lord Mayor will take place during the period for which the Act remains in force, viz., until 31st December, 1929.

The functions of the Council, now vested in the Commission, include the maintenance of the streets and other public ways of the city, though the traffic is regulated by the police. Similarly the Commission is empowered to levy general, special, and street watering rates; to establish public markets; to regulate street selling, the erection of hoardings, matters relating to public health and sanitation, and the inspection of food; to resume land for the purpose of remodelling or improving areas and for widening streets, etc.; to erect and let dwellings; to maintain free lending libraries; to control parks; and generally to make by-laws for the good government of the city. The Commission also exercises authority to generate and supply electricity for public and private purposes; to elect two members of the Board which administers the Metropolitan water supply and sewerage services, one being elected in every second year to hold office for a period of four years; and, at the triennial elections of members of the Board of Fire Commissioners of New South Wales, to vote at the election of one member to represent the City of Sydney and the councils of the suburban municipalities.

The right to be enrolled as a voter at elections of the City Council, now in abeyance, extends to adult British subjects by reason of (a) the ownership or (b) the occupation of property. The qualification of ownership is held by persons who own a freehold interest in possession of property of a yearly value of £5 and upwards in any ward, or a leasehold interest in property of a yearly value of £25 and upwards. A person with this qualification may be placed on the roll for every ward in which he is so qualified, but may not then be enrolled in any ward by virtue of any other qualification. The qualification by reason of occupation is held by those who have occupied continuously for a period of six months a house, shop, or other building, or lodgings, of a yearly value of £10. Any such person may be placed on the roll for one ward only, and if he has more than one such qualification he may choose the roll on which his name shall be placed. Any person qualified to vote is eligible for election as an alderman unless disqualified under the provisions of the Sydney Corporation Act of 1902.

#### *System of Local Government.*

The Local Government Act of 1919 and its amendments, with ordinances thereunder, are administered by the Minister for Local Government, who is in charge of a State Department. Each municipality or shire is governed by a council, which is elected for a term of three years. A municipal council must consist of not less than six nor more than fifteen aldermen, and a shire council of not less than six nor more than nine councillors, each riding being represented by an equal number of councillors. Each municipal council elects a mayor annually from amongst its members, and each shire council a president. A council may pay to its members reasonable out-of-pocket expenses for travelling, and may pay an allowance to its mayor or president, but otherwise the services of aldermen and councillors are gratuitous.

Every adult natural-born or naturalised British subject of either sex is qualified to be enrolled as an elector, provided he or she is either a land-owner, a rate-paying lessee, or has been continuously for the three months preceding the day prescribed for enrolment an occupier of ratable land of the yearly value of £5 or upwards, or of land by virtue of a miner's right or business license, or is in occupation of Crown land and pays rents. By the Local Government (Amendment) Act, 1927, the franchise was extended to all adult residents of a ward or riding who have been residing

there continuously for a period of six months. Persons may be enrolled and may vote in respect of each ward or riding in which they are qualified as owners or as rate-paying lessees, but not more than once in respect of the same ward or riding. A person qualified as owner or as rate-paying lessee in a ward or riding who is qualified also as an occupier in another ward or riding of the same municipality or shire may not be enrolled under both qualifications. He may choose the ward or riding in which he desires to be enrolled, and failing due notice of his choice he is enrolled where he is qualified as owner or lessee. A person qualified as occupier in more than one ward or riding may be enrolled in one only.

Unless disqualified by the Act, every elector is qualified for a civic office. The powers of the councils are extensive; they were stated in detail in the 1922 issue of the Year Book at page 332.

A municipality may be proclaimed as a city if it is an independent centre of population with an average population of at least 20,000 people and an average income of at least £20,000. Sydney, Armidale, Bathurst, Goulburn, Grafton, and Newcastle were proclaimed as cities under the Crown Lands Act in 1885, and Broken Hill was proclaimed under the Local Government Act in 1907.

In the shires, urban areas may be established upon proclamation by the Governor if the majority of the electors in the locality favour the project. In such cases the council of the shire exercises within each urban area the powers of the council of a municipality. Except in the shires of Hornsby, Sutherland, Ku-ring-gai, and Warringah, urban committees may be appointed to exercise within the urban areas certain powers of the council, and to expend money raised by a local rate levied by the council upon the request of the urban committee.

In some cases boards or trusts have been constituted under special Acts to conduct operations which are regarded usually as belonging to the sphere of local government. A brief description of their activities is given later.

Provision is made for joint action by local governing bodies in regard to undertakings of magnitude or those which benefit more than one area. For such purposes county councils may be constituted in terms of the Local Government Act, or joint committees may be arranged under the ordinances.

Any group of local areas or of parts thereof may be constituted by proclamation as a county district, in which a county council, consisting of delegates from the areas concerned, exercises such powers as may be delegated to it. Where powers relating to the destruction of aquatic pests have been delegated, the county council may be assisted by subsidies from Consolidated Revenue, if the funds be voted by Parliament. The subsidies are payable in six half-yearly instalments, viz., for the first and second half-years, £1 for every £1 of revenue collected for the destruction of aquatic pests; for the third and fourth half-years respectively, 15s.; for the fifth and sixth, 10s.

At the end of 1926 four county districts were in existence. The St. George county district embraces the municipalities of Bexley, Hurstville, Kogarah, and Rockdale. It was formed for the purpose of establishing an electric lighting service.

The Richmond River county district consists of the municipalities of Ballina, Casino, Coraki, and Lismore, and the shires of Byron, Copmanhurst (part only), Gundurimba, Kyogle, Terania, Tintenbar, Tomki, and Woodburn. It was established for the eradication of the water hyacinth pest.

The Clarence River county district was incorporated by the municipalities of Grafton, South Grafton, and Ulmarra, and the shires of Copmanhurst (part only), Nymboida, and Orara. It was constituted principally for the purpose of carrying out the Nymboida hydro-electric scheme.

The Southern Riverina county district was formed by the municipalities of Wagga and Corowa and the shires of Coreen and Culcairn to establish a quarry at Culcairn for the supply of metal for roadmaking. The district was proclaimed on 13th February, 1925.

#### *Local Services within Irrigation Areas.*

Until the year 1928 the local services in the irrigation areas were maintained by the Water Conservation and Irrigation Commission. In 1921 executive boards were appointed in the Murrumbidgee Irrigation Areas as advisory committees to assist the administration, though they had no statutory powers. In 1924 the Governor was empowered by the Irrigation Holdings (Freehold) Act, to proclaim any irrigation area or portion thereof as a municipality or shire, or to add the whole or a portion of an irrigation area to an adjoining municipality or shire.

The Act authorised the Commission to levy rates and to impose charges for local services pending the constitution of an area as a shire or municipality, and in connection with the rates and charges statutory provision was made for the constitution of executive boards, each board to consist of seven members, four elected by the occupiers of the holdings, and three nominated by the Commission, to hold office for a period of two years. It is the function of the boards to advise the Commission in respect of questions affecting an area, and they may be entrusted with the administration of the local services.

In May, 1925, a Commission of Inquiry was appointed to report as to whether the irrigation areas or any portion of them should be proclaimed as shires or municipalities. This Commission recommended that the portion of the Murrumbidgee Area known as the Yanco Irrigation Area be proclaimed as a shire. It embraces 311 square miles, and Leeton is the principal centre. In regard to the portion known as the Mirrool Irrigation Area, 243 square miles with Griffith as the principal town, it was recommended that a proclamation be not issued until the end of the year 1928, and that meanwhile the Water Conservation and Irrigation Commission exercise its authority to administer local services with the assistance of an executive board.

Following this report the Water Conservation and Irrigation Commission took a referendum in the areas concerned, and the voting in both was in favour of the executive system in preference to the constitution of a shire. Subsequently boards were constituted and commenced operations in March, 1927. In the following year, however, these two areas were proclaimed as shires.

#### *Extent of Local Government.*

Prior to 1900, when the shires were constituted, the extent of the local governing areas was only 2,830 square miles. At the end of 1926 the incorporated area was about 183,549 square miles, or nearly 60 per cent. of the total area of the State (309,432 square miles). The population in municipalities and shires as at 31st December, 1926, was 2,322,000, or 90 per cent. of the total population.

The area, population, and unimproved capital value of ratable property in the incorporated areas as at 31st December, 1926, are stated below:—

Local Areas.	Area.	Population.	Unimproved
			Capital Value.
Metropolitan Area—	acres.	No	£
City of Sydney .. .. .	3,244	107,830	44,758,056†
Suburbs (including Ku-ring-gai Shire) .. .. .	113,880	962,630	78,607,552
<b>Total, Metropolis .. .. .</b>	<b>117,130</b>	<b>1,070,510</b>	<b>123,365,608</b>
Extra-Metropolitan Municipalities and Shires.	322,258	131,240	13,790,797
<b>Total, Metropolitan* .. .. .</b>	<b>439,388</b>	<b>1,201,750</b>	<b>137,156,405</b>
Country—			
Municipalities .. .. .	1,483,585	502,570	34,028,277
Shires .. .. .	115,548,520	617,880	143,152,312
<b>Total, Country .. .. .</b>	<b>117,032,105</b>	<b>1,120,350</b>	<b>177,180,589</b>
<b>Grand Total .. .. .</b>	<b>117,471,493</b>	<b>2,322,000</b>	<b>314,342,994</b>

\* Schedule IV, Local Government Act, 1919. † Excluding Federal properties not ratable, also ratable ruins.

The figures exclude the area, about 359,000 acres, and the population, 12,360 persons, of the Murrumbidgee Irrigation Area, which was not within the jurisdiction of any local governing body. The area of the country shires includes 28 square miles of Federal territory at Jervis Bay, but excludes the Federal Capital territory, containing an area of 912 square miles.

The improved capital value of ratable property in the City of Sydney, as at 31st December, 1926, was £151,528,760, and the assessed annual value £6,818,740, exclusive of £281,276 on account of non-ratable lands. In the other municipalities included in the metropolitan area, as defined by Schedule IV of the Local Government Act, the improved capital value was £239,763,483, and the assessed annual value £18,311,940. In the country municipalities the improved value was £104,126,741, and annual value £8,035,997. Similar particulars are available for only a small number of shires.

The financial position of the municipalities and shires in 1926 was as follows:—

Local Areas.	Total Revenue.			Total Expenditure.	Total Liabilities.	Total Assets.
	Rates Levied.	Other.	Total.			
Metropolitan Area—	£	£	£	£	£	£
City of Sydney .. .. .	1,795,368	2,665,602	3,460,970	3,587,126	21,748,233	22,423,261
Suburbs (including Ku-ring-gai Shire) .. .. .	1,780,950	675,658	2,456,617	2,742,470	3,312,975	2,117,297
<b>Total, Metropolis .. .. .</b>	<b>2,556,327</b>	<b>3,341,260</b>	<b>5,897,587</b>	<b>6,329,596</b>	<b>25,061,208</b>	<b>24,540,558</b>
Extra-Metropolitan .. .. .	288,952	221,202	510,154	606,105	917,899	745,787
<b>Total, Metropolitan* .. .. .</b>	<b>2,845,279</b>	<b>3,562,462</b>	<b>6,407,741</b>	<b>6,935,701</b>	<b>25,979,106</b>	<b>25,286,345</b>
Country—						
Municipalities .. .. .	937,436	1,302,239	2,239,775	2,163,038	4,680,204	6,421,249
Shires .. .. .	1,269,784	1,286,190	2,545,974	2,668,812	1,417,959	1,621,243
<b>Total, Country .. .. .</b>	<b>2,247,220</b>	<b>2,588,529</b>	<b>4,835,749</b>	<b>4,831,850</b>	<b>6,098,263</b>	<b>8,042,492</b>
<b>Grand Total .. .. .</b>	<b>5,092,499</b>	<b>6,150,991</b>	<b>11,243,490</b>	<b>11,767,551</b>	<b>32,077,369</b>	<b>33,328,837</b>

\* Schedule IV, Local Government Act, 1919. † Including Harbour Bridge rate, £93,246, and Main Roads rate, £46,201.

The revenue shown under "Other" is mainly derived from business undertakings, such as lighting services, etc. Particulars of these and of the operations of individual councils are published annually in the Statistical Register of New South Wales. The revenue and expenditure shown above include the Main Roads and Harbour Bridge rates, which are collected by the Councils for the Main Roads Board and the State Treasury respectively.

## VALUATION OF PROPERTY IN LOCAL AREAS.

The revenue of local governing bodies is derived mainly from the taxation of land and improvements thereon, and as the rates of taxation are levied on the unimproved, improved, or annual value, it is necessary that periodic valuations be made of all ratable property. The valuations are made at intervals not exceeding three years, and prior to the enactment of the Valuation of Land Act in 1916 they were made by valuers appointed by the councils. This system had remained in operation for many years without any centralised control to secure uniformity, but the Act of 1916 made provision for the valuation of the lands of the State by the Valuer-General. The Act prescribed that rates and taxes based on land values must be levied on the values determined by the Valuer-General, and that the power of a council to assess values ceased when the Valuer-General delivered a valuation list. A council may, however, ask the Valuer-General to re-value any land which it considers has not been valued correctly, and pending action by the Valuer-General the valuations are made by the council's assessors as formerly. Valuations either by the Valuer-General or the councils' valuers are subject to review on appeal to the Land and Valuation Court, described on page 232 of the Year Book.

This system was modified by the Local Government Act, 1924, to provide that the council of a shire, other than the Blue Mountains Shire or any shire wholly or partly within the County of Cumberland, may decide whether the valuation should be made by the Valuer-General under the Valuation of Land Act, 1916, or by a valuer appointed by the council.

In municipalities the valuation must show the unimproved capital value, the improved capital value, and the assessed annual value of ratable property. In the shires the law requires the valuation of the unimproved capital value only, the determination of the improved capital value and of the assessed annual value being optional, except in urban areas, in which the assessed annual value must be determined. The Valuer-General normally determines such values for shires within his jurisdiction. Up to the end of 1926 improved capital values and assessed annual values had been ascertained in respect of twenty-one shires, viz., sixteen by the Valuer-General and five by councils.

The unimproved capital value is defined, in both the Local Government Act and the Valuation of Land Act, as the amount for which the *fee-simple* estate in land could be sold under such reasonable conditions as a *bona-fide* seller would require, assuming that the actual improvements had not been made.

The Valuer-General's valuations cover all land except Commonwealth properties, reserves, parks, etc., and unoccupied Crown lands, and the values are on a freehold basis. For purposes of rating, however, the unimproved capital value of Crown lands occupied as pastoral or agricultural holdings is twenty times the rent payable to the Crown during the year preceding the assessment. After the expiry of ten years of the term of leases, lands leased from the Crown with right of conversion to freehold are rated on thirty times the annual rental paid.

The unimproved capital value of mines may be ascertained at the direction of the council, upon the basis of the output, as follows:—

- (1) *Coal and Shale Mines*.—A sum equal to 3s. per ton of large coal and shale, and 1s. 6d. per ton of small coal, on the average annual output during the preceding three years.
- (2) *Other Mines*.—A sum equal to 20 per cent. of average annual value of ore or mineral won during the preceding three years.



In the case of idle or undeveloped mines the unimproved capital value is calculated by multiplying the annual rental, if any, by twenty.

The improved capital value is the amount for which the *fee-simple* estate of the land, with all improvements and buildings thereon, could be sold.

The assessed annual value is nine-tenths of the fair average rental of land, with improvements thereon, but must not be less than 5 per cent. of the improved capital value.

In the City of Sydney Crown lands are ratable whether built upon or not, and in addition the underground mains of the gas and hydraulic power companies are ratable. The following properties are exempt, viz., lands vested in and used for the University or any of its colleges; lands vested in the Railway Commissioners or in the Metropolitan Water, Sewerage and Drainage Board; the Sydney Harbour Trust lands unless leased for private purposes; lands vested in trustees for purposes of public recreation, health, or enjoyment; hospitals, benevolent asylums, or other buildings used solely for charitable purposes; buildings used solely for public worship; State schools and certified schools under the Public Instruction Act, and playgrounds in connection therewith. Properties of the Commonwealth Government are not ratable, though a contribution is made to the funds of the council in respect of part of them.

In municipalities and shires under the Local Government Act all lands, including areas vested in the Railway Commissioners and the Sydney Harbour Trust, are ratable, except the following:—Lands vested in the Crown or public body or trustees and used for public cemeteries, commons, reserves, or free libraries; lands used solely for public hospitals, public benevolent institutions, or public charities, or for the University of Sydney or a college thereof; Crown lands which are not occupied or are occupied only by public works in course of construction; land occupied by or used directly in connection with churches or other buildings used solely for public worship; and public roads, streets, wharves, etc. The Local Government Act, 1927, extended the exemptions in respect of land used for public hospitals and benevolent and charitable institutions and for churches, etc., by omitting the words “solely” and “directly”; and provided additional exemptions, viz.:—Land used for the clergyman’s residence in connection with churches, etc.; schools registered under the Bursary Endowment Act, and schools certified under the Public Instruction (Amendment) Act, 1916, and playgrounds belonging to or used in connection with such schools.

In the following table are shown, in similar groups to those on page 50‡, the aggregate valuations used for assessing rates on ratable property in local governing areas in the year 1926:—

Division.	Unimproved Value of Ratable Land.			Value of Improvements on Ratable Land.		
	Total.	Average Per Head.	Average Per Acre.	Total.	Average Per Head.	Average Per Acre.
Sydney—City ...	£ 44,753,000	£ 415	£ s. 13,797 3	£ 106,771,000	£ 990	£ 32,913 7
Suburbs* ...	78,608,000	82	690 4	154,026,000	160	1,352 9
Metropolis ...	123,366,000	115	1,053 4	260,797,000	243	2,226 11
Extra-Metropolitan	13,797,000	105	42 16	18,227,000	139	56 11
Total, Metropolitan	137,163,000	44	312 3	279,024,000	232	635 0
Country—Municipalities	34,028,000	68	22 18	70,099,000	139	47 4
Shires ...	143,152,000	232	1 4	‡143,152,000	232	1 4
Total Incorporated Areas ...	314,343,000	135	2 13	492,275,000	212	4 4

\* Including Ku-ring-gai Shire.

† Excluding Federal properties not ratable, £918,000, and ratable underground mains.

‡ Estimated.

This table should be read in conjunction with the description of the methods of valuation given on previous pages and in conjunction with the references made to them on page 690 of the "Official Year Book of New South Wales" for 1921. It is noteworthy that except where valuations have been made by the Valuer-General the council's valuations do not, as a rule, represent even approximately the fair market value of the properties concerned. Lands leased from the Crown and assessed on a capitalised rental basis are included above at such capitalised value.

The unincorporated portion of the Western Division contains about 80,200,000 acres, of which 76,000,000 acres are pastoral or agricultural lands held under lease from the Crown at annual rentals. If the existing provisions of the Local Government Act were applied to the division, the unimproved capital value of the leaseholds would be assessed for rating purposes at twenty times the annual rent payable to the Crown. On this basis the unimproved value of the ratable property—Crown and alienated land—in the area at present unincorporated would not exceed £3,500,000.

The Murrumbidgee Irrigation Area was unincorporated until 1928, and the assessable unimproved capital value was estimated at £2,000,000 by a Royal Commission in June, 1925, when inquiring as to whether the irrigation areas should be proclaimed as shires. The estimate was made independently on the basis of capitalised rental.

#### *Value of Ratable Property in Municipalities.*

A comparative summary of the unimproved and improved capital values and the assessed annual value of ratable property in municipalities, excluding lands coming within the exemptions shown on page 506, is shown in the following statement. The exclusion of the shires causes the figures for the metropolitan areas to differ from those shown in the preceding tables.

Municipalities.	1916.			1926.		
	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.
	£	£	£	£	£	£
City of Sydney...	31,168,904	80,264,720	3,466,550	44,758,056	151,528,760	6,818,794
Suburbs... ..	34,719,417	96,394,785	7,129,820	74,746,427	222,560,966	17,088,876
Metropolis ...	65,888,321	176,659,505	10,596,370	119,504,483	374,089,726	23,907,670
Extra-Metropolitan	2,611,716	6,803,583	473,427	6,195,793	17,202,517	1,223,064
Total, Metro-politan ...	68,500,037	183,463,088	11,069,797	125,700,276	391,292,243	25,130,734
Country... ..	20,766,910	52,619,327	3,829,451	34,028,277	104,126,741	8,035,997
Total Municipalities ...	89,266,947	236,082,415	14,899,248	159,728,553	495,418,984	33,166,731

The valuations for the City of Sydney shown above exclude the values of Federal properties which are not ratable. The amounts so excluded are, unimproved capital value £917,840, improved capital value £6,250,560, and assessed annual value £281,276. The value of underground mains laid in the city by gas and hydraulic power undertakings are ratable on the basis of length, and their values are excluded from the above totals.

The ratio of assessed annual value to improved capital value was 6.3 per cent. in 1916, and 6.7 per cent. in 1926; and as the assessed annual value is nine-tenths of the actual annual value, the proportions per cent. of annual value to improved value were 7 per cent. in 1916, and 7.4 per cent. in 1926.

The value of improvements in the years 1916 and 1926, ascertained by deducting the unimproved from the improved values as shown in the councils' returns is shown in the following statement, and it will be seen that very great increases have occurred in all divisions:—

Municipalities.	Value of Improvements.	
	1916.	1926.
Sydney—	£	£
City ... ..	49,695,816	106,770,794
Suburbs ... ..	61,675,368	147,814,539
Metropolis ... ..	110,771,184	254,585,243
Extra-Metropolitan ... ..	4,191,867	11,006,724
Total, Metropolitan ... ..	114,963,051	265,591,967
Country ... ..	31,852,417	70,098,464
Total Municipalities ... ..	146,815,468	335,690,431

As the assessed annual value represents nine-tenths of the fair average annual rental, the ratio which it bears to the improved capital value is of considerable interest. This comparison, together with the ratio of assessed annual value to unimproved capital value, is provided below:—

Municipalities.	Assessed Annual Value of Ratable Property.		Ratio of Assessed Annual Value to—			
	1916.	1926.	Improved Capital Value.		Unimproved Capital Value.	
			1916.	1926.	1916.	1926.
	£	£	per cent.	per cent.	per cent.	per cent.
City of Sydney ... ..	3,466,550	6,818,794	4·3	4·5	11·2	15·2
Suburbs ... ..	7,129,820	17,098,876	7·4	7·7	20·5	22·9
Metropolis ... ..	10,596,370	23,907,670	6·0	6·4	16·1	20·0
Extra-Metropolitan ... ..	473,427	1,223,064	7·0	7·1	18·1	19·7
Total, Metropolitan ... ..	11,069,797	25,130,734	6·0	6·4	16·2	20·0
Country ... ..	3,829,451	8,035,997	7·3	7·7	18·4	23·6
Total Municipalities ... ..	14,899,248	33,166,731	6·3	6·7	16·7	20·8

In regard to valuations in the City of Sydney it is the practice to derive the aggregate improved capital value of properties by capitalising the fair average rental at 5 per cent. To this fact is due the apparent disparity between the yield from city properties calculated from the ratios shown above, viz., 5 per cent., and that from properties in suburban and country municipalities, viz., 8·6 per cent. It is noteworthy, however, that the rental value of city properties is only part of the return on capital value represented, since there is also a very rapid appreciation of value. This appreciation is much more rapid than that which takes place in suburban and country municipalities.

#### *Value of Ratable Property in Shires.*

It is not possible to give the improved capital value, or the assessed annual value of land in shires, as the shire councils are not compelled to make those valuations, and in 1926 only fourteen shires recorded them.

The unimproved capital value of ratable property in shires in each year from 1916 to 1926 is shown below.

Year.			Unimproved Capital Value of Ratable Property.	Year.			Unimproved Capital Value of Ratable Property.
			£				£
1916	...	...	105,693,000	1922	...	...	135,381,000
1917	...	...	107,695,000	1923	...	...	140,392,000
1918	...	...	109,153,600	1924	...	...	144,710,000
1919	...	...	110,881,000	1925	...	...	148,251,000
1920	...	...	120,872,000	1926	...	...	154,614,000
1921	...	...	130,834,000				

In the ten years between 1916 and 1926 the unimproved capital value of ratable property in the shires increased by £48,916,000, or by 46.2 per cent. As the area embraced remained practically unchanged, and the urban and residential lands embraced in shires are not relatively large, this represents roughly the assessed increment of rural land values in the period. Some allowance must be made, however, for alienations and the operations of the Valuer-General in revaluing the lands of certain shires which formerly had been undervalued, and for this reason the proportionate increase shown is probably larger than the actual increase in rural land values.

#### Valuations by the Valuer-General.

Up to the end of the year 1927 valuations had been completed by the Valuer-General in eighty-nine municipalities and in sixteen shires. All the districts in the County of Cumberland had been valued except the city of Sydney, and the municipality of Castlereagh. The valuations by the Valuer-General are revised triennially, and the totals shown below are derived from valuations or revaluations made during the years 1924 to 1927. These assessments are made under the Valuation of Land Act, which provides that all lands shall be valued on a freehold basis, and that all lands shall be valued except those owned by the Commonwealth Government, unoccupied lands owned by the State Government, and Crown reserves, parks, etc. The totals, therefore, are considerably greater than the values of ratable lands shown in municipal returns, and due modification is made in the Valuer-General's lists when writing up the rate books of the councils to provide for the exclusion of non-ratable properties and for the difference between the value of the fee-simple and the capitalised-rent value of leases held from the Crown. A summary of the results of the latest valuations is shown below:—

District.	Municipalities.				Shires.			
	Number.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.	Number.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.
Suburbs of Sydney	...	£000	£000	£000	...	£000	£000	£000
Extra Metropolitan	41	81,048	238,396	18,092	1	3,831	10,008	605
Metropolitan Area	...	...	...	...	...	...	...	...
Balance of County Cumberland	7	7,133	19,103	1,343	3	8,378	16,757	1,061
Newcastle and Suburbs	48	88,181	257,499	19,435	4	12,209	26,765	1,666
Other Country	...	...	...	...	...	...	...	...
	10	3,856	10,085	678	3	2,199	6,488	363
	11	9,706	24,686	1,832	...	...	...	...
	20	8,105	24,119	1,812	9	17,531	35,639	2,017
Total	...	...	...	...	...	...	...	...
	89	109,848	316,389	23,757	16	31,930	68,892	4,046

The average ratio between the assessed annual value (representing nine-tenths of the fair average rental value) and the improved capital value shown above is 7.5 per cent. in metropolitan municipalities, and 7.3 per cent. in country municipalities, and 5.9 per cent. in shires.

#### TAXATION BY LOCAL GOVERNING BODIES.

The total revenue collected in 1926 by all the local governing bodies from rates and charges amounted to £7,611,842, equal to £3 5s. 7d. per head of the population residing in the taxable districts. This amount includes rates collected by the municipalities, £3,617,642; rates collected by shires, £1,474,857; and rates and charges collected by the various Water and Sewerage Boards referred to later, £2,519,343.

The amount of special and loan rates includes the Harbour Bridge and Main Roads rates levied by councils.

The distribution of the total amount is as follows:—

Local Bodies.	General Rates.	Special and Loan Rates.	Total.	Per head of population living in local areas.
	£	£	£	£ s. d.
*Municipalities(including City of Sydney)	2,767,414	850,228	3,617,642	2 4 2
*Shires ... ..	1,260,618	214,239	1,474,857	2 3 1
†Metropolitan water and sewerage charges.	2,266,909	.....	2,266,909	1 12 4
†Hunter District water and sewerage charges.	245,776	.....	245,776	1 5 9
*Grafton and South Grafton Water Board	6,658	.....	6,658	1 1 0
Total ... ..	£ 6,547,375	1,064,467	7,611,842	3 5 7

\* 1926.

† 1928-27.

The total amount per head of population was £1 6s. in 1911, and £2 11s. 2d. in 1921.

A comparative statement of the local government rates and charges collected in each of the last five years will be found on pages 394 and 395 of this Year Book, where they are considered in relation to the total taxation imposed in the State.

In 1916 the City Council adopted the principle, embodied in the Local Government Act of 1906, of levying rates for general expenditure upon the unimproved value. Formerly the rates had been levied on the annual rental, with an additional rate since 1909 on the improved capital value. The maximum rate is fixed at 6d. in the £. The exemption from rating was removed from Crown lands in 1916, and the council was authorised to collect rents in respect of gas and hydraulic mains, etc., in the streets, which cannot be assessed on the basis of unimproved value.

The following table shows the rates struck and the total amounts levied by the City Council annually since 1916. Rates levied for the Harbour

Bridge and the Main Roads Board are excluded. The amount of rates levied prior to 1916 is shown in the 1922 issue of this Year Book at page 341.

Year.	City Fund.		Year.	City Fund.	
	Rate struck in the £. on u.c.v.	Total Amount Levied.		Rate struck in the £. on u.c.v.	Total Amount Levied.
	pence.	£		pence.	£
1916	4	520,537	1922	4½	729,096
1917	3½	455,040	1923	4½	713,018
1918	3½	465,988	1924	3½	651,338
1919	4½	587,376	1925	3½	652,397
1920	4½	623,766	1926	3½	652,722
1921	5	747,656	1927	3½	829,329

In 1923 and subsequent years a rate of ½d. in the £ on the unimproved capital value was levied in respect of the Sydney Harbour Bridge. The amounts, viz., £75,054 in 1923, £93,048 in 1924, £93,199 in 1925, and £93,246 in 1926, are payable into a special account in the State Treasury and are not included in the figures shown above. In addition, rates amounting to £46,237 in 1925 and £46,201 in 1926 were levied for the Main Roads Board.

*Suburban and Country Ratings.*

Suburban and country municipalities may levy rates of four kinds, viz., general, special, local, and loan rates, and certain of them may be required to levy special rates in respect of main roads and the Sydney Harbour Bridge. A general rate of not less than 1d. in the £ must be levied on the unimproved capital value, but if this minimum rate is more than sufficient to meet the requirements of the area the Governor may allow the council to levy a lower rate. The maximum amount leviable in a municipality is limited as follows:—(a) For the general rate alone—the amount yielded by a rate of 2d. in the £ on the unimproved capital value and 1s. 6d. on the assessed annual value taken together; (b) the total of all rates (except water local, and sewerage local rates) the yields of 2d. on the unimproved capital value and 2s. on the assessed annual value; (c) water local rate alone or sewerage local rate alone, the yield of 2s. in the £ on assessed annual value. A general rate exceeding 3d. in the £ on unimproved capital value may not be levied upon a mine worked for minerals other than coal or shale. In special cases where the rate as stated above would yield less than the amount required for the purpose of the rate, the Governor may alter the limit by proclamation.

In 1926 the general rates levied in the metropolitan municipalities ranged from 2½d. to 6d., and in the country from 1d. to 12d.

The first year in which the general rate was levied on the unimproved capital value was 1908, and a comparison of the general rate struck for various years since then is shown below.

The figures for the metropolitan municipalities exclude the City of Sydney but include all those municipalities in the metropolitan district as defined by Schedule IV of the Local Government Act of 1919, and listed on page 500 of this Year Book:—

General Rate.	Number of Municipalities.									
	1908.		1916.		1921.		1925.		1926.	
	Metro- politian.	Coun- try.	Metro- politian.	Coun- try.	Metro- politian.	Coun- try.	Metro- politian.	Coun- try.	Metro- politian.	Coun- try.
1d. under 2d. ...	4	28	2	21	...	5	...	3	...	3
2d. „ 3d. ...	11	36	5	28	1	9	...	13	1	14
3d. „ 4d. ...	21	38	18	41	7	18	8	25	7	20
4d. „ 5d. ...	9	26	19	29	20	33	23	20	22	28
5d. „ 6d. ...	3	9	3	16	18	28	14	26	16	24
6d. „ 7d. ...	...	2	...	4	1	23	2	26	1	25
7d. „ 8d. ...	...	2	...	1	...	11	...	9	...	8
8d. „ 9d. ...	...	...	...	1	...	6	...	5	...	6
9d. and over ...	...	1	...	1	...	3	...	5	...	4
Total ...	48	142	47	142	47	136	47	132	47	132
Amount of General Rates levied* £	547,110		954,340		1,508,332		1,966,405		2,111,493	

\* Excluding City of Sydney.

There has been a tendency towards higher rating, particularly in the country municipalities, where the rise in assessed value of ratable property has been less than in the suburbs. The number of country municipalities in 1926, as stated in the table, does not include Cessnock, which was part of Cessnock Shire until 1st November, 1926.

One hundred and forty-four municipalities, other than the City of Sydney, levied special, local, and loan rates on the unimproved capital value in 1926, ranging from  $\frac{1}{2}$  d. to 30d. in the £, and nineteen on the improved capital value, ranging from  $\frac{1}{2}$  d. to 4d. in the £. Including the Sydney Harbour Bridge rate and the rates requisitioned by the Main Roads Board, the amount of such rates levied in 1926 was £710,781.

The amount of rates levied by the five suburban municipalities ratable in connection with the Sydney Harbour Bridge was £27,480 in 1923; £29,653 in 1924; £31,062 in 1925; £34,077 in 1926; and £35,791 in 1927. The rates requisitioned from municipalities by the Main Roads Board amounted to £166,633 in 1925, and £179,711 in 1926. These amounts are exclusive of contributions by the City of Sydney.

#### Shire Ratings.

In the shires the kinds of rates which may be levied are similar to those in municipalities. They are levied upon the unimproved capital value except in a few cases where a small special rate has been imposed on the improved value. The minimum general rate is the same as in the municipalities and the maximum amounts leviable are as follows:—(a) For the total of the general rate only—the sum yielded by a rate of 2d. in the £ on the unimproved capital value of all ratable land in the shire; (b) for the total of all rates in urban areas (other than general, water local, and sewerage local) the yield of 2s. in the £ on the assessed annual value of ratable land in the urban area; (c) the total of water local alone or sewerage local

alone, the yield of 4d. in the £ on assessed annual value. As in municipalities the limits may be altered by proclamation if after inquiry it appears that the limit is less than is needed for the purposes of the rate.

Particulars relating to the general rates levied in the shires in various years since 1907, the first year the shires were in operation, are shown in the following table:—

General Rate in £.	Shires.						
	1907.	1911.	1916.	1921.	1925.	1926.	
						Number.	Unimproved Capital Value.
d.							£
$\frac{1}{2}$	1	1	1	...	...	...	...
$\frac{1}{4}$	1	3	2	...	...	...	...
$\frac{3}{4}$	3	2	5	1	1	...	...
1	...	...	...	...	...	1	1,216,393
$1\frac{1}{2}$	104	64	20	13	8	7	11,848,221
$1\frac{1}{4}$	...	3	1	...	...	1	1,417,036
$1\frac{3}{4}$	10	23	15	8	7	4	5,793,130
$1\frac{1}{2}$	...	1	...	1	...	...	...
$1\frac{3}{8}$	...	...	...	...	1	...	...
$1\frac{7}{8}$	...	...	...	...	...	1	2,173,708
$1\frac{1}{2}$	12	22	33	12	9	8	11,365,002
$1\frac{5}{8}$	...	1	...	1	...	1	1,623,680
$1\frac{3}{4}$	...	...	6	7	7	7	9,991,196
$1\frac{7}{8}$	...	...	...	...	...	1	1,367,222
2	3	14	53	83	81	78	76,334,032
$2\frac{1}{2}$	...	...	...	...	3	3	2,318,667
$2\frac{1}{4}$	...	...	...	4	10	14	12,778,767
$2\frac{3}{4}$	...	...	...	...	2	1	2,293,602
3	...	...	...	6	7	9	14,080,285
Total ... ..	134	134	136	136	136	136	154,614,441
Amount of General Rate levied £	358,751	461,971	633,973	959,446	1,163,786		1,260,618

The tendency towards higher taxation is very marked. In 1907 only 25, or 18.7 per cent. of the shires, imposed a general rate exceeding 1d., and 109, or 81.3 per cent., imposed a rate of 1d. or less, whereas in 1926 seventy-eight, or more than 57 per cent., levied the maximum general rate of 2d. in the £, and 27 councils took advantage of the special provisions of the Act, and after inquiry were allowed to levy rates beyond that amount.

On 49 per cent. of the ratable property in shires the general maximum rate of 2d. in the £ was levied in 1926, and 29 per cent. was subject to even higher rates.

In addition to the general rates, additional general, special, local, or loan rates were levied by 74 shires. They ranged upwards from  $\frac{1}{10}$ d. in the £, the highest being 21d. in the £.

The purposes for which these special, local, and loan rates were imposed included the following:—Roads and street improvements and maintenance, water supply, drainage, electricity, street lighting, street watering, sanitary and garbage services, parks, fire brigade, town improvements, and payment of interest, etc., on loans current.

The total amount of general and additional general rates levied in 1926 was £1,260,618, equal to an average rate of 1.96d. in the £, and the special and local rates (including the Sydney Harbour Bridge and Main Roads rates levied in the metropolitan area) amounted to £214,239. These amounts



represent the rates actually levied in respect of the year 1926, and do not agree with the amounts shown in the following tables, which include interest on rates in arrears.

The amounts of rates levied by the three metropolitan shires ratable in connection with the Sydney Harbour Bridge were £13,252 in 1923; £14,490 in 1924; £16,737 in 1925; £18,110 in 1926; and £18,879 in 1927. The rates requisitioned by the Main Roads Board from shires amounted to £27,101 in 1925, and to £32,275 in 1926.

### FINANCE OF LOCAL GOVERNING BODIES.

#### *Expenditure and Income.*

A summary of the expenditure and income of all municipalities and shires is shown below for the year 1926. The statement relates to income accrued and expenditure incurred irrespective of amounts actually received and paid. In regard to the City of Sydney the expenditure and income of the City fund and its subsidiary accounts are shown under the heading of "General Fund."

Particulars.	City of Sydney.	Other Municipalities.	Shires.	Total.
<b>Expenditure.</b>				
General Fund—	£	£	£	£
Administration ... ..	126,640	246,662	185,986	559,288
Works ... ..	146,816	2,281,129	2,437,726	4,865,671
Health Administration...	263,183	610,773	125,599	999,555
Public Services ... ..	131,544	307,071	41,792	480,407
Municipal or Shire Property ... ..	83,833	60,592	15,224	159,649
Miscellaneous ... ..	925,685	383,155	87,074	1,395,914
Trading Accounts ... ..	1,909,425	761,233	92,631	2,763,289
Special and Local Funds ... ..	...	377,367	163,411	543,778
Total Expenditure ... ..	3,587,126	5,027,982	3,152,443	11,767,551
<b>Income.</b>				
General Fund—	£	£	£	£
General Rates (inc. Interest, etc.) ...	656,054	2,137,987	1,275,540	4,069,581
Government Assistance ... ..	...	247,115	1,106,995	1,354,110
Other ... ..	933,927	1,123,036	267,104	2,324,067
Trading Accounts ... ..	1,870,989	906,282	121,645	2,898,916
Special and Local Funds ... ..	...	425,306	171,510	596,816
Total Income ... ..	3,460,970	4,839,726	2,942,794	11,243,490

The above amounts are inclusive of part of the loan receipts and expenditure, the total amount of which is shown on page 528. Rates amounting to £46,201, levied for the Main Roads Board by the City Council, are included in the statement, and similar rates amounting to £179,711 for municipalities and £32,275 for shires.

Harbour Bridge rates are included also, viz., £93,246 in the City of Sydney, £35,791 in municipalities, and £18,879 in shires.

The total amount of Government assistance included in the income shown above was £247,492 to municipalities and £1,113,095 to shires.

### *City of Sydney Finances.*

Though the City Council conducts its affairs under the Sydney Corporation Acts and is not bound by the provisions of the Local Government Acts, its accounts in recent years have been kept in the same manner as those of other local bodies.

The rates and other city revenues are paid into, and the expenses not otherwise provided for are defrayed out of the City Fund. Receipts and disbursements relating to the public markets, and to resumptions of land, etc., are recorded separately, but these accounts are subsidiary to the City Fund, to which their balances are transferred at the end of each year. The financial operations of the City electricity undertaking form a separate account.

The receipts from the various funds in 1926 amounted to £3,460,970; the City Fund contributing £1,131,308; the Public Markets Fund, £132,605; the Resumptions Account, £177,011; the Electric Lighting Fund, £1,870,989; other funds £9,610; rates collected in respect of the Harbour Bridge and the Main Roads Board, £139,447.

The disbursements in 1926 amounted to £3,587,126, viz., City Fund, £1,152,743; Public Markets Fund, £124,583; Resumptions Account, £256,226; Electric Lighting Fund, £1,909,425; other funds, £4,702; and Harbour Bridge and Main Roads rates, £139,447.

The following is a statement of the expenditure and income of the City Fund in the years 1925 and 1926, under appropriate headings:—

Particulars.	1925.		1926.	
	Expenditure.	Income.	Expenditure.	Income.
	£	£	£	£
General Purposes ... ..	75,838	666,095	84,565	679,997
Works* ... ..	278,880	145,003	341,523	218,943
Health Administration ... ..	271,461	52,369	263,183	57,172
Public Services ... ..	122,945	82,465	126,316	93,137
Municipal Property ... ..	79,362	26,481	61,957	19,693
Loan Expenses—Interest, etc....	118,709	29,888	138,409	35,138
Miscellaneous ... ..	117,825	1,184	138,790	27,228
Total... ..	1,065,020	1,003,485	1,152,743	1,131,308

\* Includes recoverable expenditure.

In the year 1926, administrative salaries (£31,365) absorbed a very large share of the expenses for general purposes. Of the sum spent on public works, £39,431 were expended on the maintenance and construction of streets, £34,091 on footpaths, £33,393 on wood-paving, and £226,890 represented recoverable expenditure on construction, etc. On city cleansing £167,435 were expended, and this was the main item in health administration.

The receipts and disbursements of the Public Markets Fund in 1926 were £132,605 and £124,583, respectively, the latter amount being inclusive of interest and sinking fund contributions amounting to £64,659, after paying which there was a credit balance of £8,022 on the year's transactions, which was transferred to the City Fund but is not included above. The Queen Victoria Buildings brought in a revenue of £33,848, or 26 per cent. of the total; and the receipts from the municipal markets amounted to £55,123, or about 44 per cent.

The receipts of the resumptions account were £177,011, and the disbursements £256,226, showing a debit of £79,215, carried to the City Fund but not included above. The disbursements consisted of wages, £9,108; rates and insurance, £21,345; stores, etc., £10,985; sinking fund contribution, £41,254; and interest, £173,534.

*City of Sydney—Balance-sheet.*

The following is a summary of liabilities and assets of all funds of the City of Sydney as at 31st December, 1926:—

Liabilities.		Assets.	
	£		£
Reserves, Revenue Accounts, etc.	3,064,575	Landed Properties, Baths, and Sundries ... ..	8,844,114
Sinking Funds ... ..	1,863,211	Machinery, Plant, Furniture, Stores, etc. ... ..	8,372,935
Debentures current ... ..	14,288,088	Investments—	
Bank Balances ... ..	770,057	Sinking Funds ... ..	1,867,801
Sundry Creditors ... ..	1,740,302	Other ... ..	828,177
	£21,746,233	Bank Balances and Cash ... ..	1,280,860
Excess of Assets ... ..	682,048	Sundry Debtors ... ..	708,586
		Discount and Flotation Expenses on Loans ... ..	271,497
		Sundries ... ..	254,311
Total ... ..	£22,428,281	Total ... ..	£22,428,281

The amount of discount and flotation expenses on loans shown above is a fictitious asset, being in reality the amount not yet paid from revenue to meet the difference between the face value of debentures sold and the net amount of proceeds received and utilised for loan expenditure, after deducting discount in accordance with terms of issue, underwriting charges, and other expenses of flotation. The item shown is in effect a charge against future revenue, and is written down annually. The amount of flotation expenses written off in 1926 from the various funds was £18,307.

The total amount of debentures outstanding at the end of 1926 was £14,288,088, and the accumulated sinking fund £1,867,801, leaving the net indebtedness on capital account at £12,420,287.

The debentures included £6,669,047 borrowed in connection with electric lighting, £4,719,793 for resumptions, and £956,248 for public markets. The proceeds of such loans have been spent mainly on reproductive municipal works, and in 1926 the various funds were debited with £718,298 to meet annual interest charges and £133,059 for sinking fund contributions. After meeting these charges, however, there was a net debit of £126,156 on all funds for the year.

Landed properties, baths, etc., which comprise about 39 per cent. of the assets, include such large items as public markets, £1,463,812; town hall, etc., £1,132,235; resumptions, £4,175,039; land and buildings used for the electricity works, £1,202,793. The investments of the accumulated sinking

fund, £1,867,801, consisted of State and Commonwealth Government loans and State Treasury deposits £1,334,335, Municipal Council of Sydney debentures £491,100, and Commonwealth Bank deposits £42,366.

*Progress of City of Sydney.*

The following table shows the progress of the City of Sydney since 1922:—

Particulars.	1922.	1923.	1924.	1925.	1926.
Area ... .. Acres	3,244	3,244	3,244	3,244	3,244
Population ... .. No.	109,970	109,970	109,180	106,350	107,880
Value*—	£	£	£	£	£
Unimproved Capital ...	36,057,574	36,132,946	44,663,151	44,735,763	44,758,056
Improved Capital ...	103,667,740	107,239,980	141,629,260	145,633,240	151,528,760
Assessed Annual ...	4,665,048	4,825,797	6,373,317	6,553,523	6,818,794
City Fund—					
Income—Rates	729,096	730,675	651,338	652,397	655,921
Other sources	194,970	284,357	354,193	351,088	475,387
Total ...	924,066	1,015,032	1,005,531	1,003,485	1,131,308
Expenditure ... ..	795,984	809,871	930,211	1,065,020	1,152,743
Public Markets Fund—					
Income ... ..	105,683	113,097	125,377	126,909	132,605
Expenditure ... ..	111,542	118,310	116,457	127,912	124,583
Resumptions Account—					
Income ... ..	76,183	87,409	112,768	144,892	177,011
Expenditure ... ..	178,761	183,805	215,452	246,535	256,226
Electricity Works Fund—					
Income ... ..	1,242,922	1,352,810	1,611,767	1,700,454	1,870,969
Expenditure ... ..	1,101,569	1,259,057	1,404,496	1,646,846	1,909,423
All Funds—					
Total Income ... ..	2,348,854	2,568,357	2,855,443	2,975,740	3,460,970†
Total Expenditure ...	2,187,856	2,371,043	2,666,616	3,036,313	3,597,126†
Excess of Income ...	160,998	197,314	188,827	(-110,573)	(-126,156)
All Funds—					
Liabilities ... ..	15,037,651	15,401,033	17,779,157	19,198,054	21,746,233
Assets ... ..	15,496,718	15,845,841	18,479,941	19,914,698	22,428,281
Excess of Assets ...	459,067	444,808	700,784	716,644	682,048
Loans outstanding ...	10,378,813	10,514,324	11,910,553	12,513,421	14,288,088
Sinking Fund ... ..	1,190,587	1,326,659	1,417,114	1,667,372	1,867,801

(—) Denotes excess of Expenditure.

\* Excluding Federal Government properties.

† Includes Sydney Harbour Bridge and Main Roads rates not previously included.

Properties in the city are re-valued for rating purposes every three years. There was a re-valuation in 1924. The increased values shown for 1923, 1925, and 1926, are those caused by the inclusion of new properties for assessment purposes. The value of Federal Government properties is not included in the figures shown above; the unimproved capital value in 1926 was £917,840.

The total income was 47.3 per cent. higher in 1926 than in 1922, while the expenditure increased by 64 per cent. The total liabilities were larger by 44.6 per cent., and the assets by 44.7 per cent., the balance-sheet showing an excess of assets amounting to £682,048 in the year 1926. Comparing the loans outstanding, the total increased by 37.7 per cent., and the sinking fund by 56.9 per cent. The sinking fund in 1926 represented 13.1 per cent. of the indebtedness.

## FINANCES OF COUNTRY AND SUBURBAN MUNICIPALITIES.

The Local Government Act, 1919, prescribes that there must be a general fund in each area, to which must be paid the proceeds of all general and additional general rates, loans, moneys received as grants or endowment from the Government, and miscellaneous income not required by law to be carried to other funds. The expenditure from the general fund must be on administration, health, roads, other public services, and repayment of loans.

There must be a special fund for each special rate levied, and for each work or service conducted by the Council in respect of which the special rate has been made, and the fund may be used only for the purposes of such work or service. A local fund also must be kept for each local rate levied, with restrictions similar to those in the case of the special funds, and the expenditure of the local fund is confined to works in the specified portion of the area.

A trading fund must be kept in respect of each trading undertaking conducted by the Council, into which all moneys received, whether from rates or other sources, loans, transfers, etc., must be paid, and a separate account must be kept. The fund may be applied only to the maintenance of the works, payment of interest and principal of loans, or other purposes incidental to the working of the undertaking.

All loan proceeds must be used for the specific purpose for which the loans were obtained, and may not be transferred from one fund to another, except by authority of the Minister.

The revenue of special and local funds must provide the money to meet not only the ordinary cost of maintaining the services, but also the obligations of the corresponding loan funds.

In addition to the above-mentioned funds, there must be a trust fund, which consists of receipts from the Government pending transfer to appropriate funds, deposits from contractors, etc., and any other amounts held in trust by the Council.

According to the ordinances under the Act, accounts must be "Income and Expenditure Accounts," kept by double entry, and each "fund" must have a separate banking account. Thus there is shown for each general, special, local, or trading fund a revenue account, or profit and loss account, giving the total expenditure chargeable for the period, whether paid or unpaid, and the total income for the same period, whether received or outstanding. A balance-sheet also is required for each fund with appropriate liabilities and assets, and aggregate balance-sheets and revenue accounts must be published. Only "realisable" assets may be shown, so that roads, bridges, drains, and other constructive works are excluded.

In the following tables the municipalities classified as metropolitan are those included in the area defined in Schedule IV of the Local Government Act of 1919, and the figures relating to municipalities for 1916 have been reclassified for the purpose of comparison. These municipalities are enumerated on pages 265 and 500 of this Year Book.

In comparison with the transactions in the year 1916, there were considerable increases in the transactions of the general fund, and only a slight increase in respect of the special and local funds. This is due to the application of the Local Government Act of 1919, under which the loan funds and many special and local funds were absorbed by the general fund.

*Expenditure.*

The gross expenditure during 1926 by the various municipalities under the Local Government Act amounted to £5,027,982, which was £188,256 more than the income. The following statement shows the expenditure allocated to the various funds in 1916 and 1926:—

Funds.	1916.			1926.		
	Metro-politan (exc. City of Sydney)	Country.	Total.	Metro-politan (exc. City of Sydney)	Country.	Total.
<b>General Fund—</b>	£	£	£	£	£	£
Administrative expenses ... ..	63,770	58,110	121,880	137,448	109,214	246,662
Public Works ... ..	453,450	232,917	686,367	1,697,630	583,499	2,281,129
Health Administration ... ..	85,345	38,702	124,047	539,042	271,731	610,773
Public Services ... ..	107,873	47,634	155,507	206,877	100,194	307,071
Municipal Property	26,507	28,357	54,864	33,605	26,987	60,592
Part contribution to Main Roads Board ... ..	.....	.....	.....	165,041	8,932	173,973
Miscellaneous ... ..	23,707	15,232	38,939	155,089	54,093	209,182
	760,652	420,952	1,181,604	2,734,732	1,154,650	3,889,382
Trading Accounts ... ..	.....	114,243	114,243	61,220	700,013	761,233
Special and Local Funds	70,325	277,064	347,389	68,992	308,375	377,367
Loan Funds ... ..	121,987	46,209	167,496	*	*	*
Gross Expenditure ...£	952,264	858,468	1,810,732	2,864,944	2,163,038	5,027,982

\* Included in other funds.

The greatest expenditure was naturally from the general funds, which now include the loan funds, and in 1926 accounted for 77 per cent. of the total. The trading concerns of the municipalities are gas and electricity. The special and local funds relate to water supply, sewerage, sanitary and garbage services, street-watering, street-lighting, footpaths, guttering, drainage, fire brigades, parks and reserves, and other miscellaneous matters.

The proportion of each class to the total expenditure and the rates per head of population in municipalities were as follows:—

Head of Expenditure.	1916.		1926.	
	Proportion to Total.	Per Head of Population.	Proportion to Total.	Per Head of Population.
	per cent.	£ s. d.	per cent.	£ s. d.
General Fund ... ..	65·3	1 1 8	77·4	2 10 10
Trading Accounts ... ..	6·3	0 2 1	15·1	0 10 0
Special and Local Funds ... ..	19·2	0 6 4	7·5	0 4 11
Loan Funds ... ..	9·2	0 3 1	†	†
<b>Total ... ..</b>	<b>100·0</b>	<b>1 13 2</b>	<b>100·0</b>	<b>3 5 9</b>

† Included in other funds.

In 1926, of the expenditure by municipalities from the general funds, nearly 59 per cent. was on public works. The amount expended on the actual maintenance and construction of works of a public character, viz., roads, streets, bridges, culverts, drains, wharves, ferries, etc., amounted to £2,050,823, of which the sum of £1,542,201 was expended by the municipalities in the metropolitan area, and £508,622 in the country. The expenses of supervision, such as the salary of engineers, etc., amounted to £71,881, or 3.2 per cent. of the total amount expended on public works.

Sundry expenses amounted to £158,425. The foregoing amounts relate to the general fund only, and do not represent the total expenditure of municipalities under the headings stated.

The relative cost of administration was largest in the country, being 9.5 per cent of the total expenditure from the general funds; the metropolitan municipalities spent only 5 per cent. under the same heading. So far as the municipalities are concerned, the figures relating to administrative expenses quoted above refer only to those payable for general purposes; other services, such as sanitary and garbage, etc., transfer their share of the administrative expenses to the general fund, and the amounts are not included in the above figures. The cost of administration in the country is relatively high, on account of the sparse population and small revenue of many of the municipalities, as in such cases the expenses on account of salaries, etc., are larger proportionately than those in the more closely settled localities.

The trading accounts, which relate to the supply of gas or electricity, will be treated later under those headings, and the special water and sewerage funds will be discussed separately.

### Income.

The gross income in 1926 of all the municipalities subject to the provisions of the Local Government Act was £4,839,726, including £247,492 received as endowments or grants from the Government. Under the same funds, as shown in the expenditure, the income in 1916 and 1926 was as follows:—

Funds.	1916.			1926.		
	Metro- politan (exc. City of Sydney)	Country.	Total.	Metro- politan (exc. City of Sydney)	Country.	Total.
General Fund—	£	£	£	£	£	£
Rates levied (including interest ... ..)	651,746	309,328	961,074	1,521,011	616,976	2,137,987
Government Endowments, etc. ... ..	975	4,178	5,153	...	450	450
Sundries (General Purposes) ... ..	10,161	7,644	17,805	32,607	18,017	50,624
Public Works* ... ..	57,317	40,826	98,143	563,365	166,259	729,624
Health Administration*	19,420	11,492	30,912	172,518	215,086	387,604
Public Services* ... ..	16,456	14,802	31,258	34,420	33,446	67,866
Municipal Property ... ..	22,569	33,815	56,384	40,460	48,785	89,245
Miscellaneous ... ..	3,012	1,348	4,360	41,052	3,686	44,738
Total, General Fund...	781,656	423,493	1,205,089	2,405,433	1,102,705	3,508,138
Trading Accounts ... ..	...	148,327	148,327	73,300	832,982	906,282
Special and Local Funds ... ..	79,453	315,525	394,978	71,218	354,088	425,306
Loan Funds ... ..	80,421	61,262	141,683	†	†	†
Gross Income ... ..	941,530	948,547	1,890,077	2,549,951	2,289,775	4,839,726

\* Including Government grants.

† Included in other funds.

The amount of Government assistance included in the income in 1926 amounted to £247,492; of which £242,051 represented contributions to public works (roads, streets, bridges, etc.); £4,532 were granted for health administration, chiefly as contributions to inspectors' salaries, etc.

Stating the receipts from each source as a percentage of the total income, and according to population, the following results are obtained:—

Source of Income.	1916.		1926.	
	Proportion to Total.	Per head of Population.	Proportion to Total.	Per head of Population.
General Funds ... ..	per cent. 63·8	£ s. d. 1 2 1	per cent. 72·5	£ s. d. 2 5 10
Trading Accounts ... ..	7·6	0 2 9	18·7	0 11 10
Special and Local Funds ... ..	20·9	0 7 3	8·8	0 5 7
Loan Funds ... ..	7·5	0 3 7	†	†
<b>Total ... ..</b>	<b>100·0</b>	<b>1 14 8</b>	<b>100·0</b>	<b>3 3 3</b>

† Included in other funds.

The bulk of the general fund income was received from rates, the average in 1926 for all municipalities being 61 per cent. Income from public works represented 21 per cent. of the total receipts, and about 33 per cent. of the revenue from that source was provided by the Government as grants. The next important source of income was health administration, which accounted for 11 per cent. of the total income, a large proportion being derived from sanitary and garbage fees.

In addition to the rates and charges imposed by municipalities in and around the metropolis, the Metropolitan Water, Sewerage, and Drainage Board imposes water rates, and, in some cases, sewerage and drainage rates. Reference to these is made later.

*Special and Local Funds.*

The expenditure and income of the Special and Local Funds in the years 1916 and 1926 are shown in the following table:—

Funds.	1916.			1926.		
	Metropolitan (exc. City of Sydney)	Country.	Total.	Metropolitan (exc. City of Sydney)	Country.	Total.
<b>Expenditure—</b>	£	£	£	£	£	£
Water Supply ... ..	...	92,494	92,494	329	181,319	181,048
Sewerage and Drainage ... ..	2,547	14,300	16,847	115	52,434	52,549
Sanitary and Garbage ... ..	51,258	131,056	182,314	6,467	...	6,467
Street Lighting ... ..	761	25,230	26,091	12,315	52,666	64,981
Street Watering ... ..	629	554	1,183	83	1,404	1,497
Roads, Streets, Footpaths, and Gutters ... ..	...	...	...	49,290	16,155	67,395
Miscellaneous ... ..	15,130	13,330	28,460	453	2,397	2,850
<b>Total ... ..</b>	<b>70,325</b>	<b>277,064</b>	<b>347,389</b>	<b>68,992</b>	<b>308,375</b>	<b>377,367</b>
<b>Income—</b>						
Water Supply ... ..	...	103,466	103,466	46	219,457	219,503
Sewerage and Drainage ... ..	3,097	13,392	16,399	126	58,367	58,473
Sanitary and Garbage ... ..	53,661	137,368	191,029	7,555	...	7,555
Street Lighting ... ..	960	26,430	27,390	11,825	53,152	64,977
Street Watering ... ..	624	737	1,361	...	1,370	1,370
Roads, Streets, Footpaths, and Gutters ... ..	...	...	...	50,329	15,022	69,251
Miscellaneous ... ..	21,201	34,132	55,333	1,337	2,780	4,117
<b>Total ... ..</b>	<b>79,453</b>	<b>315,525</b>	<b>394,978</b>	<b>71,218</b>	<b>354,088</b>	<b>425,306</b>

The water and sewerage services are the most important of those mentioned above so far as the country is concerned. All metropolitan municipalities are supplied with water and some are served also with sewerage and drainage facilities by the Metropolitan Water, Sewerage, and Drainage Board.



*Balance-sheet.*

The following statement indicates the nature of the liabilities and assets of the municipalities as at 31st December, 1926, amounts due from one fund to another being excluded:—

Funds.	Metropolitan (excluding City of Sydney).	Country.	Total.
	£	£	£
<b>Liabilities—</b>			
Sundry creditors, including Loans outstanding and interest thereon ... ..	3,091,613	1,975,719	5,067,332
Debts due to Government and interest thereon ...	83,380	2,397,603	2,480,983
Bank overdraft ... ..	231,291	241,187	472,478
Other (including Deposits on Contracts and unexpended portion of Government grants) ...	76,243	65,795	142,038
<b>Total ... ..</b>	<b>3,482,527</b>	<b>4,680,304</b>	<b>8,162,831</b>
<b>Assets—</b>			
Cash in hand and Bank balances ... ..	462,971	505,460	968,431
Outstanding rates and interest ... ..	156,071	161,562	317,633
Sundry debtors ... ..	200,011	282,516	482,527
Furniture ... ..	42,857	41,087	83,944
Stores and materials ... ..	43,456	112,779	156,235
Land, buildings, plant and machinery ... ..	1,266,571	5,282,122	6,548,693
Other ... ..	101,038	35,823	136,861
<b>Total ... ..</b>	<b>2,272,975</b>	<b>6,421,349</b>	<b>8,694,324</b>
Excess of Assets ... ..	...	1,741,045	531,493
Excess of Liabilities ... ..	1,209,552	...	...

The policy of constructing works from loan moneys has been more extensively followed in the metropolitan area—where development has been rapid—than in the country municipalities. These loans are raised on the security of future revenue, and neither this nor the value of works such as streets, etc., constructed from loans are included in the balance-sheet. There is, consequently, little significance in the total relationship of the assets shown to liabilities. The statement, however, contains interesting items of an informative character.

## SHIRES—FINANCE.

The accounts of the shires are kept under the same system as those of municipalities—income being treated as revenue in the year in which it is due, and disbursements as expenditure in the year in which they are incurred. The following statement shows the expenditure of shires during 1926 in comparison with the year 1916:—

Particulars.	Expenditure.					
	1916.			1926.		
	Total.	Per cent.	Per head of population in Shires.	Total.	Per cent.	Per head of population in Shires.
General Fund—	£		£ s. d.	£		£ s. d.
Administrative expenses... ..	101,614	9·4	0 3 2	185,986	5·9	0 5 5
Public works ... ..	343,803	78·2	1 6 1	2,457,726	77·3	3 11 3
Health administration ... ..	8,513	0·8	0 0 3	125,599	4·0	0 3 8
Public services ... ..	15,229	1·4	0 0 6	41,792	1·3	0 1 3
Shire property ... ..	14,969	1·4	0 0 6	15,224	0·5	0 0 5
Miscellaneous ... ..	16,120	1·5	0 0 6	87,074	2·8	0 2 7
Special and local funds ... ..	78,649	7·3	0 2 5	166,411	5·3	0 4 10
Trading Accounts ... ..	...	...	...	92,631	2·9	0 2 8
<b>Total Expenditure</b>	<b>1,078,897</b>	<b>100·0</b>	<b>1 13 5</b>	<b>3,152,443</b>	<b>100·0</b>	<b>4 12 1</b>

The total amount spent from the general funds of the shires upon public works included the cost of supervision (salaries of engineers, etc.), £107,869, and sundry expenses, £96,970. The actual amount spent on maintenance

and construction was £2,232,887. This amount represents an increase of £441,114 over the expenditure in 1925, chiefly due to the increase in Government grants, but also in part to increased loan expenditure.

The principal heads of income of shires in 1926 were as follow, and the figures for 1916 are shown also:—

Particulars.	Income.					
	1916.			1926.		
	Total.	Per cent.	Per head of population in Shires.	Total.	Per cent.	Per head of population in Shires.
	£		£ s. d.	£		£ s. d.
General Fund—						
General rates, etc. ...	636,303	58·2	0 19 8	1,275,540	43·4	1 17 3
Government endowment...	143,259	13·1	0 4 5	147,525	5·0	0 4 4
Public works ...	205,277	18·8	0 6 4	1,038,343	35·3	1 10 4
Health administration ...	4,087	0·4	0 0 2	118,188	4·0	0 3 5
Public services ...	11,162	1·0	0 0 4	17,651	0·6	0 0 6
Shire property ...	12,449	1·1	0 0 5	19,534	0·7	0 0 7
Miscellaneous ...	5,177	0·5	0 0 2	32,858	1·1	0 1 0
Special and local funds ...	75,309	6·9	0 2 4	171,510	5·8	0 5 0
Trading Accounts ...	...	...	...	121,645	4·1	0 3 7
Total Income ...	1,038,023	100·0	1 13 10	2,942,794	100·0	4 6 0

The principal item in the receipts during 1926 on account of public works was Government grants, which amounted to £958,447, while the same source was responsible for £293 for health administration, and £730 for public services. The total assistance from the Government amounted to £1,113,095, or 38 per cent. of the total income. There has been a large increase since 1925 on account of augmented votes for construction, reconditioning, and maintenance of roads.

*Balance-sheet.*

The financial position of the shires on 31st December, 1926, is summarised in the items of the following table:—

Liabilities.	Assets.
£	£
Sundry Creditors (including Loans outstanding and interest thereon) ... ..	Cash in hand and bank balances
1,284,860	451,276
Debts due to Government and interest thereon ... ..	Outstanding rates and interest ...
351,383	194,096
Bank overdraft ... ..	Sundry debtors ... ..
392,110	119,388
Other (including deposits on Contracts and unexpended portion of Government grants)... ..	Furniture ... ..
137,752	24,833
Excess of assets ... ..	Stores and materials ... ..
45,157	54,383
	Land, buildings, plant, and machinery ... ..
	1,308,453
	Other ... ..
	58,833
Total ... ..	Total ... ..
2,211,262	2,211,262

As remarked in connection with the balance-sheet of municipalities, the loans raised are secured against future revenue, and only part of the works constructed from loans are included as assets.

FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT.

The central Government of the State affords financial assistance to the local governing bodies in the form of endowment or of grants for roads and other necessary works, or for special purposes.

Endowments are paid to shires only, assistance to municipalities being paid as grants. Certain endowments payable under the Municipalities Act, 1897, may still be paid, but the provisions for endowment of municipalities

made in the Act of 1906 were not re-enacted in the Act of 1919, and endowment is not now paid to municipalities. The Local Government Act of 1906 provided that a sum of at least £150,000 per annum should be paid by the State to the shires as endowment. Until 1912 the amount paid under this provision was considerably in excess of the minimum, but in later years the actual amount of endowment paid annually has averaged approximately £150,000, and substantial votes have been made for main roads. Under the Local Government Act, 1919, the endowment is distributed amongst the shires according to an apportionment made by the Government in every third year. The matters to be taken into account in making the distribution are specified in the Act., *e.g.*, the necessity for developing new districts, the extent to which the Council and the people of the areas concerned undertake to share in the development by constructing works or paying local rates, the rate levied and its relation to the maximum rate.

The allotment of the statutory sum of £150,000 per annum for the three years commencing 1st January, 1925, was as follows:—

57 shires received no endowment.			
5 shires received £250 and under £500 per annum.			
6	”	£500	” £750
4	”	£750	” £1,000
19	”	£1,000	” £1,500
14	”	£1,500	” £2,000
18	”	£2,000	” £3,000
6	”	£3,000	” £4,000
4	”	£4,000	” £5,000
3	”	£5,000 each	

As a general rule, the highest amounts are allowed to the areas in the coastal division, and the shires which receive £5,000 are Dorrigo, Erina, and Manning.

Beyond this endowment the State on occasion makes available funds for specific purposes which have usually been the subject of application by individual local governing bodies. Prior to 1925 the State voted to shires and municipalities considerable sums annually for the maintenance of main roads and bridges, and these sums are included below under the heading “Public Works.” In 1925, however, the Main Roads Board came into being and increased funds were set aside for main roads construction and maintenance. Of these funds large sums are disbursed through the councils of municipalities and shires, and are included in the following comparison of funds provided by the State and Commonwealth Governments and expended by the local governments.

Year.	Municipalities.			Shires.				Total Government Assistance.
	Public Works.	Other.	Total Municipalities.	Endowment.	Public Works.	Other.	Total Shires.	
1921	£ 51,466	£ 5,772	£ 57,238	£ 178,420	£ 152,181	£ 572	£ 331,173	£ 388,411
1922	102,639	5,884	108,523	156,861	183,712	374	340,947	449,470
1923	66,688	5,259	71,947	150,296	166,697	472	317,465	388,412
1924	43,382	6,213	49,595	146,765	265,218	306	412,229	461,824
1925	232,334	5,959	238,313	149,345	613,045	7,233	759,643	1,007,956
1926	242,051	5,441	247,492	147,528	958,447	7,123	1,113,098	1,300,587

The amounts stated above do not include repayable advances by the State or Federal Governments. The amount of such advances in 1924 was £12,686 to municipalities and £26,594 to shires, in 1925 £19,430 and £76,028, and in 1926, £17,377 and £85,072, respectively.

## LOANS.

Loans obtained by the Council of the City of Sydney prior to 1905 were raised under the provisions of special Acts of Parliament. In 1905 the Sydney Corporation Amendment Act authorised the Council to raise loans, with the approval of the Governor, by the sale of debentures secured upon the corporate rates and revenues of the Council from whatever source arising, and to issue new debentures to repay any such debentures upon maturity. The term of the debentures may not exceed in the aggregate fifty years, and a sinking fund must be established for each loan raised under the Act of 1905, on the basis of 3 per cent. per annum compound interest over the period of fifty years. The maximum rate of interest was fixed at 4 per cent. until 1917, when amending legislation provided that the rate of interest be fixed by the Council with the approval of the Governor. The Act of 1917 provided also that the Council, in lieu of issuing debentures subject to the provisions of the Act of 1905, may issue debentures to secure the repayment of its loans, together with interest thereon, by equal yearly or half-yearly instalments. An Act passed in 1928 authorised the City Council to raise loans outside Australia.

Loans obtained by the councils of other municipalities and of shires are raised usually under the Local Government Act, 1919, as amended by subsequent Acts.

In respect of municipal loans, the Local Government Act prescribes that a council may not borrow any moneys which, with existing loans, will cause the total indebtedness to exceed 20 per cent. of the unimproved value of rateable land in the area. If the outstanding loans of a municipality exceed this proportion, the council may not raise a special loan until the total amount falls below the limit.

Loans under the Local Government Act may be raised by four methods, viz., limited overdraft, and renewal, ordinary, or special loans.

Limited overdrafts may be obtained for any purpose upon which the council is authorised to expend a fund (except a trust fund). The sum raised may not exceed half the income of the fund in respect of which it is obtained, plus the amount of any fixed deposit to the credit of the fund (except a deposit which is part of a reserve for loan repayment). Prior to 21st March, 1927, when an amendment of the law came into force, councils were required to obtain the authority of the Minister for Local Government for a limited overdraft and by his certificate the Minister determined the limit within which the council might borrow up to the maximum fixed by the Act. The amending law empowers the council to borrow, without the Minister's sanction, an amount not exceeding one-third of the preceding year's income of the fund affected; the Minister's certificate is required if the council needs to borrow an amount exceeding one-third.

The purpose of limited overdrafts is to enable the councils to finance a regular programme of works and services to meet extraordinary expenditure during periods of inequality or fluctuations in the collection of rates. In view of this fact, the Department of Local Government suggests to the councils as a general principle that the amount of the overdraft at end of each year, or, at least, at the end of each council's term, should not exceed the amount outstanding for rates in the case of the general or other fund of which rates constitute the principal source of revenue.

Renewal loans are for the purpose of repaying or renewing any other loan, and for paying the expenses incidental thereto.

Ordinary loans are those for such purposes as carrying out orders as to boundary works, discharging liability arising under verdicts or orders of legal tribunals, establishing or extending sanitary and garbage services, acquiring machinery and equipment for the construction of roads and

bridges, establishing road punts and road ferries, and meeting liabilities transferred to the council consequent upon alteration of boundaries. An ordinary loan may be obtained notwithstanding that it will raise the total indebtedness of the council above the prescribed limit, but while there is an excess the council may not raise a special loan.

Special loans are those which do not fall within the other three categories. A council must give notice of a proposal to raise a special loan, and the ratepayers have the right, by petition of at least 25 per cent. of those concerned, to demand that a poll be taken as to whether they approve of the loan, and as to whether the loan rate (if any) shall be on the unimproved or the improved capital value. Shire special loans may not exceed in the aggregate a sum equal to three times the amount of the income, as shown by the last year's accounts.

The councils may accept from ratepayers advances not exceeding £500 for the purpose of carrying out necessary works for which the lenders have applied. Such loans must be free of interest or at a rate not exceeding 4 per cent., and the amount accepted by a council may not exceed one-tenth of the total revenue for the preceding year.

Renewal, ordinary, or special loans under the Local Government Act are secured, firstly upon the income of the fund to which the loans belong, and, secondly, upon the income of the council arising from any source.

Unless the loans are repayable by instalments at intervals of one year or less, there must be a sinking fund for loan repayment in every fund in respect of which a renewal, ordinary, or special loan has been raised, and in each year the council must transfer to the sinking fund a sum of not less than the amounts which were intimated in its applications for approval of the loans. In the case of loans repayable by annual or more frequent instalments, the reserve for repayment is optional.

The following statement shows the loans by shires and municipalities outstanding on 31st December, 1926, and the sinking funds set apart to meet them.

Division.	Loans Outstanding.			Accumulated Sinking Funds.	Net amount of Interest due on Loans during 1926.
	New South Wales.	London.	Total.		
Municipalities—	£	£	£	£	£
Sydney ... ..	11,288,088	3,000,000	14,288,088	1,867,801	736,219
Other Metropolitan ... ..	2,948,196	...	2,948,196	28,939	140,190
Country ... ..	1,905,118*	7,500	1,912,618	37,602	87,536
Total Municipalities	£ 16,141,402	3,007,500	19,148,902	1,934,342	963,945
Shires ... ..	1,203,501	225,000	1,428,501	19,157	59,006
Total ... ..	£ 17,344,903*	3,232,500	20,577,403	1,953,499	1,022,951

\* Including £80,094 raised in Victoria.

The total of loans outstanding in respect of the City of Sydney as shown above represents fixed loans and is exclusive of bank overdrafts, the interest due represents the amount payable for a full year on the loans outstanding at the end of the year. The amount of such interest due and paid in London in 1926 was £175,000.

The amounts for other municipalities and for the shires include £864,588, being the total amount of overdrafts shown on funds of the council, and £44,322 being temporary loans repayable on demand. The net amount of interest due on loans during 1926 (other than for the City of Sydney) represents the net amount chargeable on loans and overdrafts after deduct-

ing interest accrued on funds in credit during the year. Practically all the overdrafts are in anticipation of revenue for maintenance and administration.

Apart from the liability to the State under the Country Towns Water and Sewerage Act, and the Main Roads Act, the total amount of municipal loans and overdrafts outstanding at the close of the year was £19,148,902, and towards this amount there was at the credit of the sinking funds a sum of £1,934,342. The average rate of interest on loans of municipalities was 5.31 per cent.

Since 1916 the loan indebtedness of the municipal and shire councils has almost doubled, as shown by the following comparison of the loans outstanding at the end of 1916 and of each of the six years to 1926, also of the ratio of loans to the unimproved capital value of ratable property in the incorporated areas.

At 31st Dec.	Amount of Loans Outstanding.				Proportion to Unimproved Capital Value of Ratable Property.			
	City of Sydney.	Other Muni- cipalities.	Shires.	Total.	City of Sydney.	Other Mu- nicipalities	Shires.	Total.
	£	£	£	£	per cent.	per cent.	per cent.	per cent.
1916	7,050,100	1,692,133	148,367	8,890,600	22·62	2·91	0·14	4·56
1921	9,341,742	2,203,175	198,581	11,743,498	26·03	2·70	0·15	4·73
1922	10,378,813	2,483,614	356,917	13,219,344	28·78	2·86	0·26	5·10
1923	10,514,324	2,899,221	535,322	13,948,867	29·10	3·04	0·38	5·12
1924	11,910,553	3,658,971	779,162	16,348,686	26·67	3·60	0·54	5·60
1925	12,513,421	4,257,363	950,587	17,721,371	27·97	3·90	0·64	5·86
1926	14,288,088	4,860,814	1,428,501	20,577,403	31·92	4·23	0·92	6·55

The ratio of loans to the improved capital value in 1926 was 9.43 per cent. in the City of Sydney, and 1.41 per cent. in the other municipalities.

It is apparent that the borrowing by the municipalities and shires is, in the aggregate, well within the limits allowed by the Local Government Act already referred to. The relatively extensive loans of the City of Sydney are invested largely in the acquisition of revenue-producing assets, some of which, notably the electricity supply undertaking, have been profitable. Considerable amounts of loan money have been expended on resumption for city improvements, and these are only partly reproductive.

The place of redemption and the approximate amount of interest payable on the foregoing loans of the City of Sydney, the other municipalities and the shires in New South Wales are shown in the following table. The amounts are exclusive of advances from the Government, but, in the case of municipalities and shires, they are inclusive of considerable amounts of bank overdrafts on revenue account:—

Year.	Principal raised in—			Annual Interest due.		
	Australia.	London.	Total.	In Australia.	In London.	Total.
	£	£	£	£	£	£
1916	8,066,745	823,855	8,890,600	316,371	33,208	349,579
1921	10,231,498	1,512,000	11,743,498	423,746	85,690	509,436
1922	10,707,844	2,511,506*	13,219,344*	478,516	130,625	609,141
1923	11,939,867	2,009,000	13,948,867	530,090	125,525	655,615
1924	13,590,186	2,758,500	16,348,686	612,884	154,691	767,575
1925	14,713,371	3,008,000	17,721,371	681,574	175,520	857,094
1926	17,344,903	3,232,500	20,577,403	835,189	187,762	1,022,951

\* Includes £500,000 matured 1st November, 1922.

The amounts stated above do not include the sums due to the Government as capital debt on water and sewerage and drainage works, viz.,

£2,291,353 owing by municipalities and shires at the end of 1926, and £79,664 in respect of the Grafton and South Grafton works. The above statement is exclusive also of loans of county councils, viz., £42,812 in 1922, £124,258 in 1923, £250,439 in 1924, £341,713 in 1925, and £349,523 in 1926, the interest, all of which was paid in Sydney, being £1,036, £3,968, £5,794, £15,749, and £17,449 in respective years.

The annual amount of loan expenditure by local governing bodies in New South Wales is shown below:—

Year.	City of Sydney.	Metro-politan Municipalities.	Country Municipalities.	Shires.	County Councils.	Grand Total.
1924.	£	£	£	£	£	£
Government Advances	...	9,320	3,366	26,594	...	39,280
Other Loans ... ..	719,500	464,342	218,808	150,116	193,556	1,746,322
Total ... ..	719,500	473,662	222,174	176,710	193,556	1,785,602
1925.						
Government Advances	...	4,493	14,937	76,028	...	95,458
Other Loans ... ..	690,604	461,482	287,636	231,191	66,032	1,736,945
Total ... ..	690,604	465,975	302,573	307,219	66,032	1,832,403
1926.						
Government Advances	...	...	17,377	85,072	...	102,449
Other Loans ... ..	1,805,820	625,635	279,143	346,109	51,537	3,108,244
Total ... ..	1,805,820	625,635	296,520	431,181	51,537	3,210,693

The amount of expenditure by councils from loan funds provided by, but not repayable to, the State is excluded. The total loan expenditure by local government bodies over and above Government loans was £3,108,244 in 1926, inclusive of expenditure from bank overdrafts.

#### MUNICIPAL GASWORKS.

The Local Government Act authorises the councils of municipalities and shires to construct gasworks, and to supply gas for public lighting and for use by private consumers. Twenty country municipalities maintain works for coal gas, and others have installed acetylene and other plants. The metropolitan districts are served by private companies.

Details of the accounts of the works of various municipalities are shown in the section "Local Government" of the Statistical Register for 1926-27. A summary of the gasworks revenue accounts of the municipalities with coal gasworks in 1926 is shown in the following statement, in comparison with similar particulars for 1916:—

Expenditure.	1916.	1926	Income.	1916.	1926.
	£	£		£	£
Manufacture ... ..	45,894	90,171	Rates levied ... ..	...	5,126
Distribution ... ..	6,187	10,374	Private lighting ... ..	95,706	106,350
Management expenses	12,784	20,147	Public lighting ... ..	11,449	4,982
Public lighting ... ..	3,859	1,127	Sale of residual products	...	...
Interest on Loans and Overdrafts ... ..	...	5,007	Other ... ..	8,195	12,966
Other ... ..	1,245	1,895		519	4,877
Excess of Income ... ..	16,411	5,640			
Total ... ..	£ 85,860	134,321	Total ... ..	£ 85,860	134,321

The quantity of gas sold to private consumers during 1926 was 293,488,000 cubic feet at prices ranging from 4s. 4d. to 12s. 1d. per 1,000, the general average being 7s. 3d. per 1,000 cubic feet. The quantity used for public lighting was 14,688,000, and the revenue therefrom represented 6s. 8d. per 1,000 cubic feet. Income was derived also from rates which were levied in ten of the municipalities and from the sale of residuals, etc. On the operations during 1926, there was a gross profit of £5,640 after paying interest amounting to £5,007. Six municipalities incurred a loss on trading.

The following is an analysis of the total expenditure per 1,000 cubic feet of gas sold, excluding transfers to sinking fund and reserves:—

	1925.	1926.
	s. d.	s. d.
Manufacture ... ..	5 7	5 10
Distribution... ..	0 7	0 8
Management and general expenses, including depreciation ... ..	1 3	1 4
Public lighting ... ..	0 1	0 1
Interest on loans and overdrafts... ..	0 4	0 4
Other ... ..	0 2	0 1
<b>Total</b> .. ..	<b>8 0</b>	<b>8 4</b>

The balance-sheet of the gasworks trading undertakings for 1926 is given below:—

Liabilities		Assets.	
	£		£
Sundry creditors ... ..	16,821	Buildings, land, stock, plant, etc.	294,426
Loans including interest accrued	86,199	Sundry debtors, including amounts due from other funds ... ..	39,973
Overdrafts ... ..	13,628	Fixed deposits and investments... ..	18,156
Excess of Assets ... ..	249,074	Bank balance, and cash ... ..	13,168
<b>Total</b> ... ..	<b>£365,722</b>	<b>Total</b> ... ..	<b>£365,722</b>

The total excess of assets amounted to £249,074, and none of the municipalities showed a deficit at the close of 1926.

#### MUNICIPAL AND SHIRE ELECTRICITY WORKS.

The supply of electricity for lighting and for power is undertaken directly by the councils in many local governing areas. In some cases the councils have established works for the generation of electricity, while in others it is purchased in bulk from another council, from Government works, or from collieries, etc., and distributed to consumers. In addition, electricity for street and private lighting and power in defined areas is supplied under contract with the councils from works which are privately owned and operated, and are not included in the statistics which follow.

#### *City of Sydney Electricity Undertaking.*

In 1904 the council of the City of Sydney commenced to supply electricity within the city, and subsequently the works were extended to enable the city undertaking to supply a large area beyond the city boundaries. In addition to the electricity generated at the council's works, supplies are purchased from the Railway Commissioners. In 1926 the undertaking distributed electricity direct to consumers in the city, in thirty-four other municipalities and in the shire of Ku-ring-gai; and supplied it in



bulk to the local councils of the municipalities of Manly, Fairfield, Prospect and Sherwood, Dundas, and Ermington and Rydalmere, and the shires of Warringah, Hornsby, and Blacktown.

The expenditure and income of the City electricity undertaking in the year ended 31st December, 1926, are shown below:—

Expenditure.		Income.	
£		£	
Generation of Electricity ...	425,980	Sales to City Council ...	36,602
Distribution ...	368,743	Other ...	1,780,883
Management ...	207,977	Rentals—Meters, Motors, etc. ...	40,231
Purchase of Electricity ...	189,504	Miscellaneous ...	33,273
Miscellaneous ...	44,151		
<b>Total ...</b>	<b>£1,236,355</b>		
<b>Balance carried to Net Revenue Account ...</b>	<b>634,634</b>		
<b>Total ...</b>	<b>£1,870,989</b>	<b>Total ...</b>	<b>£1,870,989</b>

The gross profit carried to the net revenue account was £634,634. The charges against the profits were interest on debentures and overdraft, £378,753; sinking fund contribution, £50,336; depreciation reserve account, £224,435; written off loan flotation expenses, etc., £15,562; miscellaneous, £3,984; making a total of £673,070. The net loss for the year 1926, after paying interest and sinking fund contribution, was therefore £38,436.

Below is a summary of the balance-sheet of the City Electricity Works Fund on 31st December, 1926:—

Liabilities.		Assets.	
£		£	
Debenture Loans... ..	6,669,047	Land, Buildings, Machinery, Plant, etc. ...	8,921,493
Sinking Fund ... ..	576,154	Sinking Fund Investments—	
Reserve Accounts ... ..	2,192,727	Commonwealth Loans ...	359,590
Sundry Creditors... ..	442,504	New South Wales Treasury... ..	99,906
Deposits (Consumers') ... ..	102,506	Debentures—Sydney Municipal Council ... ..	103,900
Commonwealth Bank ... ..	509,904	Commonwealth Bank ... ..	10,948
Loans repaid ... ..	12,597	Stores, Materials, Coal, etc. ...	495,188
		Sundry Debtors, Consumers' Balances, etc. ... ..	383,269
		Other ... ..	92,709
		Net Loss for year 1926 ... ..	38,436
<b>Total ... ..</b>	<b>£10,505,439</b>	<b>Total ... ..</b>	<b>£10,505,439</b>

The amount of liabilities, excluding reserve account and sinking fund, was £7,736,558, leaving an excess of assets over external liabilities amounting to £2,768,881.

The following table shows the rapid growth of the City Electric Lighting Undertaking. The figures represent the actual profit or loss made in specified years, excluding balances brought forward:—

Particulars;	1911;	1916.	1921;	1925.	1926.
Units Sold ... ..	17,768,000	48,533,000	108,177,600	202,424,000	234,609,000
Expenditure ... ..	£ 95,428	211,263	639,483	1,045,704	1,236,355
Income ... ..	£ 172,693	433,996	943,125	1,700,454	1,870,989
Surplus... ..	£ *94,861	222,733	303,642	654,750	634,634
Charges against Surplus	£ 66,470	192,071	329,234	601,142	673,070
Net gain ... ..	£ 28,391	30,662	(—)25,592	53,608	(—) 38,436

\*Includes surplus of a Purchased company £17,506.

(—) Denotes loss.

The City Council purchased from the Railway Commissioners 41,903,000 units, at a cost of £109,398 in 1925, and 71,317,000 units at £189,504 in 1926.

*Other Electricity Undertakings.*

Electricity is obtained in bulk from the generating stations of the Railway Commissioners by the municipalities of Bankstown, Newcastle, West Maitland, and Singleton, by Tarro Shire, and by St. George County Council. Supplies are purchased similarly by the municipalities of Albury and Corowa from the Victorian State Electricity Commission. The Government electric power station at Port Kembla supplies the municipalities of Wollongong, Kiama, Bowral, Moss Vale, Mittagong, and Berry, and further extensions are under construction. Dorrigo Shire Council has initiated a hydro-electric scheme; the Clarence River County Council has undertaken a scheme on the Nymboida River, and supplies the municipalities of Grafton, South Grafton, and Ulmarra, and the shires of Copmanhurst, Nymboida, and Orara.

In addition to the areas which are supplied directly from the City Electricity Undertaking and from the works named in the preceding paragraph, electric light and power were generated in 1925 by councils' plants in thirty municipalities and eight shires. Of the thirty municipalities operating their own plants in 1925 three, namely, Newcastle, Kiama, and Moss Vale, purchased the greater part of their requirements from the sources named above.

The following statement shows the results of the trading operations of the electricity undertakings during 1926 in respect of municipalities and shires, including both those which generated their own electricity and those which retailed supplies purchased in bulk. The figures for municipalities in 1916 are included for comparative purposes.

Income.	Municipalities.		Shires.	Expenditure.	Municipalities.		Shires.
	1916.	1926.	1926.		1916.	1926.	1926.
	£	£	£		£	£	£
Rates levied ...	...	65,141	23,640	Generation ...	27,019	324,985	36,544
Private lighting ...	35,297	348,650	52,345	Distribution ...	3,896	50,982	7,667
Public lighting ...	11,542	58,059	17,309	Management, etc.	6,461	108,816	22,361
Power supply ...	11,842	200,368	14,623	Public lighting ...	1,962	9,056	1,314
Rents of meters, etc. ...	2,017	20,952	4,638	Interest on Loans and Overdrafts..	...	65,988	16,802
Other ...	1,769	65,881	9,264	Other ...	5,456	57,953	8,117
				Balance ...	17,673	141,271	29,014
<b>Total...</b>	<b>62,467</b>	<b>759,051</b>	<b>121,819</b>	<b>Total...</b>	<b>62,467</b>	<b>759,051</b>	<b>121,819</b>

The net profit of these concerns to the municipalities and shires was £170,285 in 1926.

Setting out the expenditure exclusive of sinking fund in 1926 on the basis of the total units sold, the following result is obtained:—

Item.	Municipalities.	Shires.
	pence per unit.	pence per unit.
Generation and Purchase ...	1.46	2.37
Distribution ...	0.23	0.48
Management, general, depreciation, etc. ...	0.53	1.60
Public lighting ...	0.04	0.09
Interest ...	0.29	1.04
Other ...	0.21	0.46
<b>Total!</b> ...	<b>2.76</b>	<b>6.04</b>

The costs for the shires are much higher than those for the municipalities. This is attributable to the fact that the municipalities are operating on a larger scale than the shires with a consequent lessening of manufacturing costs and overhead charges per unit.

The average price per unit charged to consumers in municipalities for lighting was 5.93d., and for power 1.40d.; the corresponding figures for shires were 7.48d. and 3.18d.

The balance-sheets of the electricity trading funds in 1926 were as follows:—

Liabilities.	Municipalities.	Shires.	Assets.	Municipalities.	Shires.
	£	£		£	£
Sundry creditors ...	193,627	46,880	Materials, stock, etc. ...	1,703,721	374,315
Loans ...	1,111,701	302,406	Sundry debtors ...	144,236	25,909
Overdrafts ...	47,146	1,581	Fixed deposits, bank balance, and cash ...	192,308	46,300
Excess of assets ...	687,791	95,657			
Total ...	2,040,265	446,524	Total ...	2,040,265	446,524

The combined liabilities of municipalities and shires were £1,703,341, and the total assets amounted to £2,486,789, leaving a credit balance of £783,448. Four municipalities and two shires showed an excess of liabilities, the amounts being small in each case.

#### *Electricity Undertakings of County Councils.*

The St. George Council purchases from the Railway Commissioners bulk supplies of electricity which are sold for street lighting and to private consumers in the municipalities of Bexley, Hurstville, Kogarah, and Rockdale. The Clarence River County Council has constructed hydro-electric works on the Nymboida River to supply electricity to the municipalities of Grafton, South Grafton, and Ulmarra, and to the shires of Copmanhurst, Nymboida, and Orara. The following statement shows the particulars of the revenue accounts for 1926:—

Expenditure.	St. George Council.	Clarence River Council.	Income.	St. George Council.	Clarence River Council.
	£	£		£	£
Generation and Purchase of Electricity ...	28,173	2,131	Loan Rates ...	12,805	...
Distribution of Electricity	7,768	909	Sales of Electricity ...	67,241	15,353
Street Lighting ...	2,371	193	Rent of Meters, etc. ...	3	879
Management and General Expenses ...	5,021	2,189	Interest on Investments	674	...
Interest on Loans ...	10,628	6,761	Sundries ...	1,705	1,171
Depreciation ...	11,433	667			
Sundries ...	2,273	1,011			
Cr. Balance ...	14,756	3,550			
Total ...	82,428	17,413	Total ...	82,428	17,413

The trading operations of the St. George Council during 1926 resulted in a surplus of £14,756, and those of the Clarence River Council in a surplus of £3,550.

The liabilities and assets at 31st December, 1926, are shown below:—

Liabilities.	St. George Council.	Clarence River Council.	Assets.	St. George Council.	Clarence River Council.
	£	£		£	£
Loans and overdraft .. ..	174,053	178,394	Land, buildings, plant, etc. ..	236,310	149,950
Deposits in trust .. ..	4,653	243	Stores and Materials .. ..	6,307	3,361
Interest accrued .. ..	2,710	..	Outstanding rates .. ..	2,075	..
Sundry creditors .. ..	10,394	791	Sundry debtors .. ..	11,162	5,051
Reserves for Depreciation, etc.	18,337	667	Promotion expenses .. ..	2,182	..
Other .. ..	..	..	Bank balances .. ..	14,319	47
Excess of Assets .. ..	1,388	3,314	Fixed Deposit and Stock .. ..	9,300	..
Total .. ..	281,515	178,409	Total .. ..	281,515	178,409

### FIRE BRIGADES.

The public services for the prevention and extinguishing of fires are controlled by a Board of Fire Commissioners, constituted under the Fire Brigades Act, 1909, as amended in 1919 and 1927. Its jurisdiction extends over certain districts which were defined in the Act or added by proclamation. The areas under the oversight of the Board are grouped to form fire districts. They include the City of Sydney, nearly all the area comprised by the suburban municipalities, also Newcastle and suburbs, Broken Hill, and other municipalities, and eighteen shires in respect of towns contained in them.

The Board consists of a president, appointed by the Governor for a term of five years, and seven members, elected for a term of three years, viz., one by the councils of the Sydney and suburban municipalities, one by the councils of the other incorporated areas to which the Act applies, three elected by the fire insurance companies, one by the volunteer fire brigades, and one by the permanent firemen who are members of the Fire Brigades Association of New South Wales. The votes are apportioned among the councils according to the amount contributed to the fund administered by the Board, viz., £100 or under, one vote; over £100 and not exceeding £500, two votes; over £500 and not exceeding £1,000, three votes; over £1,000, four votes. Each insurance company and each volunteer and permanent fireman is entitled to one vote.

In each year the Board makes an estimate of the amount proposed to be expended in the various fire districts during the ensuing year, and of this sum the councils of the municipalities and shires concerned contribute one-fourth, the insurance companies one-half, and the Government one-fourth. Until the year 1927, the contributions were made in equal shares by the councils, the insurance companies, and the Government. The estimates must be made so that the contribution by the councils in a fire district will not exceed 1d. in the £ on the unimproved capital value of ratable land, though the Board may exceed this limit with the consent of the Minister if requested by the councils to do so.

Where a fire district is comprised by more than one municipality or shire, the amount to be paid by each council is apportioned according to the annual value of ratable land within the district. Payments by the insurance companies are based on the amount of premiums payable in respect of fire risks within each district. With the consent of the Governor, the Board may borrow money up to £250,000.

The Board establishes and maintains permanent fire brigades and authorises the constitution of volunteer brigades, which are subsidised out of the funds. In the metropolitan districts in 1927 there were 33 fire stations, with staffs of permanent men whose services are wholly at the Board's disposal; 30 stations with one or more permanent men, assisted by partially-

paid men, and 12 stations manned entirely by partially-paid staffs. In the country the principal stations are at Newcastle, where there are also 12 suburban stations, and at Broken Hill, and there are brigades at 103 other localities.

The following table shows the revenue account of the Board of Fire Commissioners for the year ended 31st December, 1927:—

Revenue.			Expenditure.		
£			£		
Balance from 1926 ... ..	8,364		Administration ... ..	12,675	
Subsidy from Government ... ..	81,276		Salaries and Payments to Volunteers ... ..	177,555	
Subsidy from Municipalities and Shires ... ..	81,276		Repairs to Buildings, Plant, and other expenses ... ..	92,219	
Subsidy from Fire Insurance Companies and Firms ... ..	162,552		Equipment and Property Charges	43,244	
Other Sources ... ..	9,250		Balance ... ..	17,025	
Total ... ..	£342,718		Total ... ..	£342,718	

The contributions by the municipalities and shires comprising the Sydney fire district in 1927 represented 4s. 5d. per £100 of assessed annual value of the ratable land, as compared with 5s. 7d. in 1919.

Contributions amounting to £160,370 were received from 125 insurance companies and £2,182 from 45 firms who insured goods with companies not registered in New South Wales. In the Sydney fire district such contributions represented 10.43 per cent. of the premiums less reinsurances, and in the other districts the proportions ranged from 3.83 per cent. to 27.19 per cent.

The estimates of proposed expenditure by the board for the year 1928 amounted to £389,880, viz., £295,616 for the Sydney fire district and £94,264 for other districts.

The balance-sheet of the Board as at 31st December, 1927, is shown in the following statement:—

Liabilities.			Assets.		
£			£		
Fund Account ... ..	39,689		Land and Buildings ... ..	307,955	
Trust Accounts ... ..	1,303		Plant and Fire Appliances ... ..	192,141	
Debentures and Accrued Interest	130,037		Stocks on Hand ... ..	26,929	
Revenue and Expenditure Account	17,025		Fixed Deposit, Bank Balances and Cash ... ..	1,502	
Property and Equipment Fund ...	335,623				
Administration Account ... ..	3,694				
Other ... ..	1,156				
Total ... ..	£528,527		Total ... ..	£528,527	

#### WATER SUPPLY AND SEWERAGE SERVICES.

The Metropolitan Water, Sewerage, and Drainage Board administers extensive water supply and sewerage works in Sydney and environs, and the Hunter District Water Supply and Sewerage Board exercises similar functions in Newcastle and surrounding districts. There is also a water supply board for Grafton and South Grafton.

Elsewhere the administration of water supply and sewerage services is a function of the local governing bodies in local areas. The accounts of the services provided in country municipalities are included in the returns of

those bodies, but the receipts and expenditure of the Hunter District services, and, until 1st April, 1925, of the metropolitan services were included in the Consolidated Revenue Account of the State. The works have been constructed mainly from the loan moneys which form part of the public debt of the State, and the Metropolitan and Hunter District undertakings have been regarded as belonging to the sphere of national government rather than that of local government. Generally, the construction of the major works for these services has been carried out by the State Department of Public Works, and upon completion they have been transferred to the control of the Boards, by whom the reticulation works are undertaken.

*Metropolitan Water Supply and Sewerage.*

The Metropolitan Board of Water Supply and Sewerage was constituted in 1888 to assume control of the water supply and sewerage services in the county of Cumberland, including those under the control of the City Council. The management of the water supply was transferred to the Board in May, 1888, and of the sewerage in September, 1889. The Board's jurisdiction now extends to a large district outside the county of Cumberland and embraces a strip of territory extending along the South Coast beyond Wollongong to Lake Illawarra.

The Board is constituted by a president, appointed by the Governor, and seventeen members, elected by the aldermen and councillors of the local areas concerned. For the purposes of the elections the municipalities and shires have been grouped into nine constituencies, of which the City of Sydney forms one. Eight constituencies are represented by two members each, and the other by one member. The term of office for elected members is four years, and one representative of the two-member constituencies will retire every two years.

The amount of capital expenditure on the Board's works to 30th June, 1927, was as follows:—

Nature of Expenditure.	Water.	Sewerage.	Drainage.	Total.
Loan Expenditure by—	£	£	£	£
Old Board to 30th March, 1925 ...	8,846,694	4,516,993	11,140	13,374,827
New Board since 1st April, 1925 ...	2,897,512	1,011,158	60,515	3,969,185
Public Works Department ...	5,976,109	4,844,226	336,050	11,156,385
Municipalities (Works taken over)	100,750	301,417	19,169	421,336
Total from Loans ...	17,821,065	10,673,794	426,874	28,921,733
City Water Fund taken over ...	163,172	...	...	163,172
Capital Expenditure from Revenue ...	18,483	190,553	16,296	225,332
Accumulated Interest ... ..	106	128,706	2,544	131,356
Total from Revenue ... ..	181,761	319,259	18,840	519,860
Total Capital Expenditure ...	18,002,826	10,993,053	445,714	29,441,593
Less Payments to State Debt Commissioners in Reduction of Capital Indebtedness ... ..	140,889	83,877	3,514	228,280
Net Capital Indebtedness* ...	17,861,937	10,909,176	442,200	29,213,313

\* Subject to amendment after review by Capital Accounts Committee.

The net loan expenditure on the various works to 30th June, 1927, was: Water £17,680,176, sewerage £10,589,917, and drainage £423,360, or a total of £28,693,453.

Since 1st April, 1925, the Metropolitan Water, Sewerage and Drainage Board has paid interest on the whole of its net capital indebtedness.

The Board is charged with the administration of existing services and the construction of new works required for its purpose. Works in course of construction by the Department of Public Works on the date of passing the Act, will be completed by the Government before transfer to the Board, but the Board is chargeable with interest on loan moneys expended on such works.

The capital indebtedness of the Board to the Government was declared by the Act to be £22,489,478, which was the net amount of outstanding loan moneys expended on the Metropolitan water, sewerage, and drainage services by the Board and the Government as at 30th June, 1924, inclusive of works in course of construction for the Board by the Department of Public Works. This amount is under review by a financial committee, who will determine the capital indebtedness as at 1st April, 1925, and allocate it to the fund of each service, *i.e.*, water supply, sewerage, or drainage. The determinations of the committee are to be ratified by Parliament before being adopted. The expenditure on the works which the Government had undertaken on behalf of the Board will be added to the Board's indebtedness.

The Board is required to pay to the State Treasury interest on its debt at the rate chargeable to statutory bodies representing the Crown, and to pay to the State Debt Commissioners an amount equal to 5 per cent. of its gross revenue as from 1st April, 1925, to be applied in reduction of its debt.

The Board, with the approval of the Governor, may raise its own loans, but the debt so incurred in respect of any of its services must not exceed 15 per cent. of the unimproved value of the lands ratable for that service.

Up to 30th June, 1927, no special loans had been floated for the Board, but loan advances amounting to £412,000 in 1924-25, £1,703,000 in 1925-26, and £2,000,000 in 1926-27 were made to the Board by the Colonial Treasurer.

#### *Metropolitan Water Supply.*

The sources of the metropolitan water supply are the waters of the Nepean, Cataract, and Cordeaux Rivers, draining an area of 347 square miles, with a copious rainfall. The supply is stored chiefly in four large reservoirs, *viz.*, Prospect, from which 5,502,000,000 gallons are available by gravitation; Cataract, with a capacity of 20,743,000,000 gallons; Cordeaux, 20,600,000,000 gallons; and Avon, 47,150,000,000 gallons. There is also a small reservoir at Manly, which holds 438,000,000 gallons. At 30th June, 1927, there were 79,606,000,000 gallons of water stored in these reservoirs.

The water is conveyed from the upper storages to the Prospect dam, thence to Sydney and adjacent areas by means of tunnels, canals, etc., from which systems branch to supply Camden, Campbelltown, and other townships along the southern railway. Wollongong and several settlements on the South Coast are supplied from two reservoirs on the Upper Cordeaux River, which have a combined capacity of 433,000,000 gallons, and water for Richmond is pumped from the Hawkesbury River. There are thirty-eight service reservoirs and tanks below Prospect dam, four above Prospect, and fourteen connected with the supply for the South Coast townships.

The total length of water mains as at 30th June, 1927, was 3,663 miles.

The following statement shows the number of houses in the area supplied with water by the Metropolitan Water, Sewerage, and Drainage Board in 1911, 1916, and in the last seven years:—

Year ended 30th June.	Houses Supplied.	Total Supply during Year.	Average Daily Supply.		
			Total.	Per House.	Per head of population supplied.
	No.	gallons.	gallons.	gallons.	gallons.
1911	139,237	10,587,434,000	29,006,700	208	41·7
1916	183,598	14,374,000,000	39,380,000	214	42·9
1921	221,886	17,701,000,000	48,496,033	218	43·7
1922	229,274	18,616,612,300	51,004,417	222	44·5
1923	239,528	20,657,319,200	56,595,395	236	47·3
1924	250,804	21,267,054,800	58,265,834	232	46·5
1925	259,799	20,895,729,600	57,248,574	220	44·1
1926	268,558	24,506,739,000	67,141,750	250	50·0
1927	280,157	25,675,530,000	70,343,918	251	50·2

From 1910 to 1917 inclusive, the water rate levied on the assessed annual value was 6d. in the £ and the charges for water by meter were 11d. per 1,000 gallons up to 10,000,000, 10d. from 10 to 20 millions, and 9d. over 20 millions. During 1918 the first-mentioned rate was increased to 6½d., but the meter charges were not altered. During 1919 an increase of 1d. was imposed in each case, and in 1920 the rate was further increased to 9d. in the £ on the assessed annual value, and the charge by meter to 13d. per 1,000 gallons. In July, 1922, the charge for water by meter was reduced to 12d. per 1,000 gallons, and in July, 1924, the rate per £ of assessed annual value was reduced to 7½d., but it was raised to 8½d. for each of the three years commencing 1st July, 1925. Special rates are charged in the South Coast towns, in Richmond, and in a few other extra-metropolitan localities.

The following statement shows particulars of the financial transactions relating to the water supply controlled by the Metropolitan Board in various years from 1911:—

Year ended 30th June.	Accumulated Loan Expendi- ture.	Gross Revenue.	Working Expenses and Man- agement.	Renew- als.	Net Revenue.	Interest on Capital.	Sinking Fund Contri- bution.	Surplus.
	£	£	£	£	£	£	£	£
1911	5,420,813	299,442	99,355	*	200,087	192,486	...	7,601
1916	7,192,472	470,744	165,210	*	305,534	261,335	...	44,199
1921	10,323,252	855,751	347,298	*	508,453	473,890	...	34,563
1922	11,130,857	923,798	376,203	*	547,595	543,164	...	4,431
1923	12,019,600	992,702	363,102	*	629,600	597,351	...	32,249
1924	13,094,176	1,105,098	380,407	*	724,691	648,011	...	76,680
1925	14,734,046	1,103,682	404,697	*	698,985	691,237	4,881	2,867
1926	16,227,702	1,319,872	422,359	70,274	827,239	795,144	66,350	(—) 34,255
1927	17,821,064	1,399,581	483,005	75,360	841,216	872,006	69,657	(—) 100,447

\* Charged to Public Works Fund.

Prior to 1st April, 1925, there was no contribution to sinking fund, and the incomes were kept on a cash basis. Now the revenue due and the expenditure incurred in respect of any year are brought into account in that year. The accumulated loan expenditure is inclusive of works in course of construction. Interest on these works is charged to the Board.



*The Hunter District Water Supply.*

The water supply works of the Lower Hunter were constructed by the Government under the provisions of the Country Towns Water Supply and Sewerage Act of 1880. In 1892, control of the works was transferred to a Board under the authority of a special Act.

The Board is constituted by nine members, viz., a president appointed by the Governor and eight members elected by the aldermen and councillors of the local areas concerned.

Water is obtained mainly from a dam of 5,000 million gallons capacity on the Chichester River at a point about 60 miles north from Newcastle. This supply is supplemented as required by pumping water from the Hunter River.

Particulars relating to the water supply of the Board at intervals since 1911 are given below:—

Year ended 30th June.	Properties Supplied.	Supply during year.	Average Daily Supply.		
			Total.	Per Property.	Per Head.
	No.	thousand gallons.	gallons.	gallons.	gallons.
1911	17,164	675,214	1,849,900	108	21·5
1916	22,056	1,283,754	3,507,500	159	31·8
1921	25,874	1,711,187	4,688,183	181	33·2
1922	26,758	1,688,537	4,626,129	173	34·5
1923	28,036	1,754,418	4,806,623	171	34·2
1924	29,568	2,106,615	5,755,778	195	39·0
1925	31,405	2,312,046	6,334,371	202	40·3
1926	33,997	2,668,215	7,310,177	215	43·0
1927	36,600	2,970,781	8,139,126	222	44·5

A water rate of 10d. in the £ is payable on the assessed annual value of all properties over £12, but if valued at less than £12 the rate is 10s. per annum. Extra charges are made for water used for other than domestic purposes, the rates on which services range from 10s. to 40s. per annum. The charge by meter is 2s. per 1,000 gallons.

The following table shows the financial position for similar periods to those shown above:—

Year ended 30th June.	Capital Debt.	Gross Revenue.	Working Expenses and Management.	Interest on Loan Capital.	Net Revenue.
	£	£	£	£	£
1911 ... ..	495,747	45,711	17,774	16,970	10,967
1916 ... ..	634,265	79,507	25,297	21,687	32,523
1921 ... ..	1,472,074	116,320	59,895	35,556	20,869
1922 ... ..	1,953,411	113,217	63,736	40,005	9,476
1923 ... ..	2,467,540	110,076	62,155	43,390	4,531
1924 ... ..	3,010,615	143,138	63,883	46,286	32,969
1925 ... ..	3,424,853	153,045	53,318	48,316	51,411
1926 ... ..	3,733,126	163,807	65,328	55,819	42,660
1927 ... ..	4,078,397	170,601	78,397	65,938	23,266

The amounts of interest and net revenue shown above are due to the Consolidated Revenue Fund of the State. No deduction is made on account of expenditure on renewals, which is met from the Public Works Fund of the State. Interest is charged against revenue only on so much of the loan capital as is revenue-producing, the balance being either capitalised or paid from Consolidated Revenue Fund.

The capital debt at 30th June, 1927, consisted of £3,478,909 expended from loan funds, £17,543 from Consolidated Revenue Fund, £45,072 from Public Works Fund, and £536,873 capitalised interest.

The capital debt as stated above includes the cost of works under construction and not revenue-producing, viz., £652,581 in 1921, £1,094,293 in 1922, £1,548,869 in 1923, £1,806,826 in 1924, £2,042,838 in 1925, £2,077,847 in 1926, and £2,075,089 in 1927.

#### *Water Supply for Country Towns.*

The Country Towns Water Supply and Sewerage Acts of 1880, 1894, and 1905 were passed with the object of assisting councils to construct systems of water supply and sewerage. These Acts were repealed by the Local Government Act of 1919, in which their provisions were embodied in a revised form. On the application of a council the Minister for Public Works may construct water supply or sewerage works out of moneys voted for the purpose by Parliament. Upon completion the works are transferred to the care of the council. The capital cost is repayable by instalments, with interest on the unpaid balances at a rate fixed from time to time. The term of repayment is fixed with regard to the durability of the works, the maximum period being one hundred years.

At the end of June, 1927, water supply services, constructed wholly or in part from loan funds by the Public Works Department, were in operation in seventy country towns, in addition to those connected with the works administered by the Metropolitan and Hunter District Boards; the cost of construction was approximately £2,637,758. The works in sixty-six of these towns were under the administration of the councils of fifty-seven municipalities and of six shires. At June the water is delivered by the Public Works Department into service reservoirs.

At Broken Hill and Hillgrove the water supply is administered by the central Government, and the Grafton and South Grafton system is controlled by a Board representing the two municipalities.

The total amount of debts owing to the Government by the municipalities and shires in respect of waterworks at the 30th June, 1927, was £1,989,881, and the aggregate of the annual instalments of principal and interest was £95,923.

In addition to the above, two municipalities and four shires administered water services at 31st December, 1926, in respect of which there was no capital debt due to the Government.

The combined revenue accounts of the sixty municipalities and nine shires which administered waterworks, for the year ended 31st December, 1926, are shown below:—

Expenditure.	Municipalities.	Shires.	Income.	Municipalities.	Shires.
	£	£		£	£
Management ... ..	26,105	889	Rates levied ... ..	148,897	7,749
Working and maintenance	87,400	4,298	Rents (Meter and other) ..	3,033	97
Interest payable to Govern-			Water sales ... ..	60,338	1,197
ment ... ..	62,235	2,800	Other ... ..	6,714	264
Other ... ..	5,370	334			
Balance ... ..	37,872	986			
<b>Total ... ..</b>	<b>£ 218,982</b>	<b>9,307</b>	<b>Total ... ..</b>	<b>£ 218,982</b>	<b>9,307</b>

The combined balance-sheets of the works so administered on 31st December, 1926, were as follows:—

Liabilities.	Municipalities.	Shires.	Assets.	Municipalities.	Shires.
	£	£		£	£
Capital Debt due to Government... ..	1,644,059	63,466	Waterworks—plant, buildings, etc. ... ..	1,855,138	74,994
Interest due to Government ... ..	41,388	893	Outstanding rates ... ..	25,776	609
Sundry creditors... ..	51,297	5,196	Bank balances, fixed deposits, and cash in hand	74,554	1,017
Excess of Assets... ..	290,225	8,786	Stores and materials ... ..	7,593	53
			Sundry debtors ... ..	63,908	558
Total... ..	£2,026,969	78,321	Total... ..	£2,026,969	78,321

The capital debt, as shown above, has been reduced by the repayment of £115,486 on account of municipal works and £2,431 on account of shire works, and, in addition, appreciable sums have been written off the capital indebtedness from time to time.

The amount of rates outstanding on the date mentioned was £26,585, while the bank balances, cash in hand, investment in war loans, and fixed deposits were £76,471.

The foregoing tables are exclusive of the water works at Broken Hill and Hillgrove. They are exclusive also of the Grafton and South Grafton works which are administered by a corporate board consisting of three aldermen elected by the Grafton Council and three by the South Grafton Council. During the year ended 31st December, 1926, the expenditure of the Board amounted to £4,540, of which £3,223 represented interest payable on the capital debt to the Government, and the income amounted to £6,658, showing a profit of £2,118. The capital debt to the Government at the end of the year was £79,664, against which the Board held assets to the value of £96,134; other liabilities amounted to £298, making a total liability of £79,962; the excess of assets was £16,172.

#### *Metropolitan Sewerage and Drainage Works.*

The first sewerage works at Sydney were begun in 1853, and in 1889, the date of transfer to the Metropolitan Board of Water Supply and Sewerage, there were 70½ miles of sewers in existence.

The present system consists of three main outfalls—the northern, discharging into the Pacific Ocean near Bondi; and the southern and western, discharging into the ocean at Long Bay. The northern suburbs ocean outfall, which is under construction, discharges into the ocean at North Point, in the quarantine area; part of this main is in use and when completed it will serve the suburban areas on the northern side of Sydney Harbour and Parramatta River, extending as far west as Wentworthville.

The number of houses served by the system under the administration of the Metropolitan Board, and the length of sewers and of storm-water drains, are shown below:—

Year ended 30th June.	Houses connected.	Length of Sewers.	Length of Storm-Water Drains.	Length of Ventilating Shafts.	Length of Sewers Ventilated.
	No.	miles.	miles.	feet.	miles.
1911	108,012	825	49	376,000	795
1916	130,638	1,022	54	443,134	953
1921	146,923	1,197	64	514,526	1,122
1922	153,769	1,227	64	527,766	1,162
1923	150,300	1,274	64	532,470	1,176
1924	165,215	1,314	66	543,306	1,208
1925	170,774	1,358	66	556,036	1,246
1926	176,368	1,416	61	568,506	1,283
1927	179,580	1,491	69	578,022	1,313

The following statement of financial transactions relates to the sewerage account, and it includes drainage in each year to 1925:—

Year ended 30th June.	Accumulated Loan Expenditure.	Gross Revenue.	Working Expenditure.	Renewal.	Net Revenue.	Interest on Capital.	Sinking Fund Contribution.	Surplus.
	£	£	£	£	£	£	£	£
1911	4,496,290	234,208	79,636	*	154,572	159,070	†	(—) 4,498
1916	6,114,072	363,790	120,244	*	243,555	224,551	†	19,004
1921	7,329,632	615,615	229,441	*	386,174	341,675	†	44,499
1922	7,553,906	683,434	244,916	*	438,518	373,671	†	64,847
1923	7,857,504	661,964	231,672	*	430,292	395,152	†	35,140
1924	8,145,061	756,539	244,480	*	512,059	400,721	†	102,338
1925	8,465,700	756,624	274,423	*	482,201	411,686	3,273	67,242
1926	9,861,645	777,809	289,426	3,818	484,565	501,451	38,917	(—) 55,803
1927	10,673,793	823,334	284,777	4,712	573,805	539,628	41,818	(—) 7,561

\* Charged to Public Works Fund, amount not stated.

† Nil.

(—) Deficit.

The sewerage rate for the city of Sydney and the eastern suburbs up to 1903 was 7d. in the £ on the assessed annual value, the northern and the western suburbs being rated at 1s., but in 1904 a uniform rate of 11d. was imposed. In 1907 it was reduced to 10d. in the £, and in 1908 to 9½d.

On the 1st July, 1917, it was increased to 10d., and to 11d. on 1st July, 1918, and to 12d. on 1st July, 1920. On the 1st July, 1922, the rate was lowered to 10½d., and on 1st July, 1924, to 9d.

### *Hunter District Sewerage Works.*

The sewerage scheme for the Hunter district has its outfall at Merewether Gulf, some distance south from Newcastle. The districts served are Newcastle, Adamstown, Hamilton, Lambton, New Lambton, Merewether, Waratah, Wickham, and parts of the Tarro and Lake Macquarie shires.

The following table shows information relating to the sewerage system under the control of the Hunter District Board in the years stated:—

Year ended 30th June.	Properties Connected.	Length* of Sewer.	Capital Cost.	Gross Revenue.	Working Expenditure.	Interest.	Net Revenue.
	No.	Miles.	£	£	£	£	£
1911 ...	1,465	30	170,151	8,975	3,177	2,902	2,896
1916 ...	7,240	84	411,332	18,582	6,819	11,623	140
1921 ...	12,218	148	590,790	32,164	16,007	25,328	(—) 9,171
1922 ...	13,416	157	613,249	39,477	18,863	28,664	(—) 8,050
1923 ...	14,325	161	627,645	49,551	19,692	30,108	(—) 249
1924 ...	15,606	166	646,552	56,210	21,914	30,939	3,357
1925 ...	16,927	171	672,526	63,707	21,910	31,033	10,764
1926 ...	18,071	177	*719,549	68,412	22,625	31,932	13,855
1927 ...	19,219	183	*781,452	75,175	25,578	32,968	16,629

\* Includes cost of stormwater drains, £41,637 in 1926, and £85,334 in 1927. (—) Deficit.

The amounts of interest paid and net revenue shown above accrued to the Consolidated Revenue Fund of the State, the deficits being met from that fund. In addition to the working expenditure paid from the Board's funds as shown above, an annual vote is made from Public Works Fund for renewals.

A sewerage rate of 1s. in the £ on the annual rental value of ratable properties has been in force since 1st January, 1909.

### *Country Sewerage and Drainage Works.*

Outside the areas administered by the Metropolitan and Hunter District Boards, sewerage works were in operation in thirteen towns at 30th June, 1927, and stormwater drainage in a like number of towns, including some of the foregoing. The total cost of sewers and stormwater channels was approximately £645,191.

The debts due to the central Government on account of these systems amounted to £632,228 as at 30th June, 1927, and the annual instalments amounted in the aggregate to £29,692.

Some of the municipalities do not levy special sewerage rates, and therefore do not keep a separate account in respect of the sewerage services. A summary of the revenue accounts relating to sewerage funds of the eleven municipalities which published such statements for the year ended 31st December, 1926, is shown below.

Expenditure.				Income.			
£				£			
Management	...	...	6,283	Rates levied	...	...	43,529
Working and maintenance	...	...	12,869	Other	...	...	9,926
Interest payable to Government	..	...	25,080				
Fittings, etc.	...	...	5,940				
Other	...	...	1,247				
Balance	...	...	5,036				
Total	...	...	£56,455	Total	...	...	£56,455

Practically the only source of income is from rates, the other receipts representing contributions to works, sales of fittings, etc.

The combined balance-sheet of these works was as follows:—

Liabilities				Assets.			
£				£			
Due to Government—				Works and Plant	...	...	604,963
Capital Debt	...	...	583,828	Outstanding rates	...	...	3,828
Interest	...	...	18,109	Bank balance and cash	...	...	25,815
Sundry creditors	...	...	2,147	Stores and materials	...	...	1,916
Excess of Assets	...	...	43,019	Sundry debtors	...	...	10,578
Total	...	...	£647,103	Total	...	...	£647,103

To 31st December, 1926, an amount of £27,199 had been paid off the capital debt to the Government.

#### Drainage Trusts.

In addition to the water and sewerage and drainage works shown in the foregoing tables, thirty-three trusts for reclamation of swamp and other lands had been constituted as at 30th June, 1927, but, of these, two had been dissolved. The total area served was 134,273 acres, and the length of channels was 123 miles. The total cost as gazetted was £120,089, and the instalments amounted to £7,043. The owners of the lands improved by these works are responsible for the repayment of the capital expenditure, and they are required to provide for the cost of maintenance and administration.

*Metropolitan Drainage Works.*

The Metropolitan Water, Sewerage, and Drainage Board is authorised to construct and maintain channels for stormwater drainage purposes, and to levy drainage rates within areas notified by gazettal.

The drainage accounts were separated from those of the sewerage works in 1925-26 and the following summary is available:—

Year ended 30th June.	Accumulated Loan Expenditure.	Gross Revenue.	Working Expenses.	Renewals.	Net Revenue.	Interest in Capital.	Sinking Fund Contribution.	Deficit.
1926 ...	£ 381,777	£ 33,790	£ 13,602	£ 1,966	£ 18,222	£ 20,189	£ 1,688	£ 3,655
1927 ...	426,874	33,944	14,309	1,174	18,461	21,895	1,693	5,127

Prior to the years shown above neither renewals nor sinking fund contribution were a charge on the drainage revenues. The former was met from the Public Works Fund and the latter was not charged.

Stormwater drainage rates are levied in respect of property within a drainage area. The rate levied in respect of each drain vested in the Board is fixed so as to yield only the amount of revenue required to cover costs of maintenance and interest. The rates vary from ¼d. to 7d. in the £ on the assessed annual value.

## ROADS, BRIDGES, AND FERRIES.

Prior to the enactment of legislation providing for the incorporation of shires, the State was divided into road districts, each under the supervision of an officer directly responsible to the Commissioner for Roads. These officers had under their care the greater part of the roads and bridges of the State outside the incorporated areas and a portion of those within such limits. Road trusts formed under various Acts had the supervision of the expenditure of certain grants for the maintenance of roads in districts chiefly of minor importance, as well as some important roads in the vicinity of the metropolis.

When the Local Government Act of 1906 commenced, the councils of the municipalities and shires took over the administration of the roads, bridges, etc., under the control of the Roads Department, with the exception of those in the unincorporated areas of the Western Division, and certain bridges and ferries proclaimed as "national works." The Act authorised payments by way of endowment to municipalities and shires, the minimum endowment payable to shires being fixed at £150,000 per annum, and the Minister was empowered to withhold payment of endowment from a council if his requirements in respect of main roads were not satisfied.

Between 1906 and 1912 the amount of endowment allotted to shires was increased from £150,000 to £360,000 approximately, but the expenditure by the councils on the important roadways was not sufficient to maintain them in a serviceable condition. It was decided, therefore, to reduce the amount of general endowment to the minimum, and to make a separate vote to Councils for the upkeep of the main roads. This vote was continued until the year 1924 when the matter was transferred to the Main Roads Board.

### *Main Roads Board.*

The rapid increase in the number of motor vehicles since 1921 placed a heavy strain on the roads, which were constructed for slow-moving traffic. To meet the situation the Government made large sums available for road work and brought the main avenues of traffic under unified control. For this purpose the Main Roads Act, 1924, constituted a Main Roads Board, consisting of two engineers with special knowledge of road construction, and a president. The Board is charged with the duty of co-operating with the local councils in the work of constructing and maintaining a well-organised system of main highways, with the primary object of developing the vacant lands in the State, of feeding the railways with traffic, of giving the primary producers access to markets, and of providing facilities for modern motor traffic. On the recommendation of the Board, any public road, except those in the City of Sydney, may be proclaimed to be a main road.

The Act provides for the creation of three separate funds: (1) the County of Cumberland Main Roads Fund for metropolitan main roads as defined in the Act, that is, those in the County of Cumberland, the Municipalities of Katoomba and Blackheath, and the Shire of the Blue Mountains; (2) the Country Main Roads Fund; and (3) the Developmental Roads Fund.

The income of the two Main Roads Funds is derived from (a) the proceeds of taxes, fees, and penalties in respect of motor vehicles, and fees and penalties in respect of public vehicles; (b) annual subsidies from the State revenues; (c) grants from the Federal Government; (d) contributions by municipal and shire councils; (e) loan moneys appropriated for the main roads.

The proceeds of motor taxes, fees, etc., as from 30th June, 1924, are apportioned between the two funds, after a deduction of 10 per cent. has been made by the Treasury for cost of collection. The County of Cumberland Fund receives half the net proceeds in respect of motor vehicles owned by residents in the road district, also the net collections in respect of public vehicles licensed under the Metropolitan Traffic Act, and the Country Main Roads Fund receives the balance. Under an amending law which operated from 1st July, 1926, and was repealed in the following year, the amounts payable to the County of Cumberland Fund from these sources were limited to £106,155 and £6,300 per annum respectively. Similarly the annual payment of motor taxes, etc., to the Country Fund was limited to £452,382.

The Main Roads Act prescribes that the subsidy from the State must not be less than £25,000 per annum for the Metropolitan Main Roads and £20,000 for the Country Fund.

The Board may require the councils in the metropolitan road district to contribute to the County of Cumberland Main Roads Fund at a rate not exceeding ½d. in the £ of the unimproved capital value of ratable property, the rate payable in respect of land used for agricultural and pastoral purposes, or land in the city of Sydney, being one half the rate levied on other lands in the district. Contributions by country councils depend upon the amount expended on the main roads.

In the metropolitan district, where the levy is compulsory, the Board will pay the whole cost of maintenance and construction, but the actual work may be done by the councils under its direction. In the country districts the Board may grant assistance in respect of road work to the council of any area through which a main road passes, and the council may be required



to contribute half the cost of the work. The Board may accept voluntary offers from the councils to pay more than half the cost, or, in special circumstances, may pay the whole cost of any particular work or advance the cost, to be repaid by the councils. The maximum contribution which may be required from a country council in a year is limited to the sum which would be produced by a rate of  $\frac{1}{4}$ d. in the £ of the unimproved capital value. To meet cases in which a metropolitan or country council may be unable or unwilling to carry out the work planned by the Board, power is reserved to the Governor to authorise the Board itself to do the work.

Any road, not being a main road, may be proclaimed as a developmental road if, in the opinion of the Board, it will help to develop a district, and a portion or the whole cost of construction may be provided from the Developmental Roads Fund. This fund consists of moneys voted by Parliament from revenue or loans or granted by the Federal Government for the purpose.

The Main Roads Act was brought into operation by proclamation as from 1st January, 1925, and the first Main Roads Board was appointed in the following month. Actual operations were commenced on 12th March, 1925.

The length of main roads in the County of Cumberland at 30th June, 1927, was 586 miles, of which the councils were maintaining 396 $\frac{1}{2}$  miles and the Board 189 $\frac{1}{2}$  miles. There were also 12 miles of secondary roads which the Board may assist the councils to construct or maintain because they relieve neighbouring main roads of a substantial amount of traffic. In the country there were 12,261 miles of main roads.

A summary of the income and expenditure accounts of the three funds is shown below for the period from 12th March, 1925, to 30th June, 1926, and for the financial year ended 30th June, 1927:—

Expenditure.	1925-26.*		Income.	1925-26.*	
	1925-26.*	1926-27.		1925-26.*	1926-27.
	£	£		£	£
<b>Main Roads and Bridges—</b>					
Construction ... ..	909,093	1,994,757	Motor taxes, fees, etc. ...	1,473,494	564,835
Maintenance ... ..	4,0795	504,045	Rates requisitioned from		
Repayment of Loans ...	145,472	91,742	Councils ... ..	268,166	262,058
Administrative Expenses ...	23,837	41,085	Loans raised by Councils ...	...	38,282
Plant Running Expenses (in-		25,278	State appropriations—		
cluding depreciation) ...		14,188	From Revenue ... ..	151,877	258,000
Miscellaneous ... ..	7,625		From Loans ... ..	998,942	708,216
			Federal Grants ... ..	387,303	...
			Plant Earnings ... ..	...	87,059
			Interest on Advances ... ..	1,054	8,578
			Miscellaneous ... ..	4,536	8,855
<b>Total... ..</b>	<b>1,582,842</b>	<b>2,671,095</b>	<b>Total ... ..</b>	<b>3,385,372</b>	<b>1,880,888</b>

\* From 12th March, 1925, to 30th June, 1926.

The income received during 1925-26 included the motor taxes, license fees, etc., for two years, these moneys having been set aside for the main roads from 30th June, 1924. It included also receipts from two requisitions upon municipal and shire councils in the metropolitan road district, covering the period from 1st January, 1925, to 30th June, 1926. In the year 1925-26 the income from motor taxes, etc., was restricted in terms of the amending legislation noted above, but this was offset partly by the receipt of moneys from the State for works to relieve employment, viz., £5,000 from revenue and £54,000 from loans, and an additional sum of £138,000 granted

from revenue for developmental roads, because no Federal grants were available pending the acceptance by the State of the new Federal aid scheme, which is described later.

Particulars of the income and expenditure accounts of each fund for the two periods are shown below:—

Particulars.	1925-26.*			1926-27.		
	Cumber-land Main Roads.	Country Main Roads.	Develop-mental Roads.	Cumber-land Main Roads.	Country Main Roads.	Develop-mental Roads.
<i>Expenditure.</i>						
	£	£	£	£	£	£
Main Roads and Bridges—						
Construction ... ..	377,671	429,954	101,468	647,971	1,194,779	152,007
Maintenance ... ..	148,511	328,284	...	205,840	298,205	...
Repayment of Loans ... ..	145,472	...	...	90,149	1,593	...
Administrative Expenses ... ..	10,631	13,226	...	18,094	22,991	...
Plant Running Expenses (including depreciation)... ..	...	...	...	...	25,278	...
Miscellaneous ... ..	3,005	4,620	...	7,660	6,519	...
Total ... ..	685,290	776,084	101,468	969,723	1,549,365	152,007
<i>Income.</i>						
Motor Taxes, Fees, etc. ... ..	353,324	1,120,170	...	112,453	452,382	...
Rates requisitioned from Councils. ... ..	368,166	...	...	262,058	...	...
Loans raised by Councils ... ..	...	...	...	38,282	...	...
State Appropriations—						
From Revenue ... ..	29,835	114,930	7,112	30,000†	90,000	138,000
From Loans ... ..	300,000	579,727	119,215	265,216†	300,000	138,000
Federal Grants ... ..	68,000	181,627	137,676	...	...	...
Plant Earnings ... ..	...	...	...	...	37,059	...
Interest on Advances ... ..	...	1,054	...	...	8,578	...
Miscellaneous ... ..	1,949	2,587	...	8,816	38	1
Total ... ..	1,121,274	2,000,095	264,003	716,825	888,057	276,001

\*From 12th March, 1925, to 30th June, 1926. † Includes £54,000 for unemployed relief works.  
‡ Includes £5,000 for unemployed relief works.

The Main Roads Act made provision for certain financial adjustments to be made by the Board with the Treasury and the municipal and shire councils in respect of moneys expended on metropolitan main roads, or borrowed by the councils for these roads, prior to the constitution of the Main Roads Board. Under these provisions the Board has assumed liabilities in respect of interest and repayment of loans, including the councils' share of the cost of works carried out by the Government, and half the moneys from the General Loan Account and the Public Works Fund expended by the Government on metropolitan main roads during the five years ended 30th June, 1925. The loans which are thus chargeable to the

County of Cumberland Main Roads Fund are not included in the statement of liabilities shown below in the balance-sheet as at 30th June, 1927; the principal amount outstanding at that date was £973,187.

Particulars.	Cumber-land Main Roads.	Country Main Roads.	Develop-mental Roads.	Total, All Funds.
<i>Liabilities.</i>				
	£	£	£	£
Sundry Creditors ... ..	33,839	38,500	1,704	74,043
Insurance Reserve ... ..	...	3,980	...	3,980
Balance of Income and Expenditure Accounts ...	183,066	562,703	286,529	1,032,318
<b>Total ... ..</b>	<b>216,925</b>	<b>605,183</b>	<b>288,233</b>	<b>1,110,341</b>
<i>Assets.</i>				
Balance of Fund and Sub-advance Accounts ...	79,146	77,731	268,730	425,607
Stock on Hand ... ..	12,456	20,700	...	33,156
Depot Buildings, Plant and other Assets... ..	42,435	192,124	...	234,559
Sundry Debtors—				
Councils—				
Rates ... ..	79,947	...	...	79,947
Loans ... ..	...	270,196	...	270,196
Interest ... ..	...	...	991	991
Federal Government Grant ... ..	...	35,941	18,512	54,453
Miscellaneous ... ..	2,941	8,491	...	11,432
<b>Total ... ..</b>	<b>216,925</b>	<b>605,183</b>	<b>288,233</b>	<b>1,110,341</b>

#### *Commonwealth Grants for Main Roads.*

Apart from the assistance granted by the State Government for the construction and upkeep of roads, the Commonwealth Parliament, in each year from 1st July, 1923, to 30th June, 1925, voted £500,000 from Consolidated Revenue to assist the States in developing new country by the construction of main roads. It was a condition of the grant that the States should spend a sum equal to the Commonwealth vote on the works concerned. The sum allocated to New South Wales in respect of each year's appropriation was £138,000, making a total of £414,000 for the three appropriations. In 1925-26 provision was made for additional Commonwealth grants for re-conditioning and strengthening existing main roads, without any condition as to State subsidy. The maximum amount of the grant payable was fixed at £250,000, of which £60,000 were payable in New South Wales. The amounts of the Federal grants were paid into a trust fund at the Commonwealth Treasury, and made available to the States as expenditure approved by the Federal authorities was incurred.

For the purposes of these grants, a main road was defined as (a) a main road opening up new country for agricultural, pastoral, or mining purposes; (b) a main trunk road between important towns where no railway communication exists; (c) an existing arterial road required for the transport of produce to railway, river, or port. It was prescribed that a Federal grant might not be paid unless the work on which the money was to be expended, the method of construction, etc., were approved by the Federal Minister.

When the Main Roads Board came into being there were unexpended balances for developmental roads amounting to £94,350 on the 1923-24 vote, £267,052 on the 1924-25 vote, and £275,860 on the 1925-26 vote, the total votes in each case consisting of £138,000 from the Commonwealth Government, and a subsidy of like amount from the State.

In 1926 the Federal Government passed the Federal Aid Roads Act to validate agreements with the various States, which provide that the Federal Government shall distribute among the States a sum of £20,000,000 in ten equal annual instalments for the construction and reconstruction of Federal aid roads defined as—

- (i) Main roads which open up and develop new country.
- (ii) Trunk roads between important towns.
- (iii) Arterial roads to carry the concentrated traffic from developmental, main trunk, and other roads.

It is provided that at least one-fourth of all moneys expended under the Act shall be on construction.

The funds provided by the Commonwealth are obtained from Customs duties on motor-cars and motor accessories, and each State participating in the scheme is required to expend at least three-fourths of the sums provided by the Commonwealth. This State moiety may be derived either from loans or from State revenue, but at least one-eighth of it must be derived from revenue, and the amount derived from loans must be subject to a sinking fund of 3 per cent. per annum at a rate of interest sufficient to extinguish the indebtedness in twenty years. In terms of the agreement New South Wales will receive an annual grant of £552,000 from the Federal Government, and will be required to provide annually from its own resources £414,000, of which at least £51,750 must be from revenue. The agreement was not signed until 17th June, 1927. Therefore no grants were paid during the financial year which ended 30th June, 1927. The agreement was ratified by the State Parliament in December following.

#### *Length of Roads.*

After the extension of the system of local government there was a great increase in the mileage of public roads. The length of roads under Government control on 30th June, 1906, prior to the transfer to the councils, was 48,311 miles; 195 miles were under the care of road trusts, and the Government paid subsidy to the municipal councils in respect of 1,338 miles of roads within their areas. There were also about 8,000 miles of roads and streets belonging to the municipal councils.

Statistics as to roads are collected triennially, and in 1927 the length of roads in the State was approximately 109,457 miles, of which 58 miles were controlled by the Government, 10,229 miles by the municipalities, 93,482 miles by the shires, and 5,688 miles were in the unincorporated areas of the Western Division, also administered by the Government. The nature of the roads may be seen in the following statement:—

Divisions.	Stocked, Metalled, Gravelled, Ballasted, etc.	Formed only.	Cleared only.	Natural surface.	Total.
	miles.	miles.	miles.	miles.	miles.
National <sup>†</sup> ... ..	50	8	...	...	58
Municipalities ... ..	5,026	2,006	1,846	1,351	10,229
Shires ... ..	19,693	14,937	29,992	28,860	93,482
Western Division ... ..	177	220	2,932	2,359	5,688
Total ... ..	24,946	17,171	34,770	32,570	109,457

The principal roads leading southward from Sydney are the Prince's Highway (350½ miles), traversing the coastal districts to the Victorian border; and the Hume or Great Southern Highway (362½ miles), via Goulburn and Gundagai to Albury. The Federal Highway (37 miles) runs from the Great Southern Highway, near Yarra, to the Federal Capital Territory; and the Monaro Highway (260 miles) from Tathra, on the coast, via Cooma and Tumut to Wagga.

The western highways are the Great Western (127½ miles) from Sydney to Bathurst; the Mid-western (610 miles approximately) from Bathurst through Cowra, Wyalong, Balranald, and Wentworth to the South Australian border near the southern corner of New South Wales; the North-western (432½ miles) from Bathurst via Orange, Trangie, Nyngan, and Bourke to Barrington on the Queensland border; and the Barrier Highway (about 394 miles) from Nyngan, via Cobar, Wilcannia, and Broken Hill to the South Australian border at Cockburn. The principal northern roads are the Great Northern Highway (562 miles), traversing the coastal districts from North Sydney to Newcastle, Hexham and Maitland, thence along the tablelands through Glen Innes and Tenterfield to the Queensland border near Mount Lindesay; the North Coast Highway (483½ miles) from Hexham through the coastal towns to the Queensland border at Coolangatta. The Oxley Highway (393½ miles), branching from the North Coast Highway near Wauchope, connects it with the North-western at Trangie; and the Gwydir Highway (319½ miles) branches from the same road at South Grafton and runs westerly via Glen Innes and Moree to Mogil Mogil. A road 16 miles in length between Lansdowne and Hornsby connects the Great Southern and Great Northern Highways.

#### *Bridges and Ferries.*

Many of the earliest bridges erected in the State were built of stone, and are still in existence. Those erected in the period following the extension of settlement to the interior were principally of timber, and have been replaced after an average life of about twenty-five years. Nearly all the large bridges of recent date are of iron and steel and reinforced concrete, and some of them have been erected under difficult engineering conditions, owing to the peculiarity of the river flow in certain parts of the country. The municipal and shire councils are empowered to control the bridges, with the exception of those classified as national works, which may be transferred by the Government at any time to the council. The most notable bridge-building project is the Sydney Harbour Bridge described below.

In the case of a wooden bridge across Middle Harbour at the Spit, which was built in 1924 by the Sydney Harbour Trust for the Manly Municipal Council, tolls are levied to defray the cost. When loan or other expenses have been fully paid, the tolls will be abolished, and the bridge will be transferred to the Government as a national work. Similar conditions will apply to a bridge across George's River, which is being constructed by the Sutherland Shire Council.

Where local conditions and limited traffic have not favoured the erection of a bridge, a punt or ferry has been introduced. The most important ferries which are worked otherwise than by hand have been proclaimed as national services. Prior to 1st December, 1907, it was the practice to charge a small fee for ferry transit; but on that date tolls were abolished, and public ferries became free.

On 1st January, 1907, the bridges of 20 feet span and over, including those in course of construction, numbered 3,575. Of these, 256 bridges, with an aggregate length of 101,416 feet, which, by reason of their cost, size, and extra-local importance, would constitute a strain on the resources of the local councils, were proclaimed as "national works," to be maintained by the Government.

The particulars of the bridges, culverts, and ferries of the State as at 30th June, 1927, are shown below:—

Classification.	Bridges over 20 feet span.		Culverts.		Ferries.
	Number.	Length.	Number.	Length.	Number.
National Works ... ..	238	ft. 108,295	...	ft. ...	18
Municipalities ... ..	645	39,014	4,483	256,296	38
Shires ... ..	3,943	243,477	35,489	355,653	173
Western Division (unincorporated)	96	13,495	489	5,972	6
Total ... ..	4,972	404,281	40,461	617,921	235

At 30th June, 1927, the national bridges were valued at approximately £3,500,000.

#### *Sydney Harbour Bridge.*

The construction of an arch bridge over Sydney Harbour has been commenced. It is expected to be completed in 1931, and will be the largest arch bridge in the world. It will span the harbour between Dawes Point on the southern and Milson's Point on the northern side, the main arches crossing between abutment towers a distance of 1,675 feet. The total length of the bridge will be 3,770 feet, and at high water there will be a headway of 170 feet for vessels passing underneath.

The bridge will carry a roadway 57 feet wide, two footways each 10 feet wide, and four lines of railway to connect the City railway, now under construction, with the northern suburban line. The contract price for a length of 3,770 feet of bridge is £4,217,721, and it is estimated that approaches, etc., will cost £1,275,000. Two-thirds of the capital cost is to be debited to the Railway Commissioners, and one-third is to be paid by means of a special levy at the rate of  $\frac{1}{4}$ d. in the £ of unimproved capital value of land in the city of Sydney, the municipalities of Manly, Mosman, Lane Cove, North Sydney, Willoughby, and the shires of Ku-ring-gai and Warringah, and part of the shire of Hornsby. The special levy in these areas in the five calendar years 1923 to 1927 amounted to £114,768, £135,809, £139,948, £144,700, and £182,427 respectively, a total of £717,652. The Government expenditure in connection with the bridge amounted to £1,852,241 as at 30th June, 1927, and of this sum £644,130 had been expended on resumptions and £370,550 on approaches.

#### *Government Expenditure on Roads, Bridges, etc.*

Although the main roads have been superseded largely by the railways, they are still the sole means of communication throughout a large part of the interior and serve as valuable feeders to the railway system. The

following return shows the expenditure by the State Government on works of a local character, such as roads, bridges, punts, ferries, public watering places, etc., in various years from 1905 to 1927:—

Year ended 30th June.	Expenditure from votes of Public Works Department.	Expenditure from Funds of Main Roads Board.	Endowments and Grants, to Councils from votes of Local Government Department.			Total Expenditure.
			Shires.	Municipali- ties.	Total.	
	£	£	£	£	£	£
1905	495,672	...	...	7,048	7,048	502,720
1915	175,726	...	288,053	40,314	328,367	504,093
1920	160,679	...	296,511	56,366	352,877	513,556
1921	212,407	...	316,186	108,353	424,533	636,940
1922	555,940	...	348,710	85,824	434,534	990,474
1923	345,997	...	378,661	124,031	502,692	848,689
1924	479,372	...	342,271	54,739	397,010	876,382
1925	254,121	...	465,950	111,081	577,031	831,152
1926	321,785	1,385,888	255,465	9,654	265,119	1,972,792
1927	343,013	2,498,802	181,392	10,157	191,549	3,033,364

The Government expenditure in connection with the Sydney Harbour Bridge, amounting to £910,077 in the year 1926-27, is not included in the figures shown in the table. The amount of grants and endowment to councils as stated for the year 1924-25 are exclusive also of grants to councils for main roads which were allotted from the Main Roads subsidy of £115,000 pending the appointment of the Main Roads Board.

In addition to the above there was a considerable amount of expenditure on roads, bridges, etc., by local government bodies and on streets by private individuals in preparing land for subdivisinal sales.

#### PARKS AND RECREATION RESERVES.

It has always been the policy of the State to provide the residents of municipalities and shires with parks and reserves for public recreation. The city of Sydney and suburban municipalities contain within their boundaries a large extent of parks and public gardens.

In country districts, reserves have been proclaimed as temporary commons, and considerable areas have been dedicated from time to time as permanent commons attached to inland townships, which are well provided also with public recreation grounds. Further particulars relating to parks and reserves are contained in the chapter of this volume entitled Social Condition.

## AGRICULTURE.

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THE land of New South Wales, comprising an area of nearly two hundred million acres, is practically all under occupation. It embraces so great a variety of soils and climate that almost any kind of crop, whether specially the produce of temperate, and even cold, climates, or of sub-tropical regions, may be grown. The nature of the soil varies greatly in different parts of the country; but, except in the inaccessible or rugged portions of the mountain chains, and the more arid regions of the north-western districts, the soil is almost everywhere capable of productive use. The variety of climate experienced extending through 8 degrees of latitude—from 29 degrees to 37 degrees south—causes a corresponding variety in the kinds of produce which may be grown successfully. The area absolutely unfit for occupation of any sort has been estimated roughly at less than 5,000,000 acres. Success in agricultural operations in New South Wales is, however, not entirely dependent on the mere fitness of the soil for cultivation. Up to the present, experience has shown that an irregular rainfall and a want of uniformity in the seasons retard the advance of agriculture, but research and experiment are extending steadily the areas on which agricultural pursuits may be followed with success.

The land adaptable to cultivation for wheat and other grains embraces more than 25,000,000 acres, and is found mainly in the Eastern and Central Divisions, which cover three-fifths of the area of the State. Owing to the confined nature of their basins, the portions of the valleys of the coastal rivers adapted for agriculture are limited, and the coastal districts are given over principally to dairy-farming and maize-growing, with cattle-grazing in the more rugged parts. Large tracts of the tablelands are hilly and rock-strewn, and are used mainly for sheep and cattle raising. In the northern hinterland agriculture is not extensive, and sheep-raising is still the principal industry, although that division has a plentiful rainfall, and large areas are adaptable to wheat-culture. At present, therefore, agriculture is most extensive on the central and southern slopes and plains of the interior, but even in the extensive and well-named Riverina district only a small portion of the land has been cultivated, and great expansion is still possible. In these central districts of the hinterland large irrigation projects are in course of development or are under consideration, and these will ultimately augment the productivity of large tracts of land.

The meagre rainfall and the absence of irrigation facilities in the Western Division, which includes eighty million acres, or two-fifths of the surface of the State, have hitherto rendered this great area practically unfit for cultivation, although it is eminently suited for raising merino sheep.

The agricultural potentialities of the more easterly areas have not yet been fully developed, but taking a long view, wheat-growing is steadily intensifying in the central districts, while mixed farming, that is to say, wheat-growing in conjunction with sheep-raising, is extending westward. Moreover, factors such as the evolution of improved plant types, the introduction of dry-farming and other improved methods of land tillage, the extension of irrigation facilities, and the development of the railway system, are expanding the area adaptable to successful agriculture and encouraging the cultivation of new areas.



## AREA OF AGRICULTURAL LANDS.

A brief historical note on the growth of agriculture was published on page 709 of the Official Year-book, 1921, and a comparison of the areas cultivated in divisions of the State since 1905 appeared on page 712.

Rapid extension in the area cropped occurred toward the end of the last century, and yet more rapid extension between 1910 and 1916. The decline in the three years 1918-1920 was due to the occurrence of bad seasons and to the uncertain outlook which faced the growing of wheat for export, but with the improvement of market and seasonal conditions there has been a recovery. Other crops are of small extent.

The progress of cultivation since 1891, in quinquennial periods, is shown in the following table:—

Years ended June—	Average Area under—		Acres per Inhabitant under—	
	Cultivation and Sown Grasses.	Crops.	Cultivation.	Crops.
	acres.	acres.		
1891-95	1,398,199	1,048,554	1·18	0·88
1896-03	2,252,649	1,894,857	1·73	1·46
1901-05	2,942,506	2,436,765	2·10	1·74
1906-10	3,575,873	2,824,253	2·34	1·84
1911-15	5,187,850	4,025,165	2·93	2·27
1916-20	6,011,049	4,615,913	3·09	2·37
1921-25	6,599,048	4,665,362	3·04	2·15
1921	6,280,517	4,464,342	3·01	2·14
1922	6,451,363	4,445,848	3·03	2·09
1923	6,619,538	4,694,088	3·05	2·11
1924	6,738,958	4,808,046	3·05	2·18
1925	6,904,866	4,911,148	3·06	2·18
1926	6,559,272	4,541,423	2·85	1·98
1927	6,632,602	4,595,711	2·82	1·96

The area of land under sown grasses (2,036,891 in 1926-27) consists principally of lands in the coastal districts, cleared, and sometimes rudely cultivated and sown with grasses for the maintenance of dairy stock.

The average area under crop in 1916-20 was comparatively high by reason of the sudden expansion of wheat-growing in 1915-16, when the area sown with wheat was suddenly increased to 5,122,245 acres, in response to a special war-time appeal. This area declined by reason of bad seasons to 3,068,540 acres in 1919-20, then it gradually increased to 3,960,204 acres in 1924-25. Owing to seasonal factors a decrease of approximately 300,000 acres occurred in the wheat areas of 1925-26 and 1926-27, but the area sown with wheat increased again to 3,998,760 acres in 1927-28.

Particulars were obtained in 1927 of the area of alienated land (inclusive of that required to depasture working horses and milking cows necessary on the farm) which, in the opinion of the occupier, was suitable for cultivation after the removal of standing timber. The area so ascertained was 22,708,932 acres, or 33 per cent. of the area of alienated land occupied for agricultural and pastoral purposes. A small proportion of the land included in this area is situated in districts where the rainfall has not yet been found adequate for agricultural production on a commercial scale. Included in the designation "alienated land" are lands in course of alienation and certain lands held under perpetual lease. The area of Crown lands suitable for cultivation has not been ascertained, but it is very extensive.

The following table shows the divisional distribution of agricultural lands during the season 1926-27. The divisions referred to are shown on the map forming the frontispiece of this Year Book:—

Division.	Total Area of Division. †	Area of Alienated and Crown Lands under—			Area of Alienated Land Occupied in Holdings of 1 acre and over—*		
		Occupation in Holdings of 1 acre and over.	Crops.	Sown Grasses.	Suitable for Cultivation.	Under Crops, 1926-27.	Proportion of Suitable Area Cultivated.
	000 acres.	000 acres.	000 acres.	000 acres.	000 acres.	000 acres.	per cent.
<b>Coastal—</b>							
North Coast .. ..	6,915	4,650	104	1,554	502	103	20·6
Hunter and Manning ..	8,395	5,489	95	277	453	96	21·1
Metropolitan .. ..	959	818	31	1	129	31	23·8
South Coast .. ..	5,968	2,572	51	149	316	51	16·1
<b>Total .. ..</b>	<b>22,237</b>	<b>13,029</b>	<b>281</b>	<b>1,981</b>	<b>1,400</b>	<b>231</b>	<b>50·0</b>
<b>Tableland -</b>							
Northern .. ..	8,119	6,522	76	11	390	76	19·4
Central .. ..	10,717	7,629	362	7	1,434	355	23·8
Southern .. ..	7,644	5,963	41	2	287	33	13·3
<b>Total .. ..</b>	<b>26,480</b>	<b>20,114</b>	<b>479</b>	<b>20</b>	<b>2,171</b>	<b>469</b>	<b>21·6</b>
<b>Western Slopes—</b>							
North .. ..	9,219	8,131	399	4	1,457	391	26·8
Central .. ..	7,723	6,735	808	3	3,699	788	21·3
South .. ..	11,222	9,439	1,148	13	4,355	1,122	25·8
<b>Total .. ..</b>	<b>28,164</b>	<b>24,305</b>	<b>2,355</b>	<b>20</b>	<b>9,511</b>	<b>2,301</b>	<b>24·2</b>
<b>Central Plains—</b>							
North .. ..	9,579	7,569	118	..	1,033	101	9·2
Central .. ..	14,811	13,627	157	1	2,265	151	6·7
Biverina .. ..	17,028	16,093	1,199	15	6,104	1,123	18·4
<b>Total .. ..</b>	<b>41,418</b>	<b>37,294</b>	<b>1,474</b>	<b>16</b>	<b>9,467</b>	<b>1,375</b>	<b>14·5</b>
Western .. ..	80,311	73,096	7	..	100	4	2·6
<b>All Divisions ..</b>	<b>198,610</b>	<b>172,333</b>	<b>4,596</b>	<b>2,037</b>	<b>22,709</b>	<b>4,430</b>	<b>19·5</b>

\* Total area of alienated land in holdings of 1 acre and over used for pastoral and agricultural purposes was 66,891,017 acres, which includes lands in course of alienation and certain lands under perpetual lease.  
 † Revised.

The divisions in this table, as published prior to 1923, were arranged on a county basis, but as the statistics of 1922-23 and subsequent years have been collected with the shire as the unit of area, a re-alignment of the territorial divisions had to be undertaken. This alteration produced considerable changes in the totals shown for individual divisions, and the divisional totals shown above are in few cases comparable with those for 1921-22 and previous years.

## NUMBER OF AGRICULTURAL HOLDINGS.

A consideration of the number of holdings on which land was cultivated, and the number of crops grown, affords guidance as to the popularity of the various crops. The number of farms on which wheat is sown, so far from exhibiting any permanent increase, declined after 1915-16, owing to bad seasons, but the area devoted to this crop has practically doubled in the past twenty years. Several minor industries have been languishing over lengthy periods, and less attention is being paid to maize, potatoes, and sugar-cane, than formerly. The cultivation of oats has extended, and citrus fruit-growing is gaining steadily in importance.

Relatively to the area cultivated, the number of holdings on which maize is grown is greatly in excess of that of wheat, owing to the fact that many dairy-farmers crop small areas of maize for use on the farms. Portion of the area under wheat—varying from one-fourth to one-seventh—is cultivated on the “shares” system, by which a number of growers may be engaged in cultivating one holding.

The number of cultivated holdings, and the number of crops cultivated on them at intervals since 1900-01 are shown below.

Kind of Crop.	Number of Holdings upon which Crop was grown.					
	1900-01.	1905-06.	1915-16.	1924-25.	1925-26.	1926-27†.
Wheat ... ..	20,149	19,049	22,453	17,690	17,074	17,135
Maize ... ..	17,569	17,475	14,869	16,607	15,196	15,475
Barley ... ..	2,246	1,755	2,538	1,886	1,916	1,446
Oats ... ..	11,547	10,740	13,723	16,664	16,851	15,995
Potatoes ... ..	9,521	8,552	4,643	3,908	3,679	3,527
Tobacco ... ..	31	98	97	76	111	95
Sugar-cane ... ..	1,214	1,113	694	871	955	931
Grapes ... ..	1,832	1,530	1,388	1,880	1,809	1,687
Fruit—Citrus ... ..	1,905	2,385	5,787	5,748	5,758	5,229
Other ... ..	8,064	6,846	8,760	7,434	7,218	6,294
Market Gardens ..	2,266	2,842	3,301	2,448	2,398	1,916
Total Cultivated Holdings* ...	45,828	46,349	50,728	50,771	49,668	48,639†

\* Holdings on which more than one crop was grown are included once only.

† Including only crops one acre or more in extent. Previously crops of less than one acre were included.

Maize and oats crops for market are grown on only a small proportion of the holdings where they are cultivated. The apparent decline in number of crops in 1926-27 is attributable to the exclusion from the table of crops less than 1 acre in extent. This affected particularly the figures shown for potatoes, grapes, fruit trees, and market gardens.

Although the number of cultivated holdings has not increased appreciably since 1901, the agricultural industry has grown very much, as may be seen from the comparison on page 554. The total number of holdings of one acre and upwards used for agricultural and pastoral purposes in 1926-27 was 78,380, and on 48,639 holdings areas one acre or more in extent were cultivated. Only 11,231 holdings were used exclusively for agricultural purposes. In addition, however, 18,183 combined agricultural and pastoral pursuits, 6,523 combined agriculture with dairying, 1,892 combined all three pursuits, and a limited amount of cultivation of a non-commercial character was conducted in connection with other activities. There were, in all, 29,741 holdings without any cultivated land.

AGRICULTURAL PRODUCTION.

The area and production of the principal crops of New South Wales are shown below. The year ended 30th June, 1916, in which, as the result of special war-time appeal, the area cultivated was greater than in any other season, has been included for comparative purposes:—

Crop.	1915-16.	1923-24.	1924-25.	1925-26.	1926-27.
<b>Wheat (grain)—</b>					
Area ... .. acres	4,188,865	2,945,335	3,550,078	2,925,012	3,352,756
Total yield ... .. bush.	66,764,910	33,176,000	59,767,000	33,805,500	47,541,000
Average yield p.a. ... bush.	15·9	11·3	16·8	11·6	14·2
<b>Maize—</b>					
Area ... .. acres	154,130	166,974	146,564	120,955	128,516
Total yield ... .. bush.	3,773,600	4,623,000	4,208,200	3,278,350	3,598,530
Average yield p.a. ... bush.	24·5	27·7	28·7	27·1	28·1
<b>Oats (grain)—</b>					
Area ... .. acres	58,636	86,693	123,517	101,097	105,115
Total yield ... .. bush.	1,345,698	1,570,300	2,511,400	1,615,650	1,898,750
Average yield p.a. ... bush.	23·0	18·1	20·3	16·0	18·1
<b>Hay—</b>					
Area ... .. acres	1,108,919	1,023,717	763,287	750,605	625,810
Total yield ... .. tons	1,573,938	1,172,805	1,152,613	866,275	877,767
Average yield p.a. ... tons	1·42	1·14	1·51	1·15	1·40
<b>Green Crops—</b>					
Area ... .. acres	162,945	429,772	166,073	479,464	217,439
<b>Potatoes—</b>					
Area ... .. acres	19,589	21,879	23,403	22,731	21,941
Total yield ... .. tons	44,445	61,079	57,274	43,137	53,288
Average yield p.a. ... tons	2·27	2·79	2·45	1·90	2·43
<b>Sugar-cane—</b>					
Area cut ... .. acres	6,030	6,733	7,761	8,688	10,128
Total yield ... .. tons	157,748	132,084	228,978	297,335	230,254
Average yield p.a. ... tons	26·16	19·61	29·50	34·22	22·73
<b>Fruit—</b>					
Area ... .. acres	63,823	87,463	88,714	89,003	88,968
<b>Market Gardens—</b>					
Area ... .. acres	10,967	8,543	8,837	8,935	8,230
Total yield ... .. £	400,860	628,728	657,152	682,726	661,443
Average yield p.a. ... £	36·6	73·6	74·4	76·0	80·3
<b>All other Crops—</b>					
Area ... .. acres	26,843	34,782	36,251	37,001	38,607
<b>Total Area*</b> ... .. acres	<b>5,800,747</b>	<b>4,811,891</b>	<b>4,914,485</b>	<b>4,543,541</b>	<b>4,597,296</b>

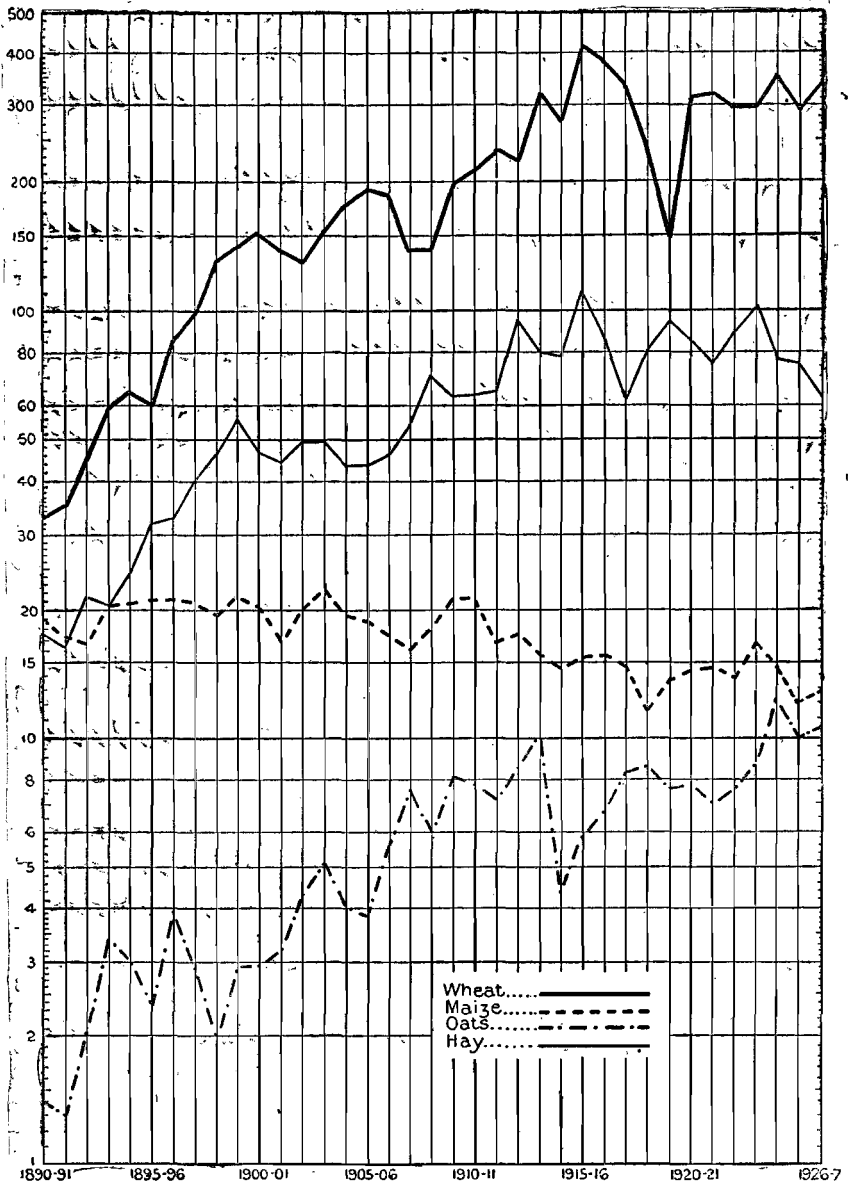
\* Including area double-cropped.

It will be observed that wheat is the only crop extensively grown. The larger part of the area cut for hay is sown with wheat, but considerable proportions are used for the production of oaten and lucerne hay.†

† See page 607.

## AREA UNDER PRINCIPAL CROPS, 1890-91 to 1926-27.

Ratio Graph.

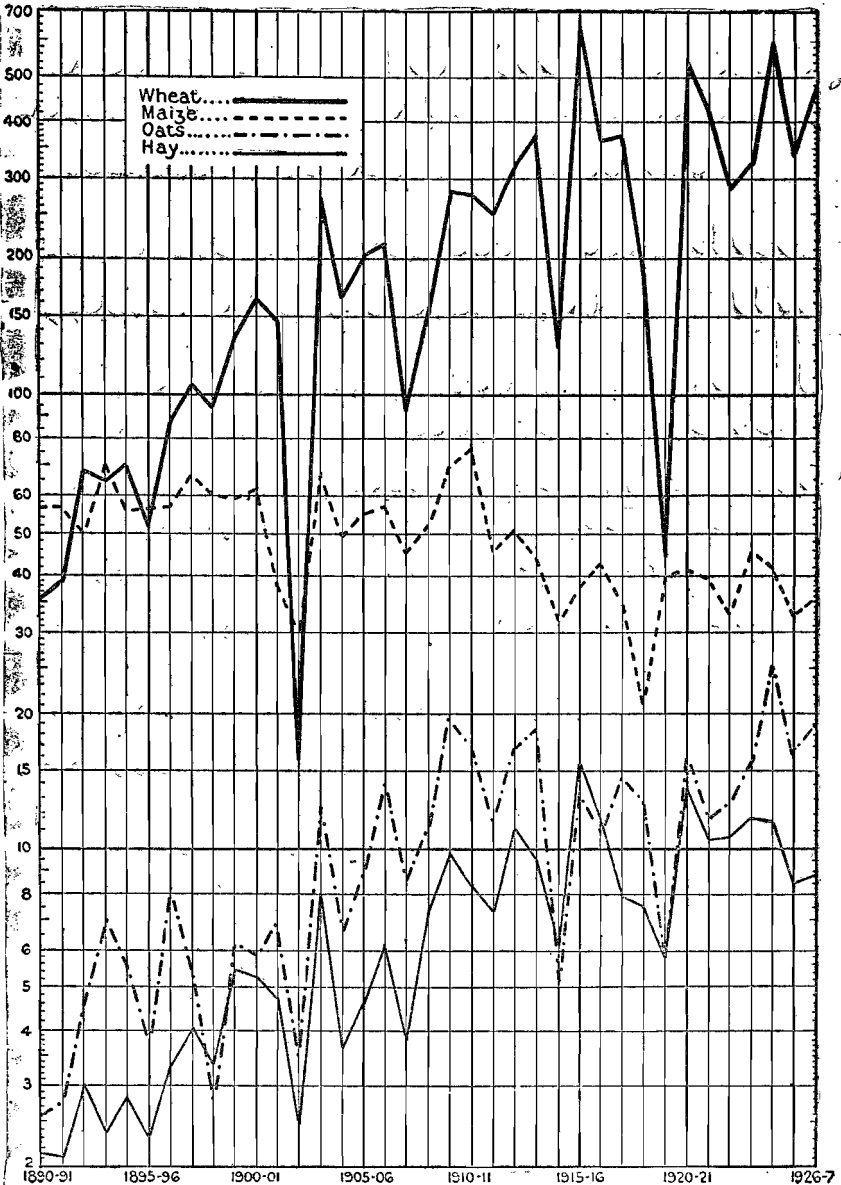


The numbers at the side of the graph represent 10,000 acres.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual areas are shown by means of the numbers on the side of the graph.

PRODUCTION OF PRINCIPAL CROPS, 1890-91 to 1926-27.

Ratio Graph.



The numbers at the side of the graph represent 100,000 bushels of wheat, maize, and oats, and 100,000 tons of hay.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual quantities are shown by means of the numbers at the side of the graph.

In addition to the area shown as cultivated there were at 30th June, 1927, 2,036,891 acres under sown grasses; 30,948,787 acres of occupied Crown lands were ringbarked, partly cleared, and under native grasses; and 4,461,133 acres were ready for cultivation on alienated holdings, including 3,229,743 acres which had been cropped previously, 263,823 acres of new land cleared and prepared for ploughing, and 1,193,747 acres in fallow.

### Value of Agricultural Production.

The estimated value of the agricultural production of the State (including the Federal Territory) during the last five seasons and the proportionate value of each crop to the total value, are shown in the following table, the values being based on prices realised on the farm:—

Crop.	Value.					Proportion per cent.				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	£	£	£	£	£					
Wheat (grain) .. ..	6,689,200	7,602,840	16,684,950	8,589,980	10,696,730	31·4	37·0	58·0	41·4	48·4
Maize .. ..	890,260	847,560	631,230	605,820	1,004,710	4·2	4·1	2·2	8·9	4·6
Barley .. ..	9,960	14,590	28,590	23,070	20,050	0·1	0·1	0·1	0·1	0·1
Oats .. ..	234,750	268,280	293,000	333,720	339,880	1·1	1·3	1·0	1·8	1·5
Hay and Straw .. ..	8,923,500	7,653,020	6,712,800	5,915,940	5,194,070	41·9	37·2	23·3	28·5	23·5
Green Food .. ..	792,060	734,950	662,030	930,752	729,005	3·7	3·6	2·3	4·5	3·3
Potatoes .. ..	318,230	323,720	319,320	517,640	341,040	1·5	1·6	1·1	2·5	1·5
Sugar-cane .. ..	347,780	230,630	446,510	337,690	385,650	1·6	1·4	1·6	1·9	1·7
Grapes .. ..	179,540	171,800	193,370	199,170	322,700	0·8	0·8	0·7	1·0	1·5
Wine and Brandy .. ..	148,210	283,940	213,330	97,140	108,030	0·7	1·4	0·7	0·5	0·5
Fruit—Citrus .. ..	628,100	521,730	609,420	742,650	762,360	2·9	2·5	2·1	3·6	3·5
Other .. ..	891,010	748,640	850,200	915,714	913,780	4·3	3·6	2·9	4·4	4·1
Market-gardens.. ..	621,030	628,730	657,150	682,726	661,443	2·9	3·1	2·3	3·3	3·0
Other Crops .. ..	627,130	476,890	482,120	538,948	618,622	2·9	2·3	1·7	2·6	2·8
Total.. ..	21,300,860	20,555,740	28,784,820	20,740,980	22,088,100	100	100	100	100	100

No deduction has been made from the values shown above for cost of materials used in production. Seed wheat is included in the production of grain and the fodder used for farm stock is included at its market value. Exclusive of materials used in maintenance of buildings, fences, etc., and of depreciation of stock used for draught purposes, the cost of materials in 1926-27 was approximately £5,207,000. The principal items were: Fodder for stock, £2,473,000; seed, £1,025,000; depreciation of machinery, £959,000; fertilisers, £556,000; sprays, etc., £144,000; and water, £50,000. After deducting these the net value of production was £16,891,100.

The agricultural income of New South Wales at present depends mainly on the return from wheat crops, the value of wheat, grain and hay in 1926-27 being £12,942,050, or over 58 per cent. of the total. Maize is next in importance, but the returns from other individual crops, except fruit, are comparatively small.

In 1922-23 the wheat crop was only two-thirds of the quantity of the previous year, but the price did not increase. However, owing to an adverse pastoral season, there was a heavy demand for hay, which rose in price and proved by far the largest item in the value of agricultural production for the year. Although the yield of wheat and hay increased in 1923-24, prices fell, and the aggregate value did not increase commensurately with the increased production. In 1924-25 a large wheat crop and favourable world markets coincided and the aggregate value of the harvest

rose to a very high level. The value of hay crops declined owing to a fall in prices due to the favourable pastoral season. In 1925-26 there was only an average wheat crop and prices declined slightly. The production of hay, maize and oats diminished also, but the prices of maize and oats improved. The yield of the principal crops increased in 1926-27 but, except for maize, prices were generally lower and the greater volume of output was not fully reflected in the value of production.

*Value of Production per Acre.*

The following table, showing the value of agricultural production, together with the average per acre, affords an interesting summary of the expansion of agricultural pursuits and a measure of the condition of the industry:—

Years ended June--	Average Annual Area Cultivated.	Average Annual Value of Production.	Average Value per Acre.
	acres.	£	£ s. d.
1887-91	858,367	4,030,611	4 13 11
1892-96	1,147,733	3,812,393	3 6 5
1897-1901	2,114,250	5,592,620	2 12 11
1902-06	2,515,268	6,302,903	2 10 1
1907-11	2,933,021	8,565,164	2 18 5
1912-16	4,507,748	12,867,474	2 17 1
1917-1921	4,349,814	16,986,250	3 17 8
1922	4,445,848	20,260,770	4 11 2
1923	4,694,088	21,300,860	4 10 9
1924	4,808,046	20,555,740	4 5 6
1925	4,911,148	28,784,820	5 17 3
1926	4,541,423	20,740,960	4 11 4
1927	4,595,711	22,098,100	4 16 2

The comparatively high value of production per acre shown in the ten years prior to 1897 was due to the fact that agriculture was on a smaller scale; cultivation was more intense than it has been in recent years, and the yield per acre usually higher. The increased value shown since 1918 has been due mainly to the rise in prices received for produce concurrently with the general rise in prices, but the influence of this factor is affected by variations in the yield per acre. The chief factors in the high average value per acre in 1924-25 were the favourable prices and heavy yield of wheat.

The average value per acre of various crops is shown below:—

Crop.	Average Values per Acre.					
	Ten years preceding 1913-14.	Ten years preceding 1926-27.	1923-24.	1924-25.	1925-26.	1926-27.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wheat for Grain...	1 17 1	3 0 7	2 11 8	4 14 0	2 18 9	3 4 2
Maize for Grain ...	4 6 11	6 3 3	5 1 6	4 6 2	6 13 3	6 9 9
Oats for Grain ...	2 4 9	2 18 0	3 1 9	2 7 5	3 15 11	3 0 3
Hay ...	3 8 9	6 19 4	7 9 3	8 15 8	7 17 5	7 9 0
Potatoes ...	11 2 5	14 9 0	14 15 11	13 13 4	22 15 5	15 2 0
Sugar-cane†	21 9 4	47 16 2	41 13 9	57 10 8	45 15 6	46 18 7
Vineyards†	16 12 4	32 7 2	45 15 5	37 3 1	25 4 10	33 12 8
Orchards†	10 17 9	24 6 7	24 5 7	28 1 3	30 5 10	25 15 9
Market-gardens ...	31 7 5	59 8 8	73 11 11	74 7 3	75 19 8	80 7 5

† Productive area only.



The average value of production per acre measures the effect from year to year of yield obtained and prices realised, therefore it may be said to furnish an index of the combined effect of market and season on the average returns obtained by farmers from their holdings. To make the analysis a complete reflex of the condition of agriculture, modifying factors, such as the cost of production, drought, and other causes of loss, should be taken into consideration.

Considered as gross returns, however, the averages for the decennial periods ending 1913-14 and 1925-26 afford guidance as to the effect of some of the economic conditions governing the industry, and show that for some of the principal crops the conditions prevailing in recent years have been adverse to expansion. Further reference to wheat in this connection is made on page 591.

#### WHOLESALE PRICES OF AGRICULTURAL PRODUCE.

The prices realised for agricultural produce in New South Wales, when not regulated by any authority, vary with the seasons, or, as in the case of wheat, with world markets, and, therefore, show very great fluctuations. Wheat and flour, in which alone there is an external trade, were closely regulated in price between 1914 and 1922. The prices of flour, bran, and pollard, are generally fixed in relation to the price of wheat by the Flour Mill Owners' Association of New South Wales. In the case of other produce, local production falls short of the requirements of the State, importation is usually necessary, and prices for these commodities are partly determined by external market conditions.

The quotations here given represent the average prices obtained for farm products in the various Sydney markets; for country districts due allowance must be made for cost of transportation, etc. The average for the year represents the mean of the prices ruling during each month, and does not take into account the quantity sold during the month. The prices ruling in each month of the year are shown in the "Statistical Register." The figures are those quoted by the middleman, and not those obtained by the producers:—

Commodity.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wheat .. ..bush.	0 3 7½	0 8 8	0 5 8	0 5 3½	0 5 5	0 6 2	0 6 2	0 5 5
Flour .. .. ton	13 10 11	19 6 7	12 6 9	11 3 4	12 17 2	14 17 10	14 17 5	13 0 2
Bran .. ..bush.	0 1 9¾	0 1 7½	0 1 6½	0 1 7½	0 1 1¾	0 1 4½	0 1 6	0 1 5
Pollard .. .. "	0 2 0	0 1 8½	0 1 7¾	0 1 8½	0 1 3½	0 1 6½	0 1 10	0 1 6
Oats .. .. "	0 5 7	0 3 5¾	0 4 1½	0 4 7½	0 4 6½	0 4 10½	0 5 6	0 4 8
Maize .. .. "	0 8 7	0 5 3¾	0 4 11½	0 6 0½	0 4 3	0 4 7½	0 6 5	0 6 0
Potatoes (local) ton	12 6 3	6 0 2	6 15 11	11 9 3	6 6 10	11 5 7	12 13 3	8 1 0
Onions .. .. "	20 7 3	5 12 1	12 7 10	6 10 6	13 10 6	16 10 9	19 12 8	6 9 0
Hay— Oaten .. .. ton	11 18 8	7 11 10	8 17 8	8 17 10	7 10 2	7 2 8	8 6 4	9 10 8
Lucerne .. .. "	11 6 10	5 18 5	6 13 7	9 4 9	6 19 3	7 11 3	8 9 1	8 0 3
Chaff— Wheaten .. .. "	10 12 11	6 8 8	6 16 8	7 4 3	6 0 9	7 0 5	7 16 3	9 0 11

The combined price variations since 1901 of agricultural produce in Sydney markets, weighted according to the average consumption in the three years 1911-15, are shown below. The prices in 1911 have been adopted as base and called 1000.

Year.	Index Number.	Year.	Index Number.	Year.	Index Number.
1901	834	1911	1000	1920	2430
1902	1263	1912	1339	1921	1750
1903	1181	1913	1069	1922	1633
1904	789	1914	1135	1923	1720
1905	972	1915	1648	1924	1475
1906	629	1916	1163	1925	1680
1907	1003	1917	1127	1926	1892
1908	1343	1918	1377	1927	1767
1909	1134	1919	1990	1928*	1475
1910	1012				

\* First six months.

It will be observed that, though seasonal causes operated to produce high prices in 1902, 1903, 1908, 1915, 1919 and 1920, there was, nevertheless, a marked rise in the price level due to other causes. In December, 1921, the index number reached 1,434—the lowest point touched since 1918. Subsequent turning points were December, 1922, when it had risen to 1,895; February, 1923, when it had fallen to 1,639; June, 1923, when it reached 1,860. In April, 1924, it had fallen to 1,393, followed by an improvement with some fluctuations to 2,064 in December, 1926. Then occurred a decline to 1,634 in June, 1927, a temporary rise to 2,004 in October, and a rapid decline to 1,411 by June, 1928.

AGRICULTURAL MACHINERY.

For harvesting grain crops the reaper and binder, the stripper, and the harvester are used, and there is considerable difference of opinion regarding the relative efficiency of each of these implements. The reaper and binder is employed almost exclusively in moist districts, but over the greater portion of the wheat areas conditions are favourable to the use of the harvester. A modern type of harvester, particularly adapted to Australian conditions, produced and developed locally, has contributed largely to the expansion of wheat cultivation, since it has enabled grain to be garnered with a considerable saving of time and labour. In recent years the increasing use of farm tractors has produced further economy in rural labour.

The following statement shows the area cropped, the total value of the agricultural machinery used, and the value of the machinery used per acre, in divisions of the State in the year 1926-27:—

Division.	Area under Crop, 1926-27.	Value of Agricultural Machinery and Implements.		Average value per Acre of Machinery used 1926-27.
		1915-16.	1926-27.	
	acres.	£	£	£ s. d.
Coastal ... ..	231,199	592,241	1,063,655	3 15 8
Tableland ... ..	478,920	714,824	1,198,154	2 10 0
Western Slopes ... ..	2,355,071	2,199,276	4,607,176	1 19 2
Central Plains and Riverina.	1,473,370	1,813,946	2,911,523	1 19 6
Western ... ..	7,151	51,740	56,685	7 18 6
Total ... ..	4,595,711	5,352,027	9,837,113	2 2 10

In the coastal and tableland districts the areas under cultivation are small, including many small holdings highly developed for fruit-growing, dairying and market gardening, while on the slopes and plains the implements

used serve large wheat farms. In the Western Division are a number of small irrigation settlements, but the area there farmed is too small to give an average which might be considered satisfactory for purposes of comparison.

Increased use of agricultural machinery has been a feature in the development of agriculture in New South Wales during the past twenty years. This matter is further discussed under the next heading.

#### PERSONS ENGAGED IN AGRICULTURE.

The following table provides an interesting comparison of the number of persons returned by land-holders as being constantly engaged in cultivating rural holdings as their principal activity:—

Year.	Persons Permanently Engaged.*	Area under Crop.	Value of Machinery Used.*	Year.	Persons Permanently Engaged.*	Area under Crop.	Value of Machinery Used.*
	No.	acres.	£		No.	acres.	£
1912-13	59,840	3,737,269	4,633,£00	1920-21	48,896	4,464,342	7,120,381
1913-14	59,813	4,568,841	5,029,938	1921-22	47,268	4,445,848	7,884,713
1914-15	58,020	4,808,627	5,159,959	1922-23	48,154	4,694,088	8,536,164
1915-16	56,904	5,794,835	5,362,067	1923-24	46,823	4,£08,046	8,799,353
1916-17	52,758	5,163,030	5,449,657	1924-25	46,278	4,911,148	9,427,730
1917-18	48,384	4,460,701	5,615,995	1925-26	43,365	4,541,423	9,588,318
1918-19	43,823	3,890,844	5,696,916	1926-27	41,650	4,595,711	9,837,193
1919-20	47,392	3,770,155	6,128,753				

\* Principally in cultivating the soil.

The number of persons shown above includes working proprietors, unremunerated members of the family working on the holding, and permanent employees. Unfortunately data as to the number of casual and itinerant workers are not obtainable and it is impossible to say to what extent, if at all, the decrease in the number of persons permanently engaged in cultivating the soil is offset by an increase in number of casual employees. Reference to data as to wages paid to casual employees, however, shows that the proportion of rural work performed by casual employees is relatively small and, although there has been a steady increase in the earnings of casual employees in rural industries it does not appear to have been such either in character or in volume as to indicate any large degree of substitution of casual for permanent labour. The figures in the table may, therefore, be accepted as a fairly reliable guide as to the variations in the number of persons earning a livelihood directly from agriculture.

Particulars of the classes and total wages of persons engaged in rural industries are shown in part "Rural Settlement" of this Year Book, and in part "Primary Production" of the Statistical Register of New South Wales.

The decline in the number of persons engaged in agriculture during the first seven years shown above was probably due mainly to enlistments for military service, although the adverse conditions ruling in the industry exercised a depressing influence. This latter cause doubtless operated to a marked extent during the severe drought which prevailed between 1918 and June, 1920. Although in 1919-20 there was an almost complete failure of the wheat crops of the State, and agricultural operations were considerably restricted, the number of persons engaged in agricultural employment increased as a result of the demobilisation of large numbers of the expeditionary forces.

Apparently the number of persons permanently engaged in cultivating rural holdings is now more than 17,000 less than in the years immediately preceding the war, although the area cultivated is approximately the same.

The increase in the value of the machinery used, particularly during the last five years, suggests as an explanation that the improvements in farm plant render less human labour necessary. This suggestion is strengthened by the considerations that the average area sown with wheat per farmer is increasing, and that the number of farms used only for agriculture increased from about 7,500 in pre-war years to 11,231 in 1926-27, indicating the rapid growth of a specialised class of agriculturists. Owing to the pronounced variations of seasonal factors, it is necessary in making comparisons to consider the averages of periods when conditions were approximately the same.

The number of persons recorded at the Census of 1921 as being engaged in agricultural pursuits was 94,508, of whom 93,598 were males and 910 females. This represented an increase of 15,999 males and a decrease of 726 females since 1911, the net increase being 15,273 persons. In the same period the proportion of male breadwinners engaged in agricultural pursuits decreased slightly from 13·4 per cent. to 13·1 per cent., and the proportion of persons engaged in agricultural pursuits decreased from 4·8 per cent. to 4·5 per cent. of the total population.

The census classification includes persons whose employment is of a casual nature as well as certain Government officials, farm servants, and others connected with agricultural operations, but not actually engaged in cultivating the soil. The numbers recorded, therefore, are not comparable with those shown in the above table as permanently and principally employed in cultivating the soil.

FERTILISERS.

In New South Wales superphosphates is the only artificial fertiliser used extensively, the soils in the wheat areas being generally deficient in phosphoric acid. Tests of manure conducted on the farmers' experiment plots indicate that benefits derived from the application of superphosphates to wheat-lands, as a general rule, are most marked in the southern portion of the wheat-belt, viz., the South-western Slope and the Riverina. The beneficial results gradually diminish throughout the western districts which form the central portion of the wheat-belt, and in the north-western districts no advantage is gained by the use of this fertiliser. The results may be affected, however, by the fact that fallowing is more common in the south than in the west, and much more than in the north. In wheat-growing the amount of superphosphates applied is generally only 56 lb. per acre. The average quantity of superphosphates used on lands fertilised with this manure only in 1926-27 was 65 lb. The number of farms using superphosphates in 1926-27 was 14,366.

The following table shows the area of land and the quantity of manure used during the year 1926-27:—

Division.	Area under Crop.	Total Area Manured.	Proportion of Area Manured to Area under Crop.	Manures Used.			
				Natural (only).	Natural and Artificial, in-Combination.		Artificial (only).
					Natural.	Artificial.	
	acres.	acres.	per cent	loads.	loads.	cwt.	cwt.
Coastal ... ..	281,199	62,594	22·3	93,808	82,242	88,868	153,327
Tableland ... ..	478,920	146,443	30·6	13,032	1,751	321	106,126
Western Slopes..	2,355,071	1,449,075	61·5	2,173	220	742	794,142
Central Plains ...	274,831	128,372	46·7	460	570	110	59,846
Riverina ... ..	1,198,489	1,074,610	89·7	2,266	500	60	651,594
Western ... ..	7,151	2,677	37·4	526	350	50	7,902
Whole State ...	4,595,711	2,863,771	62·3	112,265	85,633	90,151	1,772,937

The greater part of the natural manures is used in the metropolitan division. The total area treated with natural manures was relatively small, being only 16,272 acres, inclusive of the area on which both natural and artificial manures were used.

The quantities of the principal kinds of artificial fertiliser used in 1926-27 were 1,638,423 cwt. superphosphates and 86,275 cwt. of bone-dust in manuring 2,813,070 acres and 21,489 acres respectively. In addition, small quantities of artificial fertiliser were used in conjunction with natural manure.

The application of manures to agricultural lands is practised most extensively in the southern districts, the proportion of the cultivated area manured there in 1926-27 being 91 per cent. Over 53 per cent. of lands cropped in the central districts were manured, but less than 2 per cent. of cultivated lands in the northern districts were so treated.

In the past six years the practice of fertilising has extended, there being an increase of nearly 900,000 acres, or 43 per cent. in the area manured, and of 865,000 cwt. or 87 per cent. in the amount of artificial fertilisers used annually. The proportion of the area manured to the area under crop in 1926-27 was a record, being 62 per cent.

The following table shows the total area cultivated, the total area manured, and the nature of the manures employed, in various years between 1907-8 and 1926-27:—

Season.	Total Area under Crop.	Total Area Manured.	Proportion of Area Manured to Area under Crop.	Manures Used—	
				Natural.	Artificial.
	acres.	acres.	per cent.	loads.	cwt.
1907-08	2,570,137	423,678	16·5	144,021	276,120
1913-14	4,568,841	2,226,742	48·7	166,753	1,010,596
1915-16	5,794,635	2,753,431	47·5	177,788	1,132,446
1920-21	4,464,342	1,998,429	44·8	160,361	998,191
1921-22	4,445,848	2,104,329	47·3	176,327	1,053,710
1922-23	4,694,088	2,404,066	51·2	181,656	1,243,129
1923-24	4,811,891	2,313,602	48·1	196,697	1,327,771
1924-25	4,914,485	2,627,308	53·5	181,007	1,539,712
1925-26	4,541,423	2,635,483	58·0	268,930	1,709,557
1926-27	4,595,711	2,863,771	62·3	197,898	1,863,088

Extensive manurial trials are made regularly by the Department of Agriculture with the view of encouraging the adoption of better methods, and of demonstrating to farmers that largely-increased yields result from scientific cultivation. It is in this important respect that much hope rests for the ultimate improvement of the low average wheat yield obtained at present.

The sale of artificial manures is regulated by the Fertilisers Act of 1904, and under its provisions the vendor is required to furnish to the purchaser a statement as to their nature and chemical composition. Further legislation has been proposed for the more adequate protection of farmers.

#### SHARE-FARMING.

The system of working the land known as share-farming has played an important part in the development of agriculture in New South Wales. It took its rise towards the end of the last century, and helped to overcome the difficulties which had retarded the extension of cultivation. Land-holders

could not obtain workmen to till large areas of their land, while new settlers were impeded for lack of cleared land, and of the necessary farming facilities.

The principles of the system are as follow:—The owner provides suitable land and sometimes seed and fertiliser, and the farmer generally provides the necessary plant and labour. The contract usually is that the land be operated for a specified purpose and a fixed time. Various arrangements are made for sharing the product. Sometimes the parties to the agreement take equal shares of the produce up to a specified yield, and any excess goes to the farmer as a bonus. In other cases the owner takes one-third and the farmer two-thirds of the total product.

The following table shows particulars regarding the areas used for cultivation or dairying on shares during the past seven years:—

Season.	Holdings used for Share Farming.	Share-farmers.	Area Farmed on Shares.		
			Cultivation.	Dairying.	Total.
	No.	No.	acres.	acres.	acres.
1920-21	1,668	2,761	614,351	121,976	736,327
1921-22	2,246	3,449	677,197	183,878	861,075
1922-23	2,457	3,970	718,488	237,069	955,557
1923-24	2,374	3,636	673,593	226,804	900,397
1924-25	2,510	3,828	695,092	234,736	929,828
1925-26	2,493	3,667	645,395	226,362	871,757
1926-27	2,919	4,043	706,023	274,030	980,053

Of the 2,919 holdings used wholly or in part for share-farming in 1926-27, share-farming was for agriculture only on 2,119 holdings, dairying only on 201 holdings and agriculture and dairying combined on 599 holdings.

Practically the whole of the area cultivated on the share-system is devoted to wheat-growing. The system reached its maximum development in 1915-16, when the area cultivated under it exceeded one-fifth of the total area under crop in the State. Up to 1919-20 the returns from wheat-growing were bad on account of droughts and market difficulties, and share-farming diminished more rapidly than other systems of cultivation. The subsequent experience has been determined largely by seasonal conditions.

Of the areas cultivated in 1926-27 on the share system, 404,785 acres were in the Western Slopes Division and 190,488 acres were in the Riverina.

#### THE DEPARTMENT OF AGRICULTURE.

Increasing attention is being paid by the Government to the development of the agricultural industry, but great scope still exists for educational and scientific work in the industry in order that the resources of the State may be used with full advantage to the community.

The Department of Agriculture, created in 1890 to advance the interests of the farmers and fruit-growers of New South Wales, deals with all matters essential to agriculture. Its practical functions include the collection of information by scientific investigation and practical experiments relating to the causes of the failure of crops, improved methods of cultivation, means of combating pests, the use of fertilisers, matters of drainage

and irrigation, new plants and new implements, the disposal of surplus products, the transport of produce, the promotion of a community spirit among farmers, and since 1926 the promotion of marketing schemes.

At the end of 1927 the scientific and educational staff exceeded 70 in number, and through the agency of these, the Department demonstrates the value of improved methods of farming, investigates farm problems, and makes the results known to farmers. The operations of the Department in this direction are having a marked effect upon the standard and practice of agriculture in New South Wales.

Instructors in agriculture, most of whom have their headquarters in convenient country towns, are engaged in giving demonstrations to farmers, visiting private farms, delivering lectures to farmers, preparing educational pamphlets, and advising generally regarding agricultural methods. During recent years the practical services of the Department have been greatly extended by the conduct on private farms of experiments with various crops with the object of demonstrating to farmers the types of plants, the kinds of fertilisers, and the methods of cultivation best suited to their particular district. These trials are supervised by agricultural instructors, who make the results of such local experiments well known to farmers in the vicinity. In the year 1926-27, 870 experiments were conducted. Around some of the experimental centres have grown up defined districts in which the methods of farming are superior to those practised in districts outside their influence. The instructors also act in conjunction with the agricultural societies in promoting crop competitions among farmers. In 1926-27 there were 64 competitions for field wheat, 30 for fallow, 10 for maize, 6 for winter fodder, and 5 for conservation of fodder.

The *Agricultural Gazette*, the official organ of the Department, with a circulation of 13,300, is issued monthly. It is distributed free among farmers, and presents to them the results of scientific researches and of the investigations of official experts.

Numerous bulletins and leaflets are issued for the guidance of various classes of rural workers, and most of the publications of the Department are supplied free to persons engaged in rural industries.

Country newspapers are furnished weekly with notes describing the investigations and educational operations of the Department with respect to improved methods of agriculture, dairying, stock-raising, etc. Efforts have been made to develop many phases of primary production, fallowing, rotation in cropping, and the cultivation of maize being specially treated.

The principal heads of receipts and expenditure, exclusive of capital expenditure, of the Department of Agriculture during the year ended 30th June, 1927, were as follow:—

<i>Net Receipts.</i>	£	<i>Expenditure.</i>	£
Agricultural College, Experiment Farms, etc. ... ..	77,938	Agricultural College, Experiment Farms, etc. ... ..	164,255
Fees for Inspection—Plant Diseases Act ... ..	14,369	Grain Elevators ... ..	63,882
Herd-testing Fees, etc. ... ..	4,488	Administrative ... ..	129,938
Rents, etc. ... ..	2,894	Stock and Brands, Pastures Protection ... ..	150,892
Stock Branch ... ..	10,951	Botanic Gardens, Parks, etc. ... ..	57,466
Grain Elevator Fees ... ..	104,779		
Total ... ..	£215,419	Total ... ..	*£566,413

\* Including £3,845 expended by the Stores Supply Department and £4,472 by the Resumed Properties Department on behalf of the Department of Agriculture.

In addition the capital expenditure for the year amounted to £132,455, including £124,278 in connection with the bulk-handling of wheat.

Interest on loan money expended on grain elevators and other undertakings of the Department of Agriculture is excluded from the foregoing statement. The grain elevators' accounts are summarised on a later page.

#### *Agricultural Bureau.*

An Agricultural Bureau has been established with the support and co-operation of the Department. Its object is to foster the establishment in rural centres of societies which will encourage primary producers to meet together regularly for the purpose of exchanging ideas and experiences on every kind of subject that touches rural life, and it aims specially at making scientific methods more popular. Assistance is rendered by the officers of the Department, many of whom visit the branches from time to time to deliver lectures and conduct practical demonstrations in some subject of local interest. The movement has exhibited already a tendency toward co-operation. A large number of branches have reported successful transactions in "pool" buying, while several have registered as co-operative societies. Other branches have found it advantageous to purchase in bulk for members supplies of fertilisers, potatoes, molasses, blue-stone, machinery, oil, etc., and a certain amount of inter-bureau trading is carried on. The social side is not neglected, and some branches have ladies' sections. The Bureau admits children, and definitely caters for them by providing competitions of various kinds and encouraging appreciation of civic responsibilities. In this way the Bureau is assisting to make rural life more attractive.

Government assistance is granted in the form of subsidies payable to each branch at the rate of 10s. for every £1 of membership fees. Although the State assists the branches in this respect, the primary object of the Bureau is to develop a spirit of self-help and co-operation in the widest sense of those terms. To facilitate this the control of each branch is placed entirely in the hands of its members, who may, therefore, develop their organisation along lines where united action is most useful. However, discussion of religious matters or party politics is not permitted in any branch. The Bureau was established in 1911, and there are over 350 branches with an aggregate membership exceeding 10,000. Periodically district and State conferences are held, and generally are largely attended.

Steps are being taken to establish juvenile farmers' clubs with a view to stimulating interest in farm life among young persons.

In 1923 an Advisory Council was constituted, consisting of six representatives of the Agricultural Bureaux and four nominees of the Government.

#### AGRICULTURAL EDUCATION AND EXPERIMENTS.

The system of agricultural training in vogue in the educational institutions of New South Wales is not nearly so extensive as those of some other countries, but it is receiving increasing attention. In the primary schools pupils receive instruction in nature study and some training in elementary agriculture; school gardening also is commonly taught. Rural schools with super-primary courses in agriculture have been established, and 1,138 students were enrolled in 1927. Specialised tuition is given at various schools in the Murumbidgee Irrigation Area, several secondary schools include agriculture in the curriculum, and two agricultural high



schools have been established, covering courses of three years leading to Hawkesbury Agricultural College. A Faculty of Agriculture was established at the University in 1911, in which, in 1927 there were 23 students attending lectures.

In order to extend knowledge of local conditions and to afford an education in agriculture on scientific bases, the Government has established the Hawkesbury Agricultural College, a number of experiment farms, several viticultural nurseries, an apiary, and agricultural training farms, besides farmers' experiment plots throughout the State.

Facilities are afforded for the accommodation of students at the various experiment farms. In addition, schools of instruction for dairy factory workers are held periodically, and summer and winter schools for students of both sexes are held annually at Hawkesbury Agricultural College.

#### *Hawkesbury Agricultural College.*

The Hawkesbury Agricultural College provides accommodation for resident students, and imparts theoretical and practical instruction in a three-years' course, which embraces every department of agriculture. Instruction is given also in dairying, pig-raising, horse, sheep, and poultry-breeding; and experimental research work is conducted in connection with cereal and other crops, in cultivation with fertilisers, and in soil culture. All subsidiary branches of farm-labour are taught, including blacksmithing, carpentry, sheep-killing, bee-keeping, and other occupations incidental to the pursuit of agriculture. In June, 1927, there were 131 students in residence, and 97 completed their tuition during the year. Since its inception the College has trained 3,247 students.

Jersey dairy cattle and Romney Marsh sheep are bred, also stud pigs of various breeds, which are sold to farmers throughout the Commonwealth and New Zealand. In the poultry section the egg-laying competitions attract a large number of competitors from various parts of the State.

The net receipts from the College in 1926-27 were £18,344, and the net expenditure £44,846, including £3,169 expended on buildings and improvements.

#### *Experiment Farms.*

An extensive programme of experiments is carried out by the Department of Agriculture on the 20 experiment farms in the State. These experiments are supervised and co-ordinated by the Research Council, which has replaced the Experiments' Supervision Committee.

Educational facilities are also provided at the experiment farms, with varying curricula, adjusted to meet local needs and climatic conditions. The aim is to disseminate better knowledge of the practice of agriculture in established industries, to encourage by example new activities suited to the locality, and to demonstrate in a practical manner the agricultural possibilities of the State.

Accommodation is provided at a number of these farms for free instruction in farming, but the facilities are not fully availed of by local boys. Farm apprentice schools are conducted at Glen Innes, Cowra, Grafton,

Wollongbar, and Yanco for "Dreadnought" boys. The term is usually of six months' duration, tuition is given free of charge, and the accommodation for 100 boys is generally fully occupied.

During 1926-27 the number of trainees who completed their tuition at experiment farms was 590, making the grand total of trainees since the inception of the farms 3,944.

Particulars relating to each farm are given in the following table:—

Farm.	Year ended 30th June, 1927.			Special Purposes.
	Area.	Students in Residence.	Fees Payable.	
Wagga Wagga .. .. .	3,220	39	1st year £20 2nd " £15	Specialises in seed wheat.
Bathurst .. .. .	752	36	.. .. .	Orchard and soil culture.
Wollongbar and Duck Creek	734	20	.. .. .	Stud farm—Dairy cattle and pigs.
Berry .. .. .	403	..	.. .. .	Stud farm—Dairy cattle.
Grafton .. .. .	1,075	26	.. .. .	Mixed farming suited to sub-tropical districts.
Glen Innes .. .. .	1,110	30	.. .. .	Mixed farming and fruit culture.
Cowra .. .. .	992	24	.. .. .	Specialises in seed wheat and cross-breeding with sheep.
Narara .. .. .	100	..	.. .. .	Phylloxera-resisting vines.
Yanco .. .. .	2,043	11	.. .. .	Irrigation.
Nyngan .. .. .	6,209	..	.. .. .	Dry farming. Merino sheep suitable for dry areas.
Coonamble .. .. .	1,945	..	.. .. .	Dry farming. Wheat cultivation and sheep-farming.
Temora .. .. .	1,606	..	.. .. .	Specialises in seed wheat.
Condobolin .. .. .	1,348	..	.. .. .	Dry farming. Suitable varieties of wheat.
Trangie .. .. .	9,636	4	.. .. .	Stud-merino farm, also specialises in wheat culture.
Seven Hills. .. .. .	46	•	.. .. .	Demonstration of poultry culture.
Glenfield .. .. .	170	..	.. .. .	Veterinary experiments.
Griffith .. .. .	68	..	.. .. .	Mother-stock vineyard. Irrigated area.
Wauchope Apiary .. .. .	35	..	.. .. .	Study of diseases among bees.
Arrawatta Training Farm....	4,500	14	.. .. .	Sheep raising.

\* Non-resident students are received.

The total receipts of the Special Deposits Farms Account (excluding Hawkesbury Agricultural College) in 1926-27 was £64,908, and the expenditure £61,457. In addition the sum of £13,030 was received and £72,547 was expended on Consolidated Revenue Account.

*Farrer Scholarships.*

The Farrer Memorial Fund was established by public subscription in honour of the late William J. Farrer, whose work in the production of new wheats has afforded great benefit alike to the industry and to the community. The money subscribed has been vested in trustees, and the interest is used for the Farrer research scholarship, the specific object of which is the improvement of wheat cultivation. The scholarship is granted to a candidate selected by the trustees. At 30th June, 1927, the capital amount of the fund was approximately £2,000.

The selected scholar presents his results at the close of the year in the form of a paper, to be published by the trustees. At the end of the year the holder of the scholarship may be reappointed, or a new selection made.

A Government Farrer scholarship of an annual value of £40 is offered for competition amongst first-year students at the Hawkesbury Agricultural College, who desire to make a special study of wheat cultivation.

## DATES OF PLANTING AND HARVESTING.

The average dates of planting and harvesting the principal crops of the State in the main districts in which they are sown are as follow:—

Crop.	Most Usual Months of—	
	Planting.	Harvesting.
Wheat ... ..	May-June ... ..	November-December.
Maize ... ..	September-December ...	January-August.
Oats ... ..	May ... ..	December.
Barley ... ..	May ... ..	December.
Potatoes—early	July-August ... ..	November-December.
„ late	November ... ..	July.
Sugar-cane ... ..	September ... ..	July-December.
Tobacco ... ..	November-December ...	March-April.
Broom Millet ... ..	September-October ...	January-February.

It should be noted that the above statement represents only the most usual dates and that both planting and harvesting occur before and after the periods specified, divergences being due to the variety of seed planted, the geographical position of the district, and variations in seasonal conditions.

## INDIVIDUAL CROPS.

## WHEAT.

Wheat is the staple agricultural product of New South Wales, and its cultivation provides a means of livelihood for a large section of the population. It is the principal activity on probably one-seventh of the rural holdings of the State, and three-quarters of the average area under crop are devoted to wheat. The farm value of wheat-crops (other than those used as green fodder) in 1926-27 was £12,942,050, including £10,696,730 from grain and £2,245,320 from wheaten hay.

The mild climate of New South Wales makes it possible to work the soil on scientific lines throughout the year, and admits of the utilisation of paddocks for pastoral purposes after the crop has been harvested. The time of sowing varies according to district and seasonal conditions, but is usually between March and August. Harvests are generally gathered between November and February.

*The Wheat Belt.*

The area suitable for wheat-growing in New South Wales may be defined roughly as those parts of the State where precipitation is not excessive, but which have sufficient rainfall to admit of ploughing operations at the right time of the year, to cover the growing period of the wheat plant and to fill the grain during the months of ripening. The minimum average requirement was formerly placed at 10 inches of rain during the seven months from April to October, but wheat is now grown successfully where the average rainfall in this period is 9 inches, and even less. In numerous particular instances wheat has been grown with excellent results on fallowed lands which received an almost negligible amount of rain between April and October.

Although the months April to October are the general period of growth for wheat this period is by no means universal, and in the principal wheat districts May is the most common month of planting and December the most usual month of harvesting. The main wheat-growing districts extend for more than 500 miles in a north-easterly direction from the southern boundary, and have a maximum width of 130 miles; on the east they are distant almost uniformly about 120 miles from the coast.

The coastal region is unsuited to wheat on account of the scarcity of suitable soils and of the liability to rust and other diseases occasioned by heavy rains. Only small areas on the Tableland districts proper are suitable for wheat-growing, and the far West has insufficient rainfall to make wheat-growing profitable except under extraordinary conditions. But between the Tablelands and the Western Division lie considerable tracts of slope and plain eminently adapted to the cultivation of wheat. It is in this area, particularly in the southern and central portions of it, that most of the wheat of the State is grown, and it is here that the prospects of a large development in the wheat industry in the near future are brightest.

Most wheat is grown in districts where the average rainfall between April and October is between 11 and 15 inches, and little is grown in eastern districts where the average exceeds 20 inches in this period.

On the map forming the frontispiece of this Year Book are shown lines which represent the eastern and western limits of profitable wheat-growing for grain, as determined by experience during the ten years ending 1922. These show how great has been the expansion westward due to improvement in the methods of cultivation, and to the production of improved varieties of wheat. Between 1904 and 1912 the area added to the wheat belt by extension westwards was approximately 13,500,000 acres, and between 1912 and 1922 a further area of 6,000,000 acres was added. The total area of land between the eastern and western lines existing in 1922 was 53,000,000 acres. Probably, however, not more than one-half of the land comprised in these areas is suitable for cultivation.

A most noticeable feature of the development of wheat-growing was the expansion in districts with a low average rainfall. In 1912 the wheat line extended but a short distance beyond the limit of 10-inch rainfall in the growing season, but, by 1922, wheat had been profitably grown on a commercial scale as far west as Hillston and Balranald, with average rainfalls of 9.12 and 7.89 inches respectively in the growing period. In addition, wheat was produced as far west as Nevertire in the central-western plains, where the average rainfall between April and October is about 9½ inches. The total area of land included in that part of the wheat belt where the average rainfall is less than 10 inches in the period April to October inclusive, is 5,000,000 acres.

The extension of the limits of wheat-growing in New South Wales formed the subject of special reports by the Government Statistician in 1905, 1913, and 1923.

#### *Area Suitable for Wheat-growing.*

In his evidence before the Select Committee of Inquiry into the Agricultural Industry in 1921, Mr. F. B. Guthrie, chemist, Department of Agriculture, stated that in his opinion approximately 26,000,000 acres of land could be cultivated profitably for wheat in New South Wales. Of this area he assumed that one-fifth would be cultivated for wheaten hay, leaving 21,000,000 acres as the maximum to be cropped for grain.

Particulars obtained by the Government Statistician in 1922 from owners and occupiers of agricultural and pastoral holdings showed that (exclusive of land required for farm stock) there were 12,058,000 acres of alienated land suitable for cultivation within about 12 miles of certain railways in the wheat belt. In the same year the Chief Inspector of Agriculture estimated that of 34,000,000 acres of land (both Crown and freehold) within about 12 miles of certain railways in the wheat belt, 18,900,000 acres were suitable for cultivation. The increasing use of motor transport, however, tends to increase the limit of profitable cartage beyond 12 miles, and the extension of railways is steadily adding new areas to the wheat lands served by rail.

Further particulars of the extent and distribution of these areas, and of the number, size, and value of the alienated holdings comprised in them are shown in the chapter "Rural Settlement" of the Year Book for 1922.

The total area of land in New South Wales on which wheat has been cultivated in recent years (including the new land sown in 1927) is approximately 8,100,000 acres, but the proportion of this area sown with wheat each season is seldom very greatly in excess of one-half; the remainder is left partly in fallow, planted with other crops, or used for grazing purposes only. The total area of new land cultivated for wheat between 1911 and the end of 1927 was approximately 3,850,000 acres.

#### Development of Wheat Growing.

Wheat growing as an industry in New South Wales has progressed steadily during a period of thirty years, but at present less than one-sixth of the area suitable for wheat is cultivated each year.

The following statement shows the area under wheat for grain and for hay, together with the total production, average yield per acre, and quantity exported since 1897-98, when a surplus of wheat for export was first produced:—

Season.	Area under Wheat.				Yield.		Average yield per acre.		Wheat and Flour (overseas) in each year following harvest
	For Grain.	For Hay.	Fed-off. †	Total.	Grain.	Hay.	Grain.	Hay.	
	acres.	acres.	acres.	acres.	thousand bushels.	thousand tons.	bushels.	tons.	thousand bushels.*
1897-98	993,350	213,720	††	1,207,070	10,560	182	10.6	.85	582
1898-99	1,319,502	312,451	††	1,631,954	9,276	177	7.0	.57	437
1899-00	1,426,166	414,813	††	1,840,979	13,604	341	9.5	.32	865
1900-01	1,530,609	332,143	††	1,862,752	16,174	348	10.6	1.05	4,783
1901-02	1,392,070	312,858	††	1,704,923	14,809	287	10.6	.92	2,914
1902-03	1,279,760	320,588	††	1,600,348	1,585	76	1.2	.24	154
1903-04	1,561,111	286,702	††	1,347,813	27,334	452	17.5	1.58	9,772
1904-05	1,775,955	284,367	††	2,060,322	16,464	207	9.3	.73	5,661
1905-06	1,939,447	313,582	††	2,253,029	20,737	305	10.7	.97	5,338
1906-07	1,866,263	816,945	16,744	2,199,942	21,818	403	11.7	1.27	6,246
1907-08	1,390,171	365,925	129,313	1,835,909	9,166	198	6.6	.54	962
1908-09	1,374,056	490,823	104,202	1,989,036	15,433	427	11.1	.87	4,366
1909-10	1,990,130	380,784	5,325	2,376,789	23,532	566	14.3	1.49	12,111
1910-11	2,128,936	422,972	61,458	2,613,256	27,914	463	13.1	1.11	14,423
1911-12	2,380,710	440,243	80,731	2,901,684	25,088	423	10.5	.96	10,172
1912-13	2,231,514	704,221	31,557	2,967,292	32,487	780	14.6	1.11	17,116
1913-14	3,205,397	534,226	23,393	3,763,016	38,020	583	11.9	1.10	20,038
1914-15	2,768,024	559,431	815,561	4,143,016	12,831	355	4.7	.62	785
1915-16	4,188,865	879,678	53,702	5,122,245	66,765	1,212	15.9	1.38	23,514
1916-17	3,806,604	633,605	53,101	4,498,310	36,593	814	9.6	1.28	21,262
1917-18	3,329,371	435,180	63,855	3,823,436	37,712	435	11.3	1.11	12,650
1918-19	2,409,669	613,544	204,161	3,227,374	18,325	517	7.6	.84	19,694
1919-20	1,474,174	716,770	877,996	3,063,540	4,338	355	3.0	.49	427
1920-21	3,127,377	520,555	13,420	3,663,352	55,628	822	17.8	1.58	41,746
1921-22	3,194,940	467,363	24,735	3,637,047	42,767	575	13.4	1.23	21,793
1922-23	2,942,857	593,184	350,963	3,892,009	23,638	619	9.7	1.09	8,504
1923-24	2,945,235	695,622	233,305	3,924,262	33,176	703	11.3	1.01	11,978
1924-25	3,550,678	388,479	21,617	3,961,204	59,767	537	16.8	1.38	38,741
1925-26	2,925,012	449,803	286,552	3,661,357	33,873	444	11.6	.99	16,951
1926-27	3,352,736	311,213	38,160	3,700,109	47,541	394	14.2	1.27	18,637
1927-28†	3,006,770	354,800	627,190	3,998,760	26,927	333	9.0	.93	10,759†

\* Flour has been expressed at its equivalent in wheat. † To November. ‡ Subject to revision.  
 †† Includes area sown for green food.

From this record of thirty-one years' experience it will be observed that poor wheat yields have been obtained at intervals of more or less regular recurrence, viz., in the years 1898-9, 1902-3, 1907-8, 1914-15, 1918-19 and 1919-20. It is noteworthy that whereas unfavourable seasons were particularly prevalent between 1914 and 1919 those from 1920 to 1926 were much more propitious. The remarkable recuperative powers of the wheat lands in favourable seasons were demonstrated in the years 1903-4 and 1920-21, when, following severe droughts, record yields were obtained.

The area under wheat increased rapidly after 1912 and, in 1915, partly as the result of a special war effort, the maximum of over 5,000,000 acres was reached. The decreases in later seasons were due mainly to a shortage of labour, unfavourable ploughing seasons, and difficulties in regard to the disposal of the harvest during the war period; moreover, the high prices

obtainable for wool and mutton until the end of 1920 caused many farmers to substitute sheep-raising for wheat-growing. The splendid seasons and high prices of 1920-21 and 1921-22 encouraged growers to extend their operations, and, despite the adverse season in all districts in 1922 and in the central and northern divisions in 1923, the areas under wheat remained greater than in any preceding season except those of 1914, 1915, and 1916. A heavy fall in the price of wheat during the latter half of 1923 occurred too late to affect the area sown in that year. Prices, however, rose to a high level in 1924, and the season 1924-25 proved to be one of the most bountiful on record. These circumstances combined to produce unsurpassed prosperity in the wheat industry. Ploughing and sowing operations were hampered in 1925 by the dry conditions that prevailed in the months of March and April and by the excessive rains of May and June. The result was a substantial decrease both in the area sown and in the average yield per acre, the latter being adversely affected by the scanty rains of September and October. Similar conditions operated in 1926-27, although the rainfall was more evenly distributed, and the dry conditions which recurred in September and October were not nearly so severe. The planting season of 1927 was favourable and led to a recovery in area sown, but the acute dry weather of the growing period resulted in a yield below the average.

*Wheat Districts.*

The principal wheat-producing districts of the State, arranged in order of importance, are the Riverina, the south-western slopes, the central-western slopes, the north-western slopes, and the central tablelands. This statement refers to the statistical divisions shown on the map on the frontispiece of this Year Book.

In the 1922-23 season a redistribution of statistical divisions was made on the basis of local government areas, and, as this necessitated considerable alterations in the divisions previously adopted, the comparison formerly made between the various divisions is not possible now.

However, as the changes are comparatively slight as regards the grouping of northern, central, and southern divisions, a comparison may be made on this basis. This comparison has the merit of dividing the wheat belt into three portions, of which the northern normally receives the greater part of its rainfall in the summer, and the southern in the winter, while the rainfall of the central districts is non-seasonal in character, since it is subject in some degree to the two separate meteorological influences which determine the season of the rainfall in the other regions.

Differences of soil, geographical features, cultural methods, and other factors also play a considerable part in determining the yields of the various divisions, but the following statement shows that wheat is most extensively and successfully grown in the southern districts, while the central divisions are superior to those of the north. The coastal districts and western division, where comparatively little wheat is grown, are included to complete the total of the State.

Divisions.	Area Harvested for Grain.		Yield of Grain.		Yield of Grain per Acre.					
	Average, 1917-18 to 1926-27.	1927-28.	Average, 1917-18 to 1926-27.	1927-28.	Average 1917-18 to 1926-27.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.
	acres.	acres.	bus.	bus.	bus.	bus.	bus.	bus.	bus.	bus.
Coastal	2,379	996	22,700	5,300	9.5	9.0	7.6	2.1	15.0	5.3
†Northern	317,810	263,724	3,539,200	1,052,600	11.1	6.2	16.3	6.7	14.2	4.0
†Central	990,456	903,879	11,341,200	6,498,100	11.5	8.2	15.6	11.8	13.2	7.2
†Southern	1,613,369	1,838,082	21,250,400	19,371,000	13.2	14.2	17.8	12.2	14.6	10.5
Western	1,142	84	7,800	100	6.8	5.2	2.2	4.8	5.6	1.2
Total...	2,925,156	3,006,765	36,161,300	26,927,100	12.4	11.3	16.8	11.6	14.2	9.0

† Includes Tablelands, Slopes, and Central Plains.

Generally speaking, the use of fertilisers and the practice of fallowing are most extensive in the southern districts, and there the average yield is usually greatest. This is due in a large part to the more dependable nature of the winter rains. The yields in 1922-23, 1923-24, 1925-26, and 1927-28 were materially affected by the wide variations in the amount of rainfall received. Drought conditions prevailed in the northern and central parts of the State in these years.

#### *Average Yield of Wheat.*

The average yield of wheat in New South Wales is subject to marked fluctuations by reason of the widely divergent nature of the seasons. The highest yields have usually been recorded in seasons following the worst droughts, and besides giving dramatic proof of the advantages of fallowing, have gone far to make immediate compensation for the losses sustained. The lowest yield on record—that of the 1902 season—was only 1.2 bushels per acre. It was followed by a yield of 17.5 bushels per acre, which was only surpassed in 1920-21, when, after the severe drought of 1918-20, a record average of 17.8 bushels per acre was obtained.

The yield in recent years has been steadily increasing, but is considerably below that which was obtained prior to the expansion of the wheat industry, when probably only some of the best wheat lands were tilled. In decennial periods the average yields in New South Wales have compared as follow with the average for the six seasons ended 30th June, 1927:—

Period.	Average Yield per acre.	Period.	Average Yield per acre.
	bushels.		bushels.
1872-1881	14.71	1902-1911	11.04
1882-1891	13.30	1912-1921	11.62
1892-1901	10.02	1922-1927	12.99

In calculating these averages the area which was sown for grain but failed is included, while the area fed off or used for green fodder is excluded.

The yield of wheat in New South Wales does not compare favourably with the yields usually obtained abroad in some of the large wheat-producing countries. Smaller producing countries, particularly those situated in the colder climates, show far greater average yields. Representative averages for the four years 1921-1924 are shown below:—

Country.	Average Yield per acre.	Country.	Average Yield per acre.
	bushels.		bushels.
United Kingdom ...	33.4	Argentina ... ..	12.6
New Zealand ... ..	28.9	Australia ... ..	13.3
Canada ... ..	16.0	New South Wales ...	13.0
United States ..	14.0	Russia in Europe ..	8.5

Although the yield in New South Wales is dominated by the nature of the seasons, it is believed that, when more scientific methods of cultivation are widely adopted and land is properly fallowed, tilled, and manured, the yield per acre will be increased considerably; and another favourable factor exists in the possibilities that are attached to the improvement of wheat types by plant-breeding. However, it is anticipated that the warm climate and the prevalence of hot winds during the ripening period will always militate against a high average yield being obtained in New South Wales, such as is obtained in more humid countries.

The following comparison of the average yield of wheat per acre in the principal wheat-producing regions of the world is illuminating:—

Region.	Average Yield of Wheat in Bushels per Acre.					
	1909 to 1913.	1918 to 1922.	1923.	1924.	1925.	1926.
Europe† ... ..	18.8	17.0	19.3	15.8	18.4	17.8
North America ... ..	15.7	13.7	15.5	14.7	12.1	11.1
Asia ... ..	12.3	12.0	12.5	11.9	13.9	16.6
North Africa ... ..	12.2	10.8	12.6	10.1	14.6	16.8
Argentina ... ..	9.2	11.7	14.5	10.7	10.0	13.6
Australia ... ..	11.8	11.7	13.2	15.2	11.2	11.7
General Average† ...	15.5	14.2	15.9	14.1	13.4	14.7

† Excluding Russia.

The general averages, including Russia, so far as available, were: 1909-13, 14.0 bushels; 1923, 14.9 bushels; 1924, 13.1 bushels; and 1925, 14.2 bushels.

It is apparent that average wheat yields throughout the world fluctuate widely from season to season, and this fact is brought out very strongly by comparing the averages for the quinquennial periods shown above.

*Fallowing and the Wheat Yield.*

In 1923-24 statistics were collected for the first time of the yield of grain from the areas of new land, fallowed land, and unfallowed land sown with wheat. It was intended that land should not be classed as fallow unless it had not been cropped for at least twelve months, but it is doubtful whether the collection was made on this basis in all cases. Summer fallow is practised to some extent.

The following table provides a comparison of the yields obtained from the various classes of land in 1927-28 in each of the divisions shown on page 575:—

Division.	Area. †			Total Yield.			Average Yield per Acre.		
	New Land.	Fallowed Land.	Stubble Land.	New Land.	Fallowed Land.	Stubble Land.	New Land.	Fallowed Land.	Stubble Land.
	acres.	acres.	acres.	bushels	bushels.	bushels.	bush.	bushels.	bushels.
Coastal ... ..	19	140	837	...	5,292	...	†	†	†
Northern* ... ..	3,795	47,380	212,549	13,485	274,734	764,358	3.6	5.8	3.6
Central* ... ..	39,785	355,176	508,918	149,082	3,457,143	2,891,871	3.7	9.	5.7
Southern* ... ..	72,372	1,368,453	397,257	310,230	16,062,774	2,997,993	4.3	11.7	7.5
Western Division ...	...	59	25	...	138	...	†	†	†
Total ... ..	115,971	1,771,208	1,119,586	472,797	19,794,789	6,659,514	4.1	11.2	5.9

\*Includes Tablelands, Slopes, and Central Plains. † Average is not of value on account of smallness of operations. ‡ Including areas which failed.

Owing to the widely scattered nature of the wheat belt, the above table does not provide an absolute comparison of the results obtained from fallowed land and other lands, because rainfall, cultural methods, soil, and other factors necessarily played an important part in determining the results. In 1926-27 wind and bush fires had a material effect in reducing the yields obtained in the southern districts where fallowing is most extensive. The climatic conditions prevailing in the various wheat districts and the methods adopted by farmers differ very markedly, consequently the results shown above in respect of the fallowed lands throughout the State do not represent accurately the benefits which accrue from scientific agriculture. Still, it is apparent that even with present methods of fallow, the improvement in the wheat yield is pronounced.



The following statement shows the approximate areas of new land, fallowed land, and stubble land, sown with wheat in New South Wales during each of the past ten seasons:—

Season.	New Land.	Fallowed Land.	Remainder Stubble Land.	Total.
	acres.	acres.	acres.	acres.
1918-19	123,300	932,700	2,166,374	3,227,374
1919-20	91,100	847,100	2,130,340	3,068,540
1920-21	142,900	749,600	2,770,852	3,663,352
1921-22	232,700	935,200	2,519,147	3,687,047
1922-23	199,900	1,416,000	2,291,460	3,907,360
1923-24	86,309*	1,306,721*	1,412,971*	2,806,001*
1924-25	149,894*	1,583,047*	1,780,069*	3,513,010*
1925-26	81,243*	1,464,686*	1,307,334*	2,853,263*
1926-27	123,730*	1,746,822*	1,465,903*	3,336,455*
1927-28	115,971*	1,771,208*	1,119,586*	3,006,765*

\* Area cropped for grain only as stated in final estimate.

In 1925-26 for the first time appreciably more than half the area cropped for grain had been fallowed.

#### Size of the Wheat Farms.

If it be considered that, in normal seasons, an area of less than 250 acres devoted to wheat will not provide subsistence for a farmer and his family, it is apparent, in view of the low average area devoted to wheat, that wheat-growing in many cases must be conducted in conjunction with other pursuits, and that many wheat-growers derive a living from other sources.

The following table illustrates the recent development of wheat-growing in respect of number and average size of areas sown:—

Year.	Wheat sown for Grain, Hay, and Green Food.			Holdings on which wheat was sown for hay and for green food only.	Wheat sown for Grain.		
	Holdings.	Total Area sown with Wheat.	Average Area per Holding devoted to Wheat.		No. of Holdings.	Areas sown for grain.†	Average area per holding.†
	No.	acres.	acres.	No.	No.	acres.	acres.
1900-01	20,149	1,862,752	92	*	*	*	*
1905-06	19,049	2,253,029	118	*	*	*	*
1915-16	22,453	5,122,245	224	*	*	*	*
1920-21	17,790	3,663,352	206	2,132	15,658	3,127,377	200
1921-22	18,216	3,687,047	202	1,921	16,295	3,194,949	196
1922-23	18,632	3,832,009	209	3,727	14,905	2,942,847	197
1923-24	18,036	3,924,262	217	3,441	14,595	2,945,335	202
1924-25	17,690	3,960,204	224	1,623	16,067	3,550,078	221
1925-26	17,074	3,661,367	214	2,797	14,277	2,925,012	205
1926-27	17,135	3,700,109	216	1,204	15,931	3,352,736	210

\* Not available.

† Area cropped for grain only, excluding area cropped for hay.

Consideration of the above table in conjunction with statistics of average yield suggests that there is a considerable number of growers who sow wheat and crop it for grain, hay or green food, according to seasonal conditions. This impression is heightened by the fact that, in the last four years included above, when the average yields of grain were 11.3, 16.8, 11.6 and 14.2 bushels, respectively, the numbers of wheat-growers who sowed wheat for all purposes and cropped less than 50 acres for grain were 6,051, 4,285, 5,202, and 3,702 respectively.

The following table provides a summary of the areas of holdings on which wheat was grown for grain in the season 1926-27, arranged in groups according to the area cropped for grain. The average yield per acre in each group in preceding years is shown for comparison:—

Area cropped for Grain.	Holdings.	Wheat-grain.							
		Area cropped for grain.	Production of grain.	Average Yield per acre.					
				1926-27	1925-26	1924-25	1923-24	1922-23	1921-22
acres.	No.	acres.	bushels.	bus.	bus.	bus.	bus.	bus.	bus.
1-49	2,498	57,864	696,336	12·0	10·3	16·4	11·3	10·8	11·7
50-299	9,313	1,578,729	22,066,179	14·0	11·3	17·2	11·6	10·0	13·3
300-999	3,508	1,546,056	22,437,423	14·5	11·9	16·6	11·0	9·5	13·7
1,000-1,999	92	113,080	1,563,654	13·8	11·7	16·8	11·3	10·1	14·0
2,000-and over.	20	57,007	777,408	13·6	12·3	14·7	10·7	9·9	11·2
Total	15,931	3,352,736	47,541,000	14·2	11·6	16·8	11·3	9·7	13·4

In this table wheat-farms are divided somewhat arbitrarily into five classes, graded according to the size of the area cultivated for grain. Those where less than 50 acres are cultivated for grain may be considered to be held by growers earning their livelihood principally in other directions. In 1926-27 these numbered 2,498, or 15.7 per cent. of the total; where the areas cultivated range from 50 acres to 299 acres growers may be considered to draw their subsistence from wheat-growing in a degree ranging from partial to complete dependence—these numbered 9,813, or 61.6 per cent. of the total; where the area cultivated exceeds 300 acres it may be considered generally that hired labour is employed in connection with the whole of the operations, or that more than one grower is involved. Areas of this kind numbered 3,620, and represented 22.7 per cent. of the total.

In all, areas of less than 30 acres in extent were sown with wheat for grain on 1,533 farms. The total number of areas under 100 acres in extent sown with wheat for grain was 4,558; from 100 to 199 acres, 4,342; from 200 to 299 acres, 3,411; from 300 to 399 acres, 1,701; and from 400 to 499 acres, 867; the number in successive groups of 100 diminished rapidly thereafter. In 1926-27 there were 20 wheat crops exceeding 2,000 acres in extent. A number of large crops, however, are farmed on the shares system, and in some cases more than one share-farmer is involved.

The disparities between the average yields in area series are not always very pronounced. The most productive groups of areas in the various years were as follow:—In 1926-27, areas from 300 to 999 acres in extent; in 1925-26, areas over 2,000 acres in extent; 1924-25 and 1923-24, areas from 50 to 299 acres; 1922-23, areas under 50 acres; 1921-22, those between 1,000 and 2,000; 1920-21, areas from 50 to 299 acres in extent. It was ascertained that in 1920-21 larger proportions of the smaller areas were cropped for hay and green fodder, and doubtless these usually embraced the inferior portions of the crop.

A table showing the number, area and production from wheat crops in area series in each division of the State is published in the section "Agriculture" of the Statistical Register of New South Wales. This shows that the 20 crops exceeding 2,000 acres in extent are distributed divisionally as follows:—In South-western Slopes 10, Riverina 4, Central-western Slopes 3, North-western Slopes 2, and North Central Plain 1.

*Consumption of Wheat in New South Wales.*

Reference has been made in previous issues of the Year Book to the difficulty of making estimates of the consumption of wheat in New South Wales between the years 1910 and 1920, and it has been explained that the estimates for these years are approximate.

However, steps have been taken to obtain data of the interstate movements of wheat and flour since 1920, and as particulars of stocks are obtained at the end of each season it is now possible to state with considerable precision the amount of wheat consumed in New South Wales.

In order to preserve as far as possible the line of demarcation between seasons, the consumption and export years have been made to coincide with calendar years. But for the last period shown below this method has been further improved, and the figures relate to years ending on 30th November. Although small quantities of new season's wheat are normally received at rail before the end of November, the trade does not assume large proportions until the early part of December.

The following statement shows the yield, net exports, and apparent consumption per head in periods since 1892, flour being included at its equivalent in wheat:—

Period.	Average Annual Crop.	Average net Annual Export, Overs and Interstate.	Apparent Consumption per annum.			
			Including Seed Wheat.		Excluding Seed Wheat at 1 bushel per acre.	
			Total.	Per head.	Total.	Per head.
	thousand bushels.	thousand bushels.	thousand bushels.	bushels.	thousand bushels.	bushels.
1892-1896	5,904	(-)2,310	8,214	6·6	7,231	5·9
1897-1903	10,694	791	9,903	7·3	8,237	6·1
1904-1908	19,102	7,505	11,597	7·8	9,514	6·4
1909-1915	25,765	11,958†	13,807	7·9	10,395	5·9
1916-1921	36,150*	18,945†	17,205	8·5	13,304	6·6
1922-1927	40,912	24,712‡	16,200	7·2	12,350	5·5

\* Excludes "stock adjustments" of wheat pools; average, 420,000 bushels per year. † Partly estimated. ‡ Actual export, with allowance for stocks carried over. (—) Average net import.

Apart from showing how the estimated consumption of wheat is arrived at this table indicates the steady growth of the wheat industry both as regards production and export over the periods immediately preceding and following the establishment of the wheat export trade in 1897.

The average annual crop does not represent the net result of the harvest as it includes the quantity used for seed. For this reason the apparent consumption is shown, including seed wheat which varies from season to season in relationship to the area sown and the conditions governing the sowing. The allowance is generally set down arbitrarily at 1 bushel of seed per acre sown. This is in excess of the quantity used for sowing on many farms, but it includes an allowance for the additional amount used when faulty germination necessitates more than one sowing. The estimated consumption excluding seed wheat is, therefore, an approximation with a limit of error of approximately half a million bushels or one-quarter of a bushel per head of population according as the annual seed requirements vary above or below 1 bushel per acre. It is estimated that, for the last period shown above (1922 to 1927) the average quantity of flour, wheat meal, &c., consumed per head of population was equivalent to 4·8 bushels of wheat so that, with due modification for variation in the allowance made for seed wheat, the quantity of wheat used for feeding poultry and other stock was in the vicinity of 2,000,000 bushels per annum.

This latter quantity, however, is considerably lower than the corresponding quantity for the previous period which embraced nearly two years of very severe drought, during which a considerable amount of wheat was used

for feeding sheep. As this factor operated to increase the consumption of wheat during the period 1916-1921, the total quantity consumed in the period was considerably above normal requirements. Furthermore, great difficulty was experienced in disposing of wheat abroad, and large quantities remained in the country for lengthy periods. Much of this wheat was damaged by wet weather, mice, and weevils, and rendered unfit for consumption in the ordinary way.

The effective demand for wheat for local consumption is very elastic, although it was fairly stable between the years 1922 and 1925. Including seed wheat, the maximum annual requirement for local consumption seldom exceeds a total of approximately 17,500,000 bushels, of which about 4,000,000 bushels (depending on the area sown) are used for seed purposes. The average annual consumption for all purposes in the six years 1922 to 1927 was 16,200,000 bushels.

*Marketing Wheat.*

The comparison made between the production, export, and consumption of wheat and flour from New South Wales on a previous page shows that in recent years the average annual local consumption (excluding seed wheat) has been approximately one half of the average annual quantity exported oversea and interstate. As interstate trade in wheat and flour is comparatively small, the maintenance and further development of the wheat industry in New South Wales are dependent largely on world demand, and on the efficiency of the facilities for gaining access to over-sea markets on such conditions that it will pay local farmers to grow wheat in preference to other products. The price of wheat for export is determined by world's parity, which fluctuates with the world demand. The market for the exportable surplus of local wheat is found chiefly in Europe, but quantities of flour are sent to the countries and islands of the Pacific and Indian Oceans. The further extension of the market for local wheat in Europe is in some measure affected by the competition of great wheat-producing countries near the market—the United States, Canada, the Argentine, and possibly Russia—which derive advantages from shorter distances and lower ocean freights. These advantages, however, are counteracted to some extent by the greater land haulage necessary from the interior to the coast of some of these countries.

The aggregate movement of wheat and flour oversea and interstate is shown below. The particulars for the respective years relate to the twelve months ending 30th November, and therefore represent the movement following each harvest. Flour is expressed at its equivalent in wheat, viz., 48 bushels of grain to 2,000 lb. flour.

Year ended 30th Nov.	Total Crop.	Export Oversea.		Export Interstate.		Import Interstate.		Stocks at 30th Nov.
		Wheat.	Flour.	Wheat.	Flour.	Wheat.	Flour.	Wheat and Flour.
Expressed in thousand bushels of wheat.								
1923 ...	28,668	2,020	6,844	2,084	1,365	19	195	2,299
1924 ...	33,176	5,433	6,103	4,017	1,553	38	313	2,233
1925 ...	59,767	31,824	7,299	3,038	1,537	25	251	1,863
1926 ...	33,806	9,250	6,370	2,167	1,800	289	413	1,676
1927 ...	47,289	12,813	7,703	4,991	2,236	34	377	4,870

This table shows the comparative regularity in the export flour trade and the marked fluctuations in the quantity of wheat exported.

Further particulars of the flour trade are shown in the following table relating to financial years which do not, however, correspond very closely to wheat seasons:—

Year ended 30th June.	1923.	1924.	1925.	1926	1927.	1928.‡
Wheat gristed ...	bus. 17,035,285	bus. 19,684,075	bus. 18,844,711	bus. 20,674,708	bus. 20,598,188	bus. †
Flour produced ...	Flour expressed in tons (2,000 lb.)					
Flour exported—	354,704	409,645	395,409	434,407	*431,532	†
Oversea* ...	100,740	159,156	132,322	165,790	153,971	101,846
Interstate... ..	25,119§	26,510§	26,243§	38,800	34,766	31,605
Flour imported—						
Oversea ...	...	...	...	7	6	18
Interstate... ..	6,330	7,739	5,964	7,896	8,988	7,411

\* Including ship's stores. † Not available. ‡ Subject to revision. § Incomplete, about 5,000 tons should be added.

The approximate annual average quantity of flour consumed in New South Wales in the above years was 225,000 tons. The estimated consumption per head of population is shown in part "Food and Prices," and some further details regarding flour-milling are shown in part "Factories" of the Year Book.

#### Grading of Wheat.

The Wheat Act passed early in 1927 provided for the establishment of grades and standards of wheat in accordance with the recommendations of a Wheat Standards Board, but definite action to establish grades has not yet been taken.

Wheat for export is marketed on the basis of a single standard known as f.a.q. or fair average quality. In New South Wales the standard is fixed annually by a committee of members of the Sydney Chamber of Commerce and two Government representatives. Samples obtained from each of the wheat districts are weighed on McQuirk's patent scale, and an average struck, which is used as a standard in all wheat export transactions.

Distinction is, however, maintained between white and red wheats. No mixtures of white and red varieties are accepted for bulk handling. The proportion of red to white wheat in the harvest of 1925-26 was 3.24 per cent., or 1,090,000 bushels in a total of 33,643,000 bushels.

The following comparison shows the standard adopted in New South Wales for each of the past ten seasons, and the date on which it was fixed in each year:—

Year.	Date Fixed.	Weight of Bushel of Wheat. f.a.q.	Year.	Date Fixed.	Weight of Bushel of Wheat. f.a.q.
1918-19	30th Jan., 1919	lb. 62½	1923-24	14th Feb., 1924	lb. 60½
1919-20	6th Feb., 1920	61	1924-25	10th Feb., 1925	60½
1920-21	10th Mar., 1921	59½	1925-26	22nd Jan., 1926	62½
1921-22	7th Feb., 1922	61	1926-27	31st Jan., 1927	61½
1922-23	25th Jan., 1923	61	1927-28	19th Jan., 1928	60½

The weights shown above are those used for guidance in determining whether particular lots of wheat are at or above fair average quality, but not as a measure of quantity. Wheat is normally sold in New South Wales by weight (bushel of 60 lb.), and not by volume.

At present about two-thirds of the wheat is bagged on the farm and brought to the nearest railway station, whence that intended for export is carried in bags by rail to Sydney for shipment. At some of the stations the Railway Department has erected sheds, and a small charge is made for storage, but portions of large harvests have at times to be stored with scant shelter. At Darling Harbour, Sydney, where all the grain ships, except bulk carriers, are loaded, sheds and bag elevators have been provided.

The remainder or approximately one-third of the crop is handled in bulk as described below.

*Wheat Arrivals.*

As a rule small quantities of new season's wheat become available towards the end of November, the actual time varying under seasonal influences. Usually, most of the crop intended for sale has been sent to rail for transport before the end of February. The following comparison shows the quantity of wheat received at country railway stations in bags and in bulk during the season 1927-28:—

Week ended	Quantity of Wheat Received during Week.	Total Quantity of Wheat Received to end of Week.	Week ended	Quantity of Wheat Received during W.ek.	Total Quantity of Wheat Received to end of Week.
1927.	Bushels.	Bushels.	1928.	Bushels.	Bushels.
November ... 2	29,502	29,502	November ... 4	594,924	18,728,109
3	405,084	434,586	February ... 11	345,090	19,073,169
December... { 10	157,116	591,702	18	176,625	19,249,794
17	4,533,207	5,124,909	25	59,607	19,309,401
24	3,550,533	8,675,442	Month.		
31	3,062,661	11,738,103	March ...	173,286	19,482,687
1928.			April ...	42,228	19,524,915
January... { 7	2,872,803	14,610,906	May... ..	2,123	19,527,038
14	2,125,362	16,736,268	June ... ..	15,098	19,542,136
21	812,010	17,548,278	July... ..	91,644	19,633,780
28	594,924	18,143,202	August ..	15,396	19,649,176

\* Net, after deducting withdrawals.

The difference between the total crop and the quantity of wheat received at country railway stations in recent seasons was approximately 7,816,000 bushels in 1920-21, 8,616,000 bushels in 1921-22, 8,450,000 bushels in 1922-23, 7,812,000 bushels in 1923-24, 9,163,000 bushels in 1924-25, 7,659,000 bushels in 1925-26, 10,550,000 bushels in 1926-27, and 7,018,000 bushels in 1927-28. Of the wheat represented by this difference considerable though variable quantities are sent by road to Victoria or direct by road to country flour mills in New South Wales. The balance is retained by the grower for seed or farm purposes or is sold for consumption in the locality of production.

*Bulk Handling.*

The losses of grain, occasioned by wet weather and plagues of mice and weevils during the period of the war, in which large harvests had accumulated and shipping arrangements were dislocated, brought forcibly into public view the disadvantages of the handling and storage of wheat in bags. A Royal Commission of Inquiry was appointed by the Federal Government in 1917, and reported in favour of the erection of permanent storage facilities.

The Federal Government promptly passed a Wheat Storage Act, providing for advances to be made to the States for the construction of wheat elevators, and before the close of the year tenders had been called for the necessary work in New South Wales. The amount of advances from the

Federal Government was relatively small and the construction of the necessary works has, for the most part, been financed from loans raised directly by the State Government.

Grain elevators have been constructed at 84 of the more important wheat receiving stations of New South Wales, with direct access to rail. These country elevators have a storage capacity at one filling of 15,630,000 bushels. A modern concrete and steel shipping elevator has been erected in Sydney, with a storage capacity of 6,750,000 bushels at one filling. It is connected with the railway system of the State by four lines of rail, and has a receiving capacity of 5,000 tons (approximately 187,000 bushels) per day, and a shipping capacity of 9,000 tons (approximately 336,000 bushels) per day of eight hours.

The loan expenditure on the works constructed to 30th June, 1928, was £3,844,269. The system was first put into operation in 1920-21, and has been steadily developing, as shown by the following table:—

Season.	Number of Plants Available in Country Districts.	Storage Capacity of Plants Available in Country Districts.*	Wheat Received.			Proportion of Wheat Received in Elevators.	
			In Country Elevators.	In Terminal Elevators from Non-Silo Stations.	Total.	To Total Crop.	To Total Quantity Received at Rail.
		bushels.	bushels.	lustel.	bushels.	per cent.	per cent.
1920-21	29	5,450,000	*	*	2,000,000	3·6	4·2
1921-22	28	5,450,000	*	*	4,335,000	10·1	12·7
1922-23	54	11,550,000	*	*	4,290,000	14·6	21·2
1923-24	58	12,550,000	5,410,574	1,023,232	6,433,806	19·4	25·4
1924-25	61	13,250,000	16,334,813	1,437,058	17,771,871	29·7	35·1
1925-26	62	13,500,000	8,295,436	841,185	9,136,621	27·0	34·9
1926-27	66	14,100,000	12,244,723	515,772	12,760,499	27·0	34·5
1927-28	73	15,180,000	6,177,720	163,459	6,347,180	23·6	32·3

\*Not available.

†At one filling.

The quantity of wheat handled in bulk naturally fluctuates under the influence of the marked seasonal variations in the size of the wheat crop. Comparison of the quantity handled in bulk in 1925-26 with the quantity handled in bulk in 1923-24 when the harvests were nearly equal in magnitude indicate that over a period of two years there was an increase of approximately 40 per cent. in the relative volume of wheat handled in bulk. This marked improvement is due to the fact that farmers are recognising that substantial savings are possible for them by means of bulk handling and a strong demand has arisen among farmers in districts where silos are not available for the provision of such facilities in order that they may share the advantages of the system.

The quantities of wheat shipped in bulk during recent seasons were:— 1923-24, 3,324,154 bushels; 1924-25, 12,767,589 bushels; 1925-26, 4,313,816 bushels; 1926-27, 5,701,761 bushels; and in 1927-28, 1,788,966 bushels, representing 61.2 per cent., 40.1 per cent., 46.6 per cent., and 45.3 per cent., and 35.8 per cent. of the quantities of grain shipped overseas from respective harvests.

The elevators are under the control of a manager. Wheat of two kinds was received in 1927-28 for handling in bulk, viz., white (6,066,468 bushels) and red (111,252 bushels) of fair average quality. A fee of 2d. per bushel was charged for receiving, fixing quality, handling, storing and delivering wheat in trucks at country elevators, with an additional ½d. per bushel for receiving such wheat from trucks at terminal elevator, weighing in and weighing and loading out through shipping or truck spouts. Wheat was received at the terminal elevator from non-silo stations at a charge of 1d. per bushel if in bulk trucks and 1½d. per bushel if in bags. These charges

all included storage to 31st July, 1928, after which date an additional  $\frac{1}{2}$ d. per bushel per week was charged. The silo management pays rail freight incurred by it in handling the grain, and this, together with all fees and other charges, is paid by the holder of the warrant upon delivery of the wheat from the silo. The financial operations in connection with the silos in the year ended 30th June, 1927, were as follow:—

Receipts.				Expenditure.			
£				£			
Handling fees ... ..	∴	102,818	Salaries ... ..	∴	6,752	Repayments to previous years' Votes ... ..	216
Sundry receipts ... ..	∴	168	Contingencies ... ..	∴	52,246	Rates ... ..	2,244
Sales of damaged grain... ..	∴	1,792	Wheat adjustments ... ..	∴	2,610	Refund of handling fees ... ..	9
Railway freight repayments ... ..	∴	115,788	Railway freight ... ..	∴	147,667		
<b>Total ... ..</b>		<b>220,782</b>	<b>Total ... ..</b>		<b>211,528</b>		

The amounts shown refer to cash received and expended in the period covered. Excluding payments for railway freight for which the silo management is only the agent, the receipts were £104,994 and the expenditure £63,861, leaving a cash balance of £41,133 net earnings available to meet interest charges and depreciation, etc.

Upon delivery of his wheat at the silo the owner receives a bulk wheat warrant showing particulars of the quantity and quality of the wheat and the place of delivery. It is a negotiable document, transferable by endorsement of the owner.

At present wheat is generally transported from the farms to the silos in bags fastened by clips or sewn, the bags being emptied and returned to the farmer for use in subsequent seasons. As the system is becoming more firmly established, farmers are acquiring bulk wagons.

For conveyance from country stations to the terminal, the Railway Commissioners converted 956 WS trucks and made them suitable for the carriage of grain in bulk, and have constructed 1,170 U trucks (20 tons) with hopper bottoms.

The question of bulk handling of wheat in New South Wales, with special reference to the transition from bag handling, was the subject of inquiry by a Select Committee of the Legislative Council in November, 1920. An analysis of the findings of this committee appears in the Year Book for 1920. The system in operation in New South Wales was investigated and reported upon by a Victorian Parliamentary Committee in 1925.

*Wheat Freights.*

In the conditions governing the marketing of wheat abroad, the freight offering and its cost are very important factors.

A comparative statement is given below of the freights ruling for bagged-wheat cargoes carried by steam vessels from Sydney to London in pre-war and recent years:—

Year ended 30th June.	Freight.				Year ended 30th June.	Freight.			
	Per ton.		Equivalent per bushel.			Per ton.		Equivalent per bushel.	
	s. d.	s. d.	d.	d.		s. d.	s. d.	d.	d.
1912 ...	17 6 to	30 0	5½	to 9½	1926 ...	40 0 to	20 0	12½	to 6½
1913 ...	10 0 to	35 0	3½	to 11¼	1927 ...	47 6 to	21 3	16	to 6½
1914 ...	25 0 to	37 6	8	to 12	1928 ...	37 6 to	25 0	12	to 3



## Wheat Pools.

An account of the circumstances which led to the creation of compulsory wheat pools by the Government, and of the basis upon which they were organised is contained in issues of the Year Book for 1921 and previous years. A summary of the final returns is published in the Year Book for 1923 at page 489.

Voluntary wheat pools were initiated in 1920-21, and a summary of the results of the various voluntary pools is furnished below.

Season.	Quantity Pooled.			Net Amount Realised by Sales.		Average Charges per bushel.*		Average Net Amount Received by Farmers at Country Sidings.	Net Amount Received by Farmers
	Total.	Proportion to—		Total.	Average per. bus.	Rail Freight.	Other.		
		Total Crop.	Quantity received at Rail.						
	bus.	per cent.	per cent.	£	s. d.	d.	d.	s. d.	£
1921-22	22,785,560	53·4	66·7	6,179,027	5 5·17	5·40	3·96	4 7·81	5,298,812
1922-23	11,655,800	40·8	57·6	2,956,739	5 1·35	5·37	4·66	4 3·32	2,492,129
1923-24	9,680,854	28·9	38·2	2,444,329	5 0·59	5·46	4·13	4 3	2,059,809
1924-25	13,639,003	22·8	26·9	4,215,853	6 2·17†	5·40	4·23	5 4·54†	3,667,733
1925-26	740,600	2·2	2·8	230,820	6 2·7†	5·38	4·28	5 5·06†	200,772
1926-27	8,849,851	18·7	23·9	2,454,439	5 6·56†	5·62	4·86	4 8·08†	2,667,838
1927-28	1,042,122	3·8	5·3	...	...	...	...	...	...

\* Including deductions for inferior wheat. † Average; 1d. more was paid for bagged than for bulk. in 1924-25; ½d. in 1925-23; 1½d. in 1926-27. ‡ Approximate.

No pool was conducted in the 1928-29 season. The amount and date of each payment for the various pools to 1925-26 is stated on page 660 of the Year Book for 1926-27. For the 1926-27 pool the payments were 3s. 6d. per bushel (less dockages) on delivery, 1s. per bushel (less rail freight) on 8th June, 1927, 4d. per bushel on 1st November, 1927, 3½d. per bushel for bagged and 2d. per bushel for bulk on 29th December, 1927, and a final payment of 1.042d. per bushel on 21st March, 1928. In 1927-28 the progress payments per bushel were 3s. 6d. on delivery, 1s. less freight on 23rd May, 1928, and 6d. per bushel on 14th August, 1928.

## Prices of Wheat.

The following table gives the average prices per bushel ruling in the Sydney market in each year since 1898. The figures for earlier years, published in the Year Book for 1919, exhibit clearly the tendency towards a gradual reduction in the value of the cereal down to 1895, when the price was the lowest of the series. In 1896, however, owing to a decrease in the world's supplies, the price rose considerably, and led to an extension of cultivation throughout Australia. In the early years, when local production was deficient, the price in Sydney was generally governed by the prices obtained in the markets of Australian States where a surplus had been produced. Since the development of the export trade, however, it has been determined largely by the prices ruling in the world's market, although marked deficiencies in the local crop (such as occurred in 1920) at times have a determining influence on prices.

The prices quoted are per imperial bushel (60 lb.) of f.a.q. wheat in Sydney markets, and latterly represent the averages of millers' and shippers' quotes. The monthly averages represent the mean of daily prices, and the annual average is the mean of the monthly averages. Formerly

practically the whole of the wheat marketed was in buyers' hands before the end of March, but in recent years the practice of pooling, and more recently still the introduction of the wheat elevators and storage by farmers have extended the period of marketing. Sales effected by growers after March, however, are not relatively large. No data are available as to the volume of monthly or weekly transactions, and it is impossible to determine weighted average prices accurately.

Year. ended Dec. 31.	February.	March.	Average Value for Year. ††	Year. ended Dec. 31.	February.	March.	Average Value for Year. ††
	per bushel. s. d.	per bushel. s. d.	per bushel. s. d.		per bushel. s. d.	per bushel. s. d.	per bushel. s. d.
1898	4 0	4 0	3 8	1914	3 8	3 9½	4 1½
1899	2 7½	2 9	2 9	1915†	5 6	5 6	5 5
1900	2 9	2 8	2 8½	1916†	5 1½	5 0½	4 10
1901	2 7	2 7	2 8	1917†	4 9	4 9	*4 9
1902	3 2	3 2½	4 5	1918†	4 9	4 9	4 9
1903	5 11½*	5 9¼*	5 1¾*	1919†	5 0	5 0	5 1½
1904	3 0½	3 0¾	3 2	1920†	8 5*	8 10*	8 7¼*
1905	3 4½	3 3¾	3 5	1921†	9 0	9 0	8 8
1906	3 1½	3 2½	3 3½	1922‡	5 2	5 11	5 8
1907	3 0¾	3 1½	3 10	1923‡	5 8	5 7	5 3½
1908	4 4	4 5½	4 3½	1924‡	4 7	4 7	5 5
1909	4 0¾	4 6½	4 9	1925‡	6 9½	6 4	6 2¼
1910	4 1¾	4 1	3 10	1926‡	6 6	5 9	6 2
1911	3 7¾	3 5	3 6	1927‡	5 3	5 1	5 5
1912	3 9¼	3 8½	4 1	1928‡	5 2	5 5	5 5½
1913	3 6½	3 7	3 2¼				

\* Imported wheat. ‡ Shippers and Miller's buying quotes on trucks Sydney. †† Mean of monthly quotes.  
 † Price officially fixed on trucks Sydney of bagged wheat for flour for home consumption. § To June.

The above prices are for 60 lb. bagged wheat in three-bushel bags, and are inclusive of the value of the bag, which is sold with the wheat and included in the weight paid for as wheat. Since 1922 increasing proportions of the crop have been handled in bulk (as shown on a previous page), and bulk wheat is sold at from 1d. to 2d. per bushel less than the bagged wheat.

The high prices ruling in 1903 and 1920 were due to the almost entire failure of the previous season's crop, on account of which supplies were drawn from oversea and other States. In 1920 the price of 9s. per bushel was fixed for wheat for local consumption, in accordance with the anticipated world's parity and in order to encourage farmers to continue wheat-growing. This price was maintained until the end of November, 1921.

In the latter part of 1923 the price fell precipitately owing to the large surplus of production over world requirements, and the price remained for a time lower than in any year since the outbreak of war, although rather

higher than in pre-war years. However, a marked diminution in the world's production of wheat in 1924 led to a world-wide rise in price in July, which continued until February, 1925, when the high average level of 6s. 9½d. per bushel was reached in Sydney market. A steep decline followed to 5s. 10½d. in April, 1925, and the average monthly price moved between 5s. 9d. and 6s. 2½d. until after the close of the buying season in 1926. It attained 6s. 10d. in August, 1926, fell to 5s. 7d. in November, and then to 5s. 1d. in March, 1927, fluctuating between that level and 5s. 9d. until the middle of 1928.

It is not possible with existing statistical data to provide an accurate comparison between local and oversea prices of wheat. Such a comparison could only be accurately made by the collation of the documents relating to all sales of each season's wheat, or of a sufficiently large proportion thereof to provide a basis for the calculation of reliable averages. These documents are inaccessible.

However, certain data relating to the prices of wheat in local and oversea markets have been brought together in the following table, which provides some interesting particulars of the course of prices in the various markets. Owing to the variation of marketing conditions and the lapse of time between local sales and export and between export from New South Wales and import into the United Kingdom, the prices set against each month are not strictly comparable. The prices in all cases are per bushel of 60 lb.

Month.	Season 1926-27.					Season 1927-28.				
	Shippers and millers' quotes Sydney	Average value declar'd to Customs, Sydney.	Average price c.i.f. Liverpool and Lond'n.	Average import value into United Kingdom.	Average rate of freight to United Kingdom.	Shippers and millers' quotes Sydney.	Average value declar'd to Customs, Sydney.	Average price c.i.f. Liverpool and Lond'n.	Average import value into United Kingdom.	Average rate of freight to United Kingdom.
November ...	s. d. 5 7	s. d. 6 1½	s. d. 7 1½	s. d. 7 1½	s. d. 1 4½	s. d. 5 6	s. d. 6 1	s. d. 6 5½	s. d. 6 8½	s. d. 1 0
December ...	5 5	5 9	6 10½	8 2½	1 4½	5 6	5 10½	6 5½	6 7	1 1
January ...	5 3	5 7	6 9½	7 1½	1 3	5 5	5 6	6 4½	6 5	0 11
February ...	5 2	5 6	6 7½	6 11	1 3½	5 2	...	6 2½	6 4	0 10
March ...	5 1	5 5½	6 8½	6 9	1 3	5 5	5 10	6 7	6 4½	0 10
April ...	5 2	5 5½	6 7½	6 8½	1 0½	5 7	5 10	6 9½	6 7½	0 11
May ...	5 6	5 9½	6 10½	6 9½	1 0½	5 5	5 11	6 10½	6 8	0 11½
June ...	5 6	5 10	7 0½	6 11	1 1	5 4	5 11	6 7½	6 8½	0 11½
July ...	5 5	5 11	6 10½	6 11	0 11½	4 10	6 3½	...	6 8½	...
August ...	5 6	5 9	6 8½	6 11	0 11	...	5 5½	...	6 4½	...
September ...	5 8	...	6 7	6 11	1 0	...	5 0½	...	...	...
October ...	5 8	5 4	6 5	6 11	1 0	...	...	...	...	...

\* New crop, December January shipment.

In considering the above prices regard should be paid to the following factors:—

(1) The average of shippers' and millers' quotes represents the monthly mean of actual buying prices for bagged wheat on trucks Sydney, and they are usually for wheat for prompt delivery. The indications are that the greater part of shippers' and millers' purchases are made in the months of December, January, and February.

(2) The average values declared to the Customs relate to wheat exported in bags and in bulk, and refer to the month of shipment. Owing to delay in transferring the exportable portion of the harvest to the seaboard and the incidence of forward buying the prices in this column are not closely comparable with those in the first column. The quantity and value of

wheat exported oversea each month are shown on a later page. The values represent the amount remaining after deducting the cost of insurance and ocean freight from the oversea selling price, where wheat is sold before export, and from the expected oversea price, where wheat is consigned for sale oversea. In the two seasons shown the average export value of wheat shipped to the United Kingdom was slightly less than the average to all countries. They therefore represent the average f.o.b. value Sydney without any deduction for cost of exchange, selling commission, etc, but with the cost of loading into ship included.

(3) The average price c.i.f. Liverpool and London represents the mean of the weekly prices quoted for Australian wheat in the monthly Crop Report of the International Institute of Agriculture. The quotations are generally those at the close of business for early delivery. They compare very closely with sales reported by cable from England for Australian wheat loading or about to load for export.

(4) The average import value into the United Kingdom also relates to Australian wheat, and represents the total value c.i.f. place of import or, when consigned for sale, the latest market price in England at time of import.

(5) The average rates of freight are the means of the weekly quotes for complete cargoes as shown in the International Crop Report.

The margins between the local and oversea prices are accounted for mainly by ocean freights, but also in part by cost of exchange, insurance, and handling charges, and in part by exporters' profits and overhead expenses.

An interesting comparison between the prices realised for wheat per bushel and per acre by the growers of three important exporting countries, in pre-war and post-war years, is made in the following table:—

Crop Grown in—	Average Farm Value per Bushel of Wheat.			Average Farm Value per Acre of Wheat.		
	United States.	Canada.	New South Wales.†	United States.	Canada.	New South Wales.†
	s. d.	s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.
1909-1913	3 7	*	3 3	2 11 8	*	2 0 1
1923	3 10	2 9	4 2	2 10 7	3 19 8	2 13 1½
1924	5 5	5 1	5 7	4 6 2	3 0 6	4 14 0
1925	6 3†	5 1	5 1	4 0 0	4 16 7	2 18 9
1926	5 2†	4 6	4 6	3 15 11†	4 0 1	3 3 11
1927	4 8†	4 2†	4 7	3 11 6†	4 1 3†	2 1 3†

\* Not available. † Preliminary, subject to revision. ‡ Crops in N.S.W. are marketed six months later than in countries of Northern Hemisphere.

The above averages are as officially determined in each of the countries mentioned. The values quoted for New South Wales are the weighted average prices realised for the whole crop at railway sidings after deducting net cost of bags, due allowance being made for wheat handled in bulk. Dollars have been converted at par rate of exchange in the case of United States and Canada. The marked disparity between the values in Canada and the United States is partly due to the fact that, whereas about two-thirds

of the United States harvest is used for home consumption, only about one-sixth of the average Canadian crop is so required. Home consumption appears to operate in maintaining the value of local wheat, but there is another important consideration in that Australian wheat of average quality frequently commands a higher price in world markets than the first quality grains of either Canada or the United States. It is noteworthy, however, that the main supply of Australian wheat comes on to the world's markets six months after the crops of the northern hemisphere.

During the past four seasons the position of the local wheat-grower as regards price per bushel has compared favourably with that of the grower in Canada, but cost of production and yield per acre play an important part in determining the profitability of wheat-growing.

Comparable data as to cost of production are not obtainable, but the average farm value per acre of wheat grown for grain provides a comparison of the effects of price and yield combined on the returns of farmers per unit of cultivation. The average for the past four seasons in New South Wales has been rather less than that of the United States or Canada. In Canada yields have been higher and average prices lower than in New South Wales. Comparison of the returns of pre-war and post-war years in New South Wales show that the average gross return per acre for the periods of five years has increased by approximately 60 per cent., which is appreciably less than the average increase in wholesale prices.

#### *Cost of Growing Wheat in New South Wales.*

The Select Committee on the Agricultural Industry in 1921 concluded from the data before it that proper harvesting and cultivation of wheat could not be carried out under conditions then existing at a lower cost than £3 5s. per acre (excluding insurance), and that it will require an average of 14 bushels to the acre, with a minimum price of 4s. 8d. per bushel at the nearest railway siding, to recoup this cost to farmers within 10 miles, and "that profit over and above a labourer's wage" accrued to the wheat-grower only when the price realised exceeded that amount.

Various attempts have been made to secure the data necessary to form a satisfactory estimate of the average cost of producing wheat in New South Wales; but as, either for grain or for hay, this depends largely upon the methods of culture, the area cultivated, the distance from the railway, and the soil conditions, the experiences of individual farmers differ very greatly, and analysis of farmers' budgets has given a wide range of results.

The factor which is probably the main cause of these differences is the efficiency of the producers. Wheat being the product of a large number of farmers working independently, it is natural that there should be greater variation in regard to efficiency than in other industries, where the producers are assembled under the supervision of experts, and where there are greater facilities for improving methods of production and for utilising labour and materials on the most economical basis.

However, hypothetical estimates have been made by Mr. A. H. E. McDonald, Superintendent of Agriculture, of the cost of producing wheat on unfallowed and on fallowed land. For the purpose of the estimates the area cropped annually is taken at 250 acres, viz., 230 acres for grain, and 20 acres for hay for horse feed; to crop this area in alternate seasons under the system for fallowing, the total area of the farm would be at least 500 acres. The value of the land was assumed to be £6 per acre, and the value of the plant £680, until 1925-26, when they were increased to £7 and £750 respectively.

In the case of fallowed land one crop is grown in two years, but the stubble and herbage on the land are available for at least six months, and where sheep are kept, as is usually the case, this land is used for pastoral purposes, and the interest for only half the year of fallow is placed against agricultural operations.

Interest on land is allowed at the rate of 6 per cent. per annum, and interest and depreciation on plant at 13½ per cent. Annual allowances are made of £20 for repairs, etc., and 9d. per bag for cartage to rail. Wages for extra help are allowed at award rates for three weeks at time of sowing and nine weeks at harvest. In addition, the cost of 6½ tons of superphosphates and of the bags necessary for handling the wheat is included at market rates each year. A special allowance is made for seed wheat, and it is assumed that the whole of the harvest is sold at average market rates.

On these bases an instructive comparison may be made between the cost of producing wheat under the conditions set out above and the return to a farmer who obtained the average yield per acre. Approximately one-half of the area sown in the State is fallowed, and as particulars of the yield from this land are obtained, it is possible to publish separate estimates for fallowed and unfallowed land. The following table provides an indication of the financial results of the operations of a wheat-grower cropping annually an area of 230 acres for grain and 20 acres for hay for horse-feed, under the conditions described:—

Item.	1924-25.		1925-26.		1926-27.		1927-28.‡	
	14·8 §	19·7 §§	10·0§	13·5§§	13·9§	16·0§§	4·9§	11·2§§
Average yield per acre bushels								
Costs—	£	£	£	£	£	£	£	£
Land—Interest .. ..	90	135	105	157·5	105	157·5	105	157·5
Plant—Interest and Depreciation	90	90	99	99	99	99	99	99
Repairs .. ..	20	20	20	20	20	20	20	20
Wages—Extra help .. ..	45	45	45	45	52	52	52	52
Fertiliser, 6½ tons .. ..	28	28	32	32	34	34	37·5	37·5
Bags .. ..	76	101	48	60	54	66	26	50
Cartage to rail .. ..	43	57	29	36	37	46	17	32
Seed Wheat—50 lb. per acre	62·5	62·5	62·5	62·5	62·5	62·5	62·5	62·5
Total cost of cropping 230 acres for grain† .. .. £	454·5	538·5	440·5	512	463·5	557	419	510·5
Cost of crop per acre† .. ..	£ s. d. 1 19 0	£ s. d. 2 5 10	£ s. d. 1 18 4	£ s. d. 2 4 6	£ s. d. 2 0 3	£ s. d. 2 6 7	£ s. d. 1 16 5	£ s. d. 2 4 5
Value at rail crop per acre ..	4 6 4	5 14 11	2 13 4	3 12 0	3 1 9	3 16 0	1 8 4	2 13 8
Apparent Net Return to Farmer, including payment for his labour other than cartage to rail. } 230 acres	2 6 10	3 9 1	0 15 0	1 7 6	1 1 6	1 9 5	(-) 0 8 1	0 9 3
	£538	£794	£173*	£316*	£247*	£338*	(-) £93	£106

\* Revised. † Omitting value of farmer's labour and abnormal costs occasioned by drought.

‡ Subject to revision. § Unfallowed land. §§ Fallowed land. (—) Indicates a loss.

The corresponding amounts of net return to the farmer, including payment for his labour, in each of the preceding years for which the calculation has been made, were as follow:—1915-16, £376; 1916-17, (—) £28; 1917-18, £113; 1918-19, £16; 1919-20, (—) £103; 1920-21, £1,005; 1921-22, £109; 1922-23, £94, and 1923-24, unfallowed £47, fallowed £187. Details of these estimates were published in previous issues of this Year Book. (—) Indicates a loss. If the farmer carted his own wheat to rail, his net return for his labour would be augmented by the value of cartage shown as an item of costs. If he is the owner of the land and plant used, his income also

embraces the interest allowed on these items, viz., £150 and £202.5, respectively, on unfallowed and fallowed land in 1927-28. These, however, are fairly charged against production. Additional costs of production which might fairly be charged but are not included in the above statement are insurance and shire rates. Latterly the amount of these for unfallowed and fallowed land respectively were:—Fire insurance, £5 and £8; hail insurance, £23 and £31; shire rates, £10.5 and £15.75.

In 1923-24 approximately one-fourth and subsequently more than one-third of the harvest sent to rail was handled in bulk, consequently a considerable proportion of farmers effected large savings in their costs because they required practically no bags. Where farmers have provided themselves with special bulk-handling facilities there should, of course, be an additional allowance *per contra* for interest and depreciation, and where the wheat is carried to silos in bags fastened by clips it is estimated that bags can be used a number of times. In the latter case the farmer's expenditure for bags would be only a fraction of that shown above. In addition there would be a saving of the cost of ramming and sewing, estimated at 2d. per bag. On the other hand, the farmer who sells in bags regains part of the difference because he is paid for the weight of the bags as wheat, which represents a return (at present prices) of 2½d. on the cost of his bag. In addition, bagged wheat is generally sold at from 1d. to 2d. more per bushel than bulk wheat. Still, making allowance for all factors, it is estimated by the Director of Agriculture that farmers handling their wheat in bulk make a saving in their costs amounting to, approximately, 8d. per bag. This should be allowed for in considering the above table.

Although this statement is expressed in terms of money, it does not purport to furnish any guide to the actual profits of individual farmers. It is hypothetical, and illustrates the combined effects of prices, yields, and costs of production on the operations of wheat-farmers in recent years, thereby providing an index of prosperity. It shows the highly speculative nature of the wheat-growing industry.

In considering the estimates here put forward, it is necessary to remember that the calculations are based on the annual average yields for the whole State, which are probably below those usually obtained by skilled farmers engaged exclusively in agriculture. In many cases wheat-growing is carried on in conjunction with other activities, and the profit arising from the production of grain is not the sole factor in the farmer's income, nor in determining whether he will grow wheat.

Again, in the southern districts, farmers generally use fertiliser and fallow their land extensively. Favoured by the natural advantage of operating in a belt of winter rainfall, they generally obtain better yields than the farmers in the central and northern districts.

In view of the explanation given on page 577 the results here published do not reflect accurately the relative profitableness of the policy of fallowing.

#### *World's Production of Wheat.*

Complete and uniform statistics of the whole of the wheat crops of the world in recent years are not available, and have been very defective in many countries since 1916. But for previous years returns were obtainable from nearly every country where wheat was grown extensively. From these, reliable estimates of the fluctuations of the world's wheat production may be made. In the past thirty years a continuous increase has been apparent,

despite the fact that very considerable fluctuations have been shown from season to season. The annual averages, so far as reported, from 1891 to 1915 are shown below:—

Period.	Annual average Wheat Yield of World so far as reported.			
	Bushels.			
1891-1900 ... ..	...	...	...	2,581,000,000
1901-1910 ... ..	...	...	...	3,553,000,000
1911-1915 ... ..	...	...	...	3,837,000,000

The returns from which these totals are compiled do not include all wheat-producing countries. It is estimated by the International Institute of Agriculture that the average annual yield of wheat throughout the world is now approximately 4,600,000,000 bushels, including Turkey, China, and other countries from which data are incomplete or inaccurate. A comparatively small proportion of this enters into international trade.

The following statement, based on information contained in the Year Book of the International Institute of Agriculture, shows the quantity of wheat produced in the leading countries of the world during the past two seasons in comparison with the quinquennial average maintained before the war:—

Northern Hemisphere.	Annual Production of Wheat in Thousand Bushels.			Southern Hemisphere.	Annual Production of Wheat in Thousand Bushels.		
	Average, 1909-13. †	1925.	1926. *		Average, 1909-10, 1913-14.	1925-26.	1926-27. *
Europe—				South America—			
Russia ... ..	\$755,333	\$711,550	807,950	Argentina ... ..	146,752	190,742	220,387
France ... ..	316,973	330,154	251,234	Other Countries ...	32,087	37,106	35,324
Italy ... ..	182,951	240,343	230,163	Total S. America..	178,839	227,848	255,711
Spain ... ..	123,174	162,253	146,294	Australasia—			
Germany ... ..	151,868	117,966	95,230	New South Wales ..	26,717	33,806	47,374
Roumania ... ..	87,008	104,522	110,651	Victoria ... ..	27,656	29,250	46,886
British Isles ...	59,850	53,557	50,893	South Australia ...	22,843	28,603	35,559
Hungary ... ..	169,289	71,525	74,572	Western Australia ..	5,671	20,471	30,022
Bulgaria ... ..	42,086	49,539	40,978	Queensland ... ..	1,250	1,873	374
Czechoslovakia ...	...	89,227	34,059	Tasmania ... ..	806	396	537
Poland ... ..	...	57,795	46,982	Total, Australia ..	84,943	114,505	160,757
Belgium ... ..	14,863	14,447	12,774	New Zealand —	7,885	4,590	7,485
Austria ... ..	67,381	10,649	9,418	Total, Australasia	92,828	119,095	168,242
Yugo-Slavia ... ..	14,715	78,482	71,280	Southern Africa—			
Other Countries ...	41,468	65,632	45,814	Union of South Africa.	6,264	8,316	8,485
Total, Europe††	2,033,559	2,107,641	2,017,342	Southern Rhodesia	12	28	39
Asia—				Other ... ..	...	677	642
British India ...	351,103	324,194	324,268	Total, S. Africa	6,276	9,029	9,166
Japan ... ..	23,586	29,480	28,371	Total, Southern Hemisphere.	277,943	355,972	433,119
Russia in Asia ...	†	†	...	Total, The World, as far as Reported.	3,903,049	4,019,203	4,189,214
Turkey ... ..	†160,009	39,427	...	Countries which have not reported since 1914—			
Other Countries ...	6,988	23,772	34,594	China§§ ... ..	590,000	...	...
Total, Asia††	541,677	416,873	387,233	Other ... ..	230,900	...	...
Northern Africa—							
Egypt ... ..	34,039	36,172	37,130				
Other Countries ...	60,415	69,155	58,109				
Total, N. Africa	94,454	105,327	95,239				
North America—							
United States ...	693,006	665,099	830,649				
Canada ... ..	130,042	410,520	415,308				
Other Countries ...	71,402	9,570	10,224				
Total, N. America	897,450	1,085,189	1,256,281				
Total, Northern Hemisphere.	3,625,106	3,663,231	3,756,095				

\* Preliminary † 1923. ‡ Old boundaries. § New boundaries.

†† Production of Russia in Asia included in Russia above. Figures relate to territory now comprised in the Union of Socialist Soviet Republics. §§ Figures for one year only.



## MAIZE.

Before the development of the wheat-exporting industry of New South Wales maize-growing was the most extensive single agricultural pursuit. It is now the second largest crop grown in the State, but the harvest is small in comparison with that of wheat, and is insufficient for local consumption.

Maize is cultivated chiefly in the valleys of the coastal rivers, where both soil and climate are peculiarly adapted to its growth. On the Northern Tableland also good results are obtained, and maize is gaining popularity as a profitable crop in rotation with hay.

Maize-growing reached its highest development locally in 1910, and since then production has decreased. The following statement exhibits a comparison of the extent of maize-growing since the season 1900-01, with the total value and average value per acre for each crop:—

Season.	Area under Maize for Grain.	Production.		Farm Value of Crops.	
		Total.	Average yield per Acre.	Total.	Per Acre.
	acres.	bushels.	bushels.	£	£ s. d.
1900-01	206,051	6,293,000	30·5	839,032	4 0 6
1910-11	213,217	7,594,000	35·6	791,050	3 14 2
1915-16	154,130	3,774,000	24·5	723,270	4 13 10
1916-17	155,378	4,333,000	27·9	722,250	4 13 0
1917-18	145,754	3,500,000	24·0	875,220	6 0 1
1918-19	114,582	2,092,000	18·3	580,380	5 1 3
1919-20	136,509	4,052,000	29·7	1,502,909	11 0 2
1920-21	144,105	4,176,000	29·0	974,260	6 15 2
1921-22	146,687	3,976,000	27·1	894,670	6 2 0
1922-23	138,169	3,287,000	23·8	890,260	6 8 10
1923-24	166,974	4,623,000	27·7	847,550	5 1 6
1924-25	146,564	4,208,000	28·7	631,230	4 6 2
1925-26	120,955	3,278,000	27·1	805,820	6 13 3
1926-27	128, 5	3,599,000	28·1	1,004,710	7 16 4

A marked decline occurred between 1910 and 1914 in the area sown with maize, and this decline was accompanied by a slight falling off in the average yield per acre.

During the five seasons ending 1909-10, when the average area under maize was 183,611 acres, the average farm value of the crop was £4 8s. per acre. In the next five years the purchasing power of money declined steadily, but the average value per acre cropped increased by only about 8 per cent. Although from that time onwards the return to the farmer per acre showed some improvement it fell further and further behind the general rise in prices, and the average farm value of the crops of the last five years shown above was only £5 19s. 3d. per acre, or approximately 36 per cent. above the average for the quinquennium ending in 1910. In the same period there was a rise of 80 per cent. in the general level of wholesale prices. In 1924-25 the average farm value of the crop per acre was actually lower than the quinquennial average prevailing before the war, but in 1925-26 there was a large reduction both in the area cropped and in the yield, and the value per acre increased by more than 50 per cent. Dry weather conditions in 1927 caused a heavy demand for animal fodders and the price of maize rose further.

The following statement shows the area under maize for grain in New South Wales during the season 1926-27, with the production and average yield in each division:—

Division.	Area under Maize for Grain.	Yield.	
	Total.	Total.	Per Acre.
<b>Coastal—</b>	acres.	bushels.	bushels.
North ... ..	53,536	1,663,365	31·1
Hunter and Manning ... ..	23,133	669,351	28·9
Metropolitan... ..	2,185	125,127	57·3
South ... ..	8,905	290,541	32·6
<b>Total ... ..</b>	<b>87,759</b>	<b>2,748,384</b>	<b>31·3</b>
<b>Tableland—</b>			
Northern ... ..	19,903	338,418	17·0
Central ... ..	4,695	129,510	27·6
Southern ... ..	219	5,589	25·5
<b>Total ... ..</b>	<b>24,817</b>	<b>473,517</b>	<b>19·1</b>
Western Slopes... ..	15,859	375,852	23·7
Central Plains, Riverina, and Western Divisions ... ..	81	777	9·6
<b>All Divisions ... ..</b>	<b>128,516</b>	<b>3,598,530</b>	<b>28·1</b>

The principal factors in the local supply of maize in recent seasons are shown in the following table, based on data revised since the last issue of this Year Book. The particulars given are for calendar years, as the maize crops of the State are harvested between January and August.

Year.	Production.	Import.		Export Oversea.	Available for Consumption. * †
		Oversea.	Interstate. †		
1921 ... ..	bus. 4,176,000	bus. 28,000	bus. 878,000	bus. 20,000	bus. 5,062,000
1922 ... ..	3,976,000	390,000	732,000	2,000	5,096,000
1923 ... ..	3,287,000	1,801,000	477,000	10,000	5,555,000
1924 ... ..	4,623,000	317,000	1,397,000	53,000	6,284,000
1925 ... ..	4,208,000	180,000	1,623,000	51,000	5,960,000
1926 ... ..	3,278,000	1,434,000	324,000	44,000	4,992,000
1927 ... ..	3,599,000	249,000	2,543,000	6,000	6,385,000

\* Subject to adjustment for carry over. † Omitting quantity imported interstate at Newcastle.

The annual requirement of maize is very variable, depending largely on the nature of the pastoral season and the price and size of available supplies. The large importation in 1927 is attributed to the demand for fodder for sheep and other live stock during the acute though short drought.

Included in the quantities available for consumption shown above were the exports interstate which included the following exports by rail, viz., in 1921, 1,000 bus.; 1922, 5,000 bus.; 1923, 8,000 bus.; 1924, 62,000 bus.; 1925, 93,000 bus.; 1926, 23,000 bus.; and 1927, 106,000 bus.

Particulars are not available of the exports interstate by sea nor of the imports interstate by sea at Newcastle, and, to this extent, the above statement is incomplete. Inquiries show, however, that the quantity involved in adjustment for these factors is not considerable.

The imports interstate are derived almost exclusively from Queensland, while the imports oversea are brought from South Africa. A general duty of approximately 2s. 0d. per bushel is imposed on maize imported oversea, except from New Zealand, in which case the duty is approximately 1s. 6d. per bushel.

#### OATS.

Oats is sown in New South Wales mainly as a hay crop, the areas for respective purposes being as follow in 1926-27—Oats for hay, 218,351 acres; oats for grain, 105,115 acres; and oats for green food, 37,173 acres. The combined area—360,639 acres—is 4,754 acres greater than that of the previous season, and this total has not previously been exceeded except in 1923-4 and 1924-5.

The elevated districts of Monaro, Argyle, Bathurst, and New England contain large areas of land on which oats could be cultivated with excellent results, as it thrives best in regions which experience a winter of some severity.

Omitting from account small areas, the highest average yield of oats grain in any division in 1926-27 was 18.9 bushels per acre, obtained from 42,693 acres in the South-western Slopes Division.

The principal divisions in respect of the cultivation of oats for grain were the South-western Slopes, where 42,693 acres produced 807,011 bushels of grain, an average of 18.9 bushels per acre, the Riverina division, with 40,613 acres producing 739,002 bushels, an average of 18.2 bushels per acre, and the Central Tableland with 9,310 acres producing 147,261 bushels, or an average of 15.8 bushels per acre. These three divisions between them produced 89 per cent. of the oats grain grown in the State.

The following table gives statistics of the cultivation of oats for grain since 1900-01:—

Season.	Acres under Oats for Grain.	Production.		Farm Value of Oats for Grain.	
		Bushels.	Bushels per Acre.	Total.	Per Acre.
1900-01	29,383	593,548	20.2	£ 59,355	£ s. d. 2 0 6
1910-11	77,991	1,702,706	21.8	177,360	2 5 6
1916-17	67,111	1,084,980	16.2	128,840	1 18 5
1917-18	82,591	1,455,111	17.6	266,720	3 4 7
1918-19	86,474	1,273,752	14.7	265,350	3 1 4
1919-20	76,117	586,758	7.7	168,700	2 4 4
1920-21	77,709	1,642,700	21.1	241,480	3 2 2
1921-22	69,795	1,169,900	16.8	199,820	2 17 3
1922-23	74,006	1,250,300	16.9	234,530	3 3 5
1923-24	86,693	1,570,300	18.1	268,260	3 1 9
1924-25	123,517	2,511,400	20.3	293,000	2 7 5
1925-26	101,097	1,615,650	16.0	383,720	3 15 11
1926-27	105,115	1,898,750	18.1	339,880	3 4 8

The oats crop is harvested in December, and therefore constitutes the local element of supply for the calendar year following. The sources from which the local crop has been supplemented, and the quantity available for consumption in each of the past five years, is shown in the following table:—

Year.	Production.	Import.		Export, Oversea and Interstate.	Available for Consumption.†
		Oversea.	Interstate.‡		
	bus.	bus.	bus.	bus.	bus.
1921 ...	1,642,700	2,600	983,900	94,200	2,535,000
1922 ...	1,169,900	324,100	957,700	18,800	2,432,900
1923 ...	1,250,800	332,900	1,361,900	2,600	2,943,000
1924 ...	1,570,300	2,000	681,700	15,700	2,233,300
1925 ...	2,611,400	1,900	291,000	43,600	2,766,700
1926 ...	1,615,600	235,900	390,500	19,100	2,223,100
1927 ...	1,898,700	462,700	100,000	49,100	2,412,300

† Subject to adjustment for carry-over.  
‡ Omitting considerable quantities imported interstate at Newcastle.

A duty of 1s. 6d. per cental, or approximately 7d. per bushel of 40 lb., is imposed on oats imported oversea. In 1924 and 1925 practically the whole local supply was produced in New South Wales and other Australian States, but an appreciable part of the supply in 1926 was drawn from New Zealand and Canada.

At present the market for oats is chiefly in the metropolitan and Newcastle districts, and the demand depends mainly upon the price of maize.

The local yield per acre is considerably below that of the important producing countries, and the total yield insignificant compared with the world production, which usually amounts to more than 4,000,000,000 bushels per year. Though most countries produce sufficient for their own requirements, considerable international trade is done in oats. The United Kingdom and France are the principal importers and Russia (formerly), but now the United States, Canada, and the Argentine are the principal world suppliers.

BARLEY.

Barley is produced only on a moderate scale in New South Wales, and local supplies of barley and malt are practically all imported from other States. Although there are several districts where the necessary conditions as to soil and drainage present inducements for cultivation, particularly with regard to the malting varieties, barley is grown mainly in the North-Western Slope and the Riverina Divisions. The areas under crop in other districts are small, and do not call for special notice. The following table shows the area under barley for grain, together with the production at intervals since 1900-01:—

Season.	Area under Barley for Grain.	Production.		Season.	Area under Barley for Grain.	Production.	
		Total.	Average per Acre.			Total.	Average per Acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1900-01	9,435	114,223	12.1	1920-21	5,969	123,290	20.7
1905-06	9,519	111,266	11.7	1921-22	5,031	83,950	16.7
1910-11	7,082	82,005	11.6	1922-23	3,899	55,520	14.3
1915-16	6,369	114,846	18.0	1923-24	4,357	71,910	16.5
1916-17	5,195	73,370	14.1	1924-25	6,638	118,300	17.8
1917-18	6,370	97,824	15.5	1925-26	6,614	105,150	15.9
1918-19	7,980	86,313	10.8	1926-27	5,629	100,260	17.8
1919-20	5,354	38,892	7.2				

Considerable fluctuation has occurred in the area cultivated, while the grain yield has varied greatly, ranging from 4 bushels per acre in 1902-3, when the crop practically failed, to the excellent rate of 21.9 bushels in 1886-7. The average crop during the last ten years has been about 15 bushels per acre.

Of the area cropped for grain in 1926-27, 4,071 acres yielded 72,540 bushels of malting barley and 1,558 acres yielded 27,720 bushels of other barley. In addition, 694 acres were cropped for hay and 4,884 acres for green food.

#### HAY.

The production of wheaten and oaten hay varies in accordance with the seasonal factors controlling yield, the prospects for grain crops and the market demand for hay. In favourable years considerable stocks are stacked for use in dry seasons. The production of lucerne hay, though subject to considerable fluctuation, is more constant than that of wheaten and oaten hay. The following table shows the production of hay in each of the last five years (July to June):—

Kind of Hay.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27
	tons.	tons.	tons.	tons.	tons.
Wheaten ... ..	649,049	702,635	537,057	444,215	393,915
Oaten ... ..	265,413	299,571	400,431	244,520	293,659
Lucerne ... ..	144,611	167,682	213,335	176,336	189,070
Other ... ..	1,906	2,917	1,780	1,204	1,123
Total ... ..	1,060,979	1,172,805	1,152,603	866,275	877,767

#### GRAPES.

For twenty years prior to 1920 the area of vineyards had shown very little variation, but between 1920 and 1924 there was very rapid expansion in the area devoted to grape-growing in New South Wales. This development was largely due to the establishment of the industry on the Murrumbidgee and Cullwaa Irrigation Areas and to the settlement of returned soldiers on agricultural holdings adapted to grape-growing.

The following dissection of the total area cultivated for grapes shows that the greatest absolute increase in area has been in grapes for wine, but that the area of grapes in bearing for drying has increased more than four-fold in a period of six years:—

Area of grapes for—	1919-20.	1922-23.	1923-24.	1924-25	1925-26.	1926-27.
	acres.	acres.	acres.	acres.	acres.	acres.
Table ... ..	2,087	2,189	2,273	2,411	2,464	2,545
Drying ... ..	699	936	1,129	1,585	2,298	2,865
Wine ... ..	4,589	5,396	6,548	6,958	6,977	7,051
Total, bearing ... ..	7,375	8,521	9,950	10,954	11,739	12,461
Not bearing ... ..	3,408	5,213	4,609	3,783	2,726	497 1,323
{ Wine } { Other }						
Grand Total ... ..	10,783	13,734	14,559	14,737	14,465	14,281

While the total area has shown no permanent expansion since 1924 the area in bearing has continued to increase steadily. The rapid diminution in the area of young vines not bearing indicates that there will be a continued retardation in the rate of expansion and possibly a decline in the industry during the next few years.

The quantity of grapes produced for each of the various purposes enumerated and the dried fruits and wine made from them are shown in the following comparison:—

Grapes produced for—	1919-20.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Table ... .. cwt.	53,560	70,260	79,760	71,800	76,740	93,780
Drying—						
Sultanas made ..	4,987	8,139	13,254	12,311	19,386	35,857
Currants made ..	2,465	5,768	6,658	5,953	6,132	9,106
Raisins made ..	2,097	3,114	3,713	6,869	3,783	5,207
Wine (grapes used) ..	105,360	131,860	195,640	165,100	203,940	263,840
Wine made ... gal.	717,893	904,256	1,459,778	1,171,264	1,240,893	1,625,507

The volume of output shows some variation in accordance with the effect of seasonal conditions on average yields. The most striking feature of the table is the rapid increase in the production of sultanas.

Particulars of the production from vineyards in irrigation areas are shown in the section "Water Conservation and Irrigation" of this Year Book.

The most important viticultural district was formerly in the Hunter and Manning Division, the area cultivated for grapes in that Division in 1926-27 being 2,318 acres for wine-making, 268 acres for table use, 3 acres for drying purposes, and 215 acres of young vines. However, the area cultivated for grapes is now largest in the Riverina Division, where, in 1926-27, 3,732 acres were grown for wine-making, 630 acres for table use, 1,992 acres for drying, and 717 acres of young vines. The greater part of these areas are in the Murrumbidgee Irrigation Area.

To meet the crisis which arose in 1924 when the largely increased production of grapes both for wine and for drying caused a serious depression in prices paid to growers, the Commonwealth Government passed four Acts of Parliament, namely, the Dried Fruits Export Control Act, the Dried Fruits Exports Charges Act, the Export Guarantee Act and the Wine Export Bounty Act.

The two Acts first named provided that there should be a Dried Fruits Control Board, consisting of one representative of the Commonwealth Government, three growers' representatives from the States of New South Wales, Victoria, and South Australia, and one from Western Australia; and two members with commercial experience appointed by the Government. Dried fruits are defined as dried sultanas, lexias, and currants. The Board is empowered to constitute a London agency, to arrange conditions governing export, and to accept control of dried fruits for handling, distributing and disposing. For financing the activities of the Board a maximum charge of one-eighth of one penny per pound was imposed on all dried fruits exported from the Commonwealth.

Under the Export Guarantee Act, assented to on 20th October, 1924, the Minister is empowered upon the receipt of a recommendation from any duly constituted advisory body to grant assistance in the export and marketing of primary produce, and under this provision a sum of £17,417 was granted to producers of Doradillo grapes in Australia, of which sum £1,055 accrued to growers in New South Wales to 31st March, 1926.

Large quantities of wine and of dried fruits are produced from grapes grown on the irrigation areas of the Australian States, mainly in Victoria and South Australia, there is a large interstate trade, and the supply exceeds the local demand. In these circumstances an export trade has grown up, but it has been found difficult to obtain satisfactory prices abroad, and the local markets, especially for currants and raisins, have become depressed.

The matter was made the subject of a special report by the Tariff Board in 1927. The bounty of 4s. per gallon made payable under the Wine Export Bounty Act of 1924 on fortified wine exported from the Commonwealth during the three years ended 31st August, 1927, was reduced to 1s. 9d. per gallon as from 1st September, 1927, and, with the exception of certain wine to Canada, to 1s. per gallon as from 8th March, 1928. It was provided by the original Act that the payment of the bounty might be withheld in cases where the Minister for Customs was of opinion that less than a reasonable price had been paid for Doradillo grapes utilised for fortifying spirit used in the wine exported. The Board was of opinion that these provisions would stimulate an export trade in wines which would absorb part of the grapes hitherto used in the production of dried fruits.

The total amount of Wine Export Bounty paid in the Commonwealth in 1924-25 was £28,417, of which £5,908 was paid in respect of 29,538 gallons of wine produced in New South Wales. In the year ended 30th June, 1926, bounty amounting to £32,609 was paid on 163,043 gallons of wine exported from New South Wales, for 1926-27 £47,952 in respect of 239,759 gallons of wine, and in 1927-28 to £19,247 on 113,028 gallons.

#### RICE.

Rice growing trials were made intermittently in New South Wales and other Australian States from 1891 to 1922 with indifferent success, but, in the latter year encouraging results were obtained from trials on the Murrumbidgee Irrigation Area by the use of three varieties imported from America. Further successful trials were made in the 1923-24 season, and in 1924-25 commercial trials were made on 153 acres which yielded approximately 16,200 bushels or 304½ tons of "paddy" rice—an average yield of 106 bushels per acre. The favourable prices received for this harvest, coupled with the high average yield, encouraged many other growers to experiment with the crop, and in 1925-26 a total area of 1,556 acres was sown on the Murrumbidgee Irrigation Area, but a considerable portion of the crops failed wholly or in part owing to the adverse season and the experimental nature of many of the sowings. The yield was very low, viz., 61,100 bushels, or an average of 39.2 bushels per acre. In the year 1926-27 the production was 214,740 bushels from 3,958 acres, there being about sixty-six rice-growers. The area cropped in 1927-28 was approximately 12,000 acres, yielding about 960,000 bushels of "paddy" rice. The price received by growers f.o.r. Leeton was fixed by the rice milling firms at £10 10s. per ton in 1925-26, and £12 per ton in 1926-27, subsequent to the imposition of an import duty of 3s. 4d. per cental on uncleaned rice and 6s. per cental on cleaned rice. In 1927-28 the price was £11 per ton f.o.r. Leeton.

Formerly the consumption of rice in New South Wales ranged between 8 lb. and 10 lb. of cleaned rice per head per year, but the curtailment of supplies during the war years and the subsequent intermittency of supplies from overseas, coupled with a heavy increase in price in 1920, caused a reduction in consumption to approximately 5 lb. per head of population in recent years. On this latter basis it would appear that the annual requirement for New South Wales is approximately 11,500,000 lb. of commercial rice, equivalent to approximately 450,000 bushels (42 lb.) of "paddy" rice as harvested by the grower. It is possible, however, that if local rice can be produced in regular supply at a price attractive to consumers, the local demand can be increased.

The prospects for developing a market in other States and in the oversea countries to which imported rice is now re-exported are contingent upon the possible development of rice growing on irrigation areas in other States and the price at which it can be produced.

The volume of oversea trade of New South Wales in rice in each of the past five years is shown below.

Year.	Import oversea.				Export oversea.			
	Cleaned or partly cleaned.		Uncleaned.*		Cleaned.		Uncleaned.*	
	cwt.	£	cwt.	£	cwt.	£	cwt.	£
1923-24 ...	257,364	204,432	131,156	90,725	89,741	94,702	...	...
1924-25 ...	59,837	58,824	116,695	68,655	96,579	100,734	17	19
1925-26 ...	67,752	60,271	116,015	76,873	74,027	76,624	2,034	1,384
1926-27 ...	129,191	103,814	123,899	77,215	59,385	60,564	29	32
1927-28 ...	77,953	66,192	10,450	6,739	44,580	47,131	...	...

\* Stated to be after removal of husks, viz., 16 to 20 per cent. of weight of "paddy" rice.

After investigation in 1926 the Tariff Board concluded that (a) rice growing in Australia is a commercial proposition; (b) sufficient water and suitable land are available for the cultivation of rice in Australia to meet the local demand; (c) the quality of rice grown so far compares more than favourably with that imported; (d) with added experience and improved appliances the costs of production and the yields per acre should be improved materially.

The evidence submitted to the Board showed that the anticipated fair average yield over a period of two years was about 60 bushels per acre, and the quantity of seed required about 2½ bushels per acre. It was estimated that there were approximately 53,000 acres of land suitable for rice growing on the Murrumbidgee Irrigation Area, of which it was anticipated that ultimately 40,000 acres would be used for the purpose, 20,000 acres being cropped annually with one year's fallow.

BANANAS.

Banana culture developed rapidly in the Tweed River district of the North Coast division from 1914 to 1922, but it has since been almost extinguished by a disease known as "bunchy top." In August, 1923, the Governments of the Commonwealth, New South Wales and Queensland, began a joint investigation. Each contributed £1,500 to defray expenses, and a Bunchy-top Control Board was appointed. Investigations were sufficiently advanced in the latter part of 1926 to permit an announcement that the cause of the disease was an ultra-microscopic agent carried mainly by the banana aphid and by the transmission of diseased plants. The committee concluded that there were no protectionary or remedial measures available, and no resistant or immune banana stock. The committee, however, submitted recommendations for stringent action in controlling the disease, based mainly on the registration of banana plantations, the prompt destruction of all infected plants, the breeding of clean stock, and the prevention of transmission of infected plants.

The following table shows the area cultivated for and the production of bananas in each year since the industry reached its maximum development in 1922:—

Year ended 30th June.	Area.			Production.	
	Bearing.	Not bearing.	Total.	Cas-s.	Farm value
	acres.	acres.	acres.		£
1922 ... ..	4,570	898	5,468	433,533	260,120
1923 .....	3,300	507	3,807	233,526	151,740
1924 ... ..	1,604	250	1,854	94,983	95,410
1925 ... ..	1,002	502	1,504	60,673	47,010
1926 ... ..	1,071	658	1,729	68,167	50,750
1927 ... ..	1,375	468	1,843	64,543	52,710



The quantity of bananas imported from Queensland in 1926-27 was 274,061 cases by rail and 10,221 cases by sea. The quantity imported oversea was 6,594 centals, valued at £7,052. The duty on bananas imported oversea other than from Norfolk Island is 1d. per lb.

#### COTTON.

In view of the diminution of world supplies, a considerable amount of attention was given in 1922 and following years to the work of encouraging the cultivation of cotton in New South Wales. The educative propaganda was undertaken largely by the British-Australian Cotton Association, and the Department of Agriculture increased its experimental activities, prepared leaflets, and distributed seed among growers.

A ginnery was opened at Newcastle on 31st August, 1923, by the British-Australian Cotton Association, but this has since been closed and ginning operations are now conducted at the Grafton Experiment Farm, where 2,100 lb. seed cotton were dealt with in 1927-28. The area sown with cotton in 1923-24 was 544 acres, yielding 55,726 lb. of seed cotton; in 1924-5, 86 acres, yielding 11,617 lb.; in 1925-26, 2 acres, yielding 400 lb., and in 1926-27, 1 acre, yielding 625 lb.

#### FRUIT AND VEGETABLE GROWING.

In 1926-27 the area of land on which fruit (including grapes, bananas, and pineapples) was grown was 88,968 acres, and the value of production therefrom £2,106,870.

The importance of fruit and vegetable growing as industries is shown by the following comparison, which relates to the area and value of production of each of the principal classes of crop on holdings of 1 acre and upwards in extent:—

Kind of Crops.	1925-26.			1926-27.		
	Area not yet Bearing.	Area in Bearing.	Value of Crop.	Area not yet Bearing.	Area in Bearing.	Value of Crop.
	Acres.	Acres.	£	Acres.	Acres.	£
Orchards—Citrus ...	7,860	23,425	742,650	7,854	23,853	762,360
Other† ...	11,770	29,393	815,389	10,518	30,086	814,920
Total	19,630	52,818	1,558,039	18,372	53,939	1,577,280
Vineyards ...	2,726	11,739	296,310*	1,820	12,461	430,730*
Market Gardens ...	...	8,985	682,726	...	8,230	661,443
Separate Root Crops ...	...	23,936	543,658	...	23,552	364,562
Minor Crops of Fruit and Vegetables ...	710	12,913	312,180	598	15,394	387,610
Grand Total ...	23,066	110,391	3,392,913	20,790	113,576	3,421,625

\* Includes value of wine and brandy made from grape juice.

† Excludes passion-fruit,

bananas, pineapples, and berry fruits.

The cultivation of many classes of fruit is capable of considerable expansion, and as there exist large areas of suitable soil with climatic conditions ranging from comparative cold on the highlands to semi-tropical heat on the North Coast, a large variety of fruits can be cultivated. In the vicinity of Sydney, oranges, peaches, plums, and passion-fruit are most generally

planted. On the Tableland, apples, pears, apricots, and all the fruits from cool and temperate climates thrive well; in the west and in the south-west, figs, almonds, and raisin-grapes can be cultivated; and in the north coastal districts, bananas, pineapples, and other tropical fruits grow excellently. Citrus fruits are cultivated extensively, and form the largest element in local fruit production.

With the exception of oranges and mandarins, the fruit-production of New South Wales is far below average demands. In 1927-28 the quantity of fruit imported at Sydney by sea from other States was 1,054,015 cases, valued at £462,846. The quantity of fruit used for jam and fruit-canning in factories in New South Wales during 1926-27 was 10,938 tons, valued at £188,929. Fresh fruit (other than citrus) to the value of £36,572 was exported oversea from New South Wales in 1926-27, in addition to preserved fruit and vegetables, pulp and juice of local origin valued at £37,848, and dried fruits of local origin valued at £18,758. Good seasons generally produce a glut of stone fruits, for which apparently there is no system of efficient handling.

The conditions of the industry were investigated by the Select Committee on Agriculture in 1921, and much valuable information is contained in the report of that committee, and the evidence taken by it.

The extent of cultivation of each important class of fruit on holdings of 1 acre and upwards during the past two seasons is shown in the following table:—

Fruit.	1925-26.				1926-27.			
	Number of Trees not yet Bearing.	Trees of Bearing Age.		Number of Trees not yet Bearing.	Trees of Bearing Age.			
		Number.	Yield.		Number.	Yield.		
Oranges—			bushels.			bushels.		
Seville ... ..	10,693	42,102	51,456	8,779	40,619	41,927		
Washington Navel ...	271,596	331,232	419,422	265,684	374,841	409,446		
Valencia ... ..	201,853	532,532	636,993	221,408	549,255	555,272		
All other ... ..	50,924	491,157	516,273	56,954	456,695	512,391		
Lemons ... ..	47,659	220,024	319,355	43,188	225,644	289,734		
Mandarins ... ..	159,225	517,060	527,923	156,113	527,875	448,880		
Other Citrus ... ..	4,964	12,735	14,598	5,636	15,399	15,879		
Apples ... ..	336,209	832,110	759,742	338,306	848,490	408,363		
Pears—								
Williams ... ..	47,744	155,795	152,670	47,669	160,309	112,345		
All other ... ..	63,108	115,731	125,869	47,391	132,125	73,069		
Peaches—								
Dessert and Drying...	55,059	337,343	400,226	56,863	323,068	356,297		
Canning ... ..	73,229	230,948	317,166	92,653	198,014	226,045		
Nectarines... ..	9,716	28,915	34,083	9,915	27,749	22,290		
Plums ... ..	57,715	212,721	233,695	50,698	205,751	132,945		
Prunes ... ..	186,405	131,153	110,724	114,476	182,234	66,598		
Cherries ... ..	86,995	186,925	134,481	76,003	205,578	52,236		
Apricots ... ..	53,037	134,782	176,834	27,238	149,098	188,020		
Quinces ... ..	5,777	25,944	33,103	7,448	26,113	21,365		
Persimmons ... ..	1,605	11,865	12,413	2,631	11,221	10,444		
Passion Fruit ... ..	†44,291	†153,950	‡3,564	†43,517	†155,024	57,754		
‡All other ... ..	...	...	24,146	...	...	19,427		

† Vines.

‡ Excludes bananas and pineapples.

The above figures include returns from private orchards, which are, however, of comparatively small extent, ranging from 2 per cent. of the total orchards, in the case of citrus fruits, up to about 8 per cent. in the case of some stone-fruits.

*Citrus Fruits.*

Particulars of citrus orchards are shown in the following statement:—

Season.	Area under Cultivation (Citrus Fruits.)			Production.		Value of Production.*	
	Productive.	Not bearing.	Total.	Total.	Average per Productive Acre.	Total.	Average per Productive Acre.
	acres.	acres.	acres.	bushels.	bushels.	£	£ s. d.
1900-01	11,013	3,952	14,965	648,628	59	81,080	7 7 3
1910-11	17,465	2,643	20,108	1,478,306	85	199,300	11 8 3
1920-21	21,990	6,445	28,435	2,009,756	91	477,580	21 14 4
1922-23	20,412	8,036	28,448	1,984,707	97	628,100	30 5 8
1923-24	20,733	8,971	29,704	2,004,020	97	521,730	25 3 4
1924-25	22,709	9,284	31,993	2,292,062	101	609,420	26 16 9
1925-26	23,425	7,860	31,285	2,486,020	106	742,650	31 14 1
1926-27	23,853	7,854	31,707	2,273,529	95	762,360	31 19 2

\* At orchards.

The principal divisions for the cultivation of citrus fruits are as follow:—Metropolitan, 8,955 acres; Hunter and Manning, 8,475 acres; Riverina (which includes the Murrumbidgee Irrigation Area), 6,641 acres, and Central Tableland, 6,178 acres.

The number of orchards of 1 acre or more in extent in which citrus fruit was cultivated during the year 1926-27 was 5,229, and of these the average area was 6.1 acres.

The production of oranges and mandarins has attained such proportions that the growers are obliged to seek oversea markets. During 1926-27 the oversea export of citrus fruits from New South Wales amounted to 52,209 centials, valued at £61,612. Practically the whole of this export was to New Zealand.

Since 1921 steps have been taken by the citrus growers in an increasing number of centres to organise the marketing of their citrus products co-operatively. This is being achieved through the establishment of co-operative packing-houses, six of which operated in the 1926-27 season, with a total pack exceeding 150,000 one-bushel cases, or approximately 6 per cent. of the entire crop of the State. Four large individual producers market their crop through the Central Citrus Association.

Membership of each packing-house society is limited to bona-fide citrus fruit growers in the locality where the society operates, and members are bound for periods usually of two years to send the whole of their production to the packing-house for grading, packing and marketing.

An estimate of each member's crop is made at the beginning of the season, and steps are taken to ensure that regular supplies will be forwarded in order to secure economy in handling. However, supplies are varied periodically in consideration of the state of the market.

The fruit is marketed in four grades, the cases being labelled to show variety, grade and count. Standards are rigorously maintained by each packing-house, and this facilitates successful marketing. Buyers have found that they can rely on the standardised pack and upon getting regular supplies in season, from May to December, and in smaller quantities until February. Consequently a considerable amount of trade is being done direct from the packing-houses to the country districts of New South Wales and to Victoria, Queensland and New Zealand. Prices for New South Wales are fixed weekly on the basis of Sydney values by the packing-houses in consultation with the Central Citrus Association (a federation of the

packing-houses). By direct trading the buyer gets his fruit fresher and cheaper, because time is not wasted in superfluous handlings, no intervening profit is made, and sometimes there is a considerable saving in freight. The packing-house, on the other hand, saves considerably in selling commission, freight and cartage. However, a large quantity is still sent for sale on consignment to Sydney selling agents.

*Fruits other than Citrus.*

The following table shows the area of orchards and fruit gardens, exclusive of citrus orchards, bananas, pineapples, and berry fruits, together with the total value of each season's yield, at intervals since 1900-01:—

Season.	Area under Cultivation (Fruits other than Citrus).			Value of Production.	
	Productive.	Not Bearing.	Total.	Total.	Average per Productive Acre.
	acres.	acres.	acres.	£	£ s. d.
1900-01	25,766	5,503	31,269	270,081	10 10 0
1910-11	20,498	6,748	27,246	271,930	13 5 4
1920-21	27,302	14,309	41,611	577,500	21 3 1
1921-22	27,838	14,031	41,869	547,940	19 13 8
1922-23	26,314	14,500	40,814	732,420	27 16 8
1923-24	26,982	13,436	40,418	748,640	27 14 11
1924-25	27,386	12,631	40,017	750,796	27 8 4
1925-26	29,393	11,770	41,163	815,389	27 14 10
1926-27	30,086	10,518	40,604	814,920	27 0 2

More than one-quarter of the area under fruits other than citrus is situated in the Central Tablelands, where the area occupied in this way is 10,275 acres; 8,221 acres are situated in the south-western slopes, and 8,344 acres in the Riverina, which includes the Murrumbidgee Irrigation Settlement.\*

In contrast with the headway made in organising the marketing of citrus fruits little has been done to improve the system of marketing other fruits. However, at Batlow there has been established an efficient cool store on co-operative lines to provide growers with storage chambers which will enable them to store apples and pears during periods of plenty for sale when supplies are scarce by reason of seasonal changes. In addition to the monetary gain, this system makes it possible for suppliers to guarantee continuity of supplies of fruit over a definite period, to make valuable trading connections, and to inaugurate sound marketing undertakings. During the year 1928 certain of the producers' organisations opened retail stores in the city. Some details of the scheme were published on page 477 of the Year Book for 1924.

\* See pages 614 and 615.

*Fruit Canning.*

The Commonwealth Government paid bounty on certain kinds of fruit canned in 1923-24, and on such fruit exported on or before 28th February, 1925.

The following statement shows the quantity and value of canned fruit produced in factories in New South Wales during each of the past seven years:—

Year.	Fruit Preserved.	
	Quantity.	Value at Cannery.
	lb.	£
1920-21 ... ..	5,287,069	195,939
1921-22 ... ..	7,967,785	207,823
1922-23 ... ..	10,886,367	278,506
1923-24 ... ..	10,521,701	242,255
1924-25 ... ..	17,019,569	408,101
1925-26 ... ..	11,325,850	264,794
1926-27 ... ..	8,240,361	178,320

*Vegetables.*

As agricultural and pastoral statistics are collected only in respect of holdings of one acre or more in extent, they do not provide a complete census of vegetable growing. Nevertheless the information obtained may be considered to provide reasonably complete particulars of operations conducted on a commercial basis.

A considerable proportion of the vegetables produced on holdings of 1 acre and over are grown in market gardens, and data as to individual crops are not available in respect of these. In 1926-27 market garden produce was grown on 1,916 holdings, in areas of 1 acre or more the total area being 8,230 acres, the value of production from which was £661,443. The area and production of individual crops, exclusive of areas cultivated in market gardens or on holdings less than 1 acre in extent, were as follows:—

Crop.	1925-26.		1926-27.	
	Area of Crop.	Production.	Area of Crop.	Production.
Potatoes—	acres.	tons.	Acres.	tons.
Early (Summer) ... ..	4,772	10,431	5,882	11,981
Late (Winter) ... ..	17,959	32,706	16,059	41,307
Sweet ... ..	508	2,625	609	2,818
Onions ... ..	172	610	226	799
Turnips ... ..	480	1,149	735	1,834
Other Root Crops ... ..	45	495	41	55
Pumpkins and Melons ... ..	3,166	11,045	4,103	15,873
		Half-cases.		Half-cases.
Tomatoes ... ..	1,268	221,715	1,789	348,525
		£		£
Peas ... ..	5,984	106,777	6,346	119,450
Beans ... ..	587	12,136	511	16,450
Cabbages ... ..	299	4,634	297	10,580
Cauliflowers ... ..	170	3,052	511	7,920
Other Minor Crops ... ..	48	1,524	43	1,530

MISCELLANEOUS CROPS.

Particulars of miscellaneous crops of the State are shown below:—

Crop.	Average of 5 years ending 30th June, 1926.			Year ended 30th June, 1927.		
	Area.	Production.	Yield per acre.	Area.	Production.	Yield per acre.
<b>Hay—</b>	acres.	tons.	tons.	acres.	tons.	tons.
Wheaten ... ..	519,890	581,608	1.12	311,213	393,915	1.27
Oaten ... ..	229,792	296,026	1.29	218,351	293,659	1.35
Lucerne ... ..	84,163	177,744	2.11	95,103	189,070	1.99
Other ... ..	1,691	1,954	1.16	949	1,123	1.18
Green Fodder ... ..	340,830	£719,364	£2 2s.	217,439	£729,005	£3 7s.
Sown Grasses ... ..	1,974,689	...	...	2,036,891	...	...
Rye (Grain) ... ..	1,522	22,944	15.1	862	15,070	17.5
Broom Millet—						
Grain ... ..	2,080	13,298	6.4	3,046	18,490	6.1
Fibre ... ..		11,914	5.7		14,881	4.9
<b>Root Crops—</b>		tons.	tons.		tons.	tons.
Potatoes ... ..	24,015	51,010	2.1	21,941	53,288	2.4
Other ... ..	1,277	4,570	3.6	1,611	5,836	3.6
<b>Miscellaneous Crops—</b>		cwt.	cwt.		cwt.	cwt.
Tobacco (Dried Leaf)	1,493	12,234	8.2	881	6,405	7.3
<b>Sugar Cane—</b>		tons.	tons.		tons.	tons.
Crushed ... ..	6,892	191,173	27.74	10,128	230,254	22.7
Stand-over ... ..	9,915	...	...	8,181	...	...
<b>Grapes—</b>		cwt.	cwt.		cwt.	cwt.
For Drying Purposes	1,347	*21,193	*15.72	2,865	*50,170	*17.5
Young Vines ... ..	4,234	...	...	1,820	...	...

\* Dried fruit.

Details respecting each of the above crops are shown in the "Statistical Register of New South Wales."

The greater part of the area cultivated for hay is sown with wheat, but cultivation for oatens hay is also very extensive. Lucerne is more or less a permanent crop, and in recent years the area devoted to it has increased. The area of land cultivated expressly for green fodder is not known. The area shown above includes areas which failed to mature for grain or hay and were used as green fodder for stock. Lands sown with grasses are not usually cultivated, being used principally for grazing dairy cattle in the North Coast district.

Only about 10 per cent. of the tobacco and about 7 per cent. of the sugar used annually in New South Wales are grown within the State.

ENSILAGE.

New South Wales is liable at intervals of fairly regular recurrence to long periods of dry weather. It consequently lacks a permanent supply of natural fodder, and the necessity arises for conserving the abundant growth of herbage of good seasons, in the form of ensilage, for use when natural pastures are exhausted. To facilitate such conservation the Department of Agriculture offers free advice concerning material and method of constructing silos. Farmers may sink pits for the same purpose at small expense.

The possession of stocks of ensilage is highly advantageous to the prosecution of dairy-farming in the districts of the coast, where the climatic conditions are unfavourable to the growth of winter fodder.

The quantity of ensilage made in the State in 1926-27 was 48,718 tons, made on 407 farms, and valued at £97,312; 14,498 tons were made in coastal districts, and 25,191 tons on the Western Slopes.

The quantity of ensilage made varies considerably from year to year. The largest quantities of recorded production were in 1909, when 34,847 tons were made on 364 farms, and in 1924-25 when 35,145 tons were produced on 269 farms.

Considering the liability of the State to periods of severe drought, the small efforts made to conserve the fodder of abundant seasons are disappointing. As a means of conserving fodder, the making of ensilage is of great potential value. Schemes of fodder conservation as insurance against drought have been considered from time to time, but no project has yet been initiated.

#### PLANT DISEASES ACT, 1924.

This Act was assented to on 17th December, 1924, and replaced the Vine and Vegetation Diseases and Fruit Pest Act, 1912. By it the Governor is empowered to prohibit by proclamation the introduction into the State of any plant, fruit or other thing which in his opinion is likely to introduce any disease or pest into the State. He is authorised to appoint specified places of entry into the State for any specified kind of plant or fruit, and to appoint quarantine stations for the reception of anything of any nature which has come in contact with plants or fruit. He may also require owners or occupiers of any land or premises to take such measures as are specified for the treatment of any disease or pest. Power is also given for the seizure of any commodity dealt with in any way contrary to any direction contained in a proclamation, and the occupiers of any land or premises in which any proclaimed disease or pest appears, are required to give notice thereof within twenty-four hours.

Inspectors have been appointed for the enforcement of the Act, with power of entry and search in the execution of their duty. Such inspectors may examine any nursery and issue a certificate as to its freedom from any particular disease. Power is also given to destroy plants in any abandoned nursery or orchard. The area of orchards registered as the end of 1927 was about 75,500 acres, and the amount of registration fees for 1927 was £3,774.

Every orchard and nursery not exempted by the Minister is required to register and to pay a fee not exceeding 1s. per acre of the land comprised in the nursery or orchard. These fees are to be paid into a special account at the Treasury and to be expended for such purposes in furtherance of the interests of fruit-growers as the Minister may approve.

The Act also provides that no person shall sell any fruit or vegetables unless they are so arranged or packed that the outer layer or shown surface is a true indication of the fair average quality of the whole. If more than 10 per centum is substantially inferior to the outer layer or shown surface it shall be *prima facie* evidence that the fair average quality of the fruit or vegetables is not truly indicated.

#### *Fruit Census, 1923.*

In 1923 a special census was taken to ascertain the number of trees of each variety of each kind of fruit planted in New South Wales, in order to facilitate consideration of the problem of marketing.

The results were briefly summarised on page 504 of the Official Year Book for 1923, and were published in full in the *Agricultural Gazette* of February, 1925.

*Registration of Farm Produce Agents.*

By the Farm Produce Agents Act, which came into force on 1st January, 1927, it was made an offence for any person to carry on the business of farm produce agent without first obtaining a license under the Act, and at the end of November, 1927, 274 agents had been registered. Of these 242 were situated in Sydney, 4 in Parramatta, 4 in Newcastle, 4 in West Maitland, 3 in Bathurst and the remaining thirteen at other country centres. Stock and station agents and auctioneers do not in general come within the definition of farm produce agent contained in the Act, and companies carrying on business along co-operative lines are not required to register. Licenses are issued on condition that the applicant furnishes a fidelity guarantee for £500, is above the age of 21 years, has not (during the preceding five years) been declared guilty of fraud nor convicted of an offence punishable by imprisonment for a term exceeding three months, and is not an undischarged bankrupt. A person disqualified from holding a license is also disqualified from holding shares in any corporation or being a partner in any firm registered under the Act. The license remains in force for the current calendar year, and the annual license fee is £1.

It is provided that an account of the sale of all farm produce shall be rendered by every farm agent to his client within seven days of its disposal, and the registrar under the Act is empowered to inspect the books, documents, and accounts of any agent and inform any client of the agent of the result of such inspection so far as it directly concerns him. An agent furnishing false accounts is liable to imprisonment for three years with hard labour. All moneys received by an agent on account of sales must be banked in a trust account and duly paid to the client within fourteen days after the sale. Such trust accounts are protected against the creditors of the agent.

Agents and their employees are debarred from purchasing any produce received for sale without obtaining the consent of their client, and they are forbidden to destroy farm produce which is in a marketable condition with a view to raising the price.

It is made an offence for any person knowingly and fraudulently to spread false reports calculated to affect the price of farm produce. Fore-stalling and misrepresentation are prohibited, and commission charges are regulated.

Farm produce is defined as fruit, vegetables, potatoes, and other edible roots and tubers, eggs, poultry, and any other article prescribed by regulation under the Act.



## WATER CONSERVATION AND IRRIGATION.

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The smallness and intermittency of the rainfall and the high evaporation over a wide area of New South Wales necessitate and at the same time restrict the work of conserving water for agricultural and pastoral purposes. On page 12 it is shown that approximately 78,250,000 acres of land in the western parts of the State—comprising nearly 40 per cent. of its total area—receive an average annual rainfall of 15 inches or less. The possibilities of irrigation over this wide area are still further limited (except in the extreme south) by the lack of large permanent streams of water. For this reason not only agricultural but also pastoral activities are restricted on these lands, which embrace mostly the plains of the Western Division.

Adjoining these on the east is a strip of territory varying from about 50 to 150 miles in width, stretching through the whole length of the Central Plains and Riverina, and containing approximately 37,000,000 acres of land (18·6 per cent. of the area of the State) which receives on the average from 15 to 20 inches of rain per year. It is principally in this region, in more favoured districts further east, and in the Murray Valley to the south, that irrigation schemes have been put forward to supplement the deficient rainfall.

Across the northern and north-western hinterland there stretches an artesian water basin of 53,000,000 acres, and in the south-western corner there exists a sub-artesian basin rather smaller in extent. Artesian bores and wells have made this water available at a considerable number of places.

The relation of rainfall to productivity in the various districts of the State is discussed further in the chapter "Rural Settlement" of this Year Book.

### *Policy and Control.*

The initiation of successful irrigation projects necessitates exhaustive preliminary investigations, frequently over long periods, into the amount of rainfall, evaporation, river flow, seepage, etc., as well as the making of contour surveys and investigations by boring and the compilation of records.

The successful conduct of schemes involves constructional work of all kinds, provision and control of settlements, of community services, of factories for handling products, of finance and other important matters. The whole of these functions have been entrusted to the Water Conservation and Irrigation Commission, consisting of three members, including the Minister for Agriculture. This Commission controls the whole of the waterworks of the State (other than town and domestic supplies), except the storage works under construction in connection with the Murray River, which are supervised by the Murray Waters Commission, upon which a member of the New South Wales Commission sits.

Private waterworks are controlled for the most part under the Water Act, 1912, as amended in 1924, which consolidates the Acts relating to water rights, water and drainage, drainage promotion, and artesian wells. Part II

of the Act vests in the Crown the right to the use, flow, and control of the water in all rivers and lakes which flow through or past or are situated within the land of two or more occupiers. Private rights have been abolished, and a system of licenses established for the protection of private works, of water conservation, irrigation, and drainage, and the prevention of inundation of land.

#### IRRIGATION SETTLEMENTS.

##### *The Murrumbidgee Irrigation Areas.*

A large storage dam, capable of holding 771,640 acre-feet of water, has been constructed at the head of the Murrumbidgee River, to retain the flood waters, which are released for use 250 miles lower down the river on the extensive irrigation areas of Yanco and Mirrool. A movable diversion weir has been provided about 240 miles below the dam, to turn the required amount of water from the river into the main canal leading to the irrigation settlements. Particulars of the extent of the dam were published in the Year Book, 1921.

At 30th June, 1927, there were under occupation 1,936 farms, covering a total area of 117,519 acres, or approximately one-third of the total area to be embraced in the completed scheme. With the aid of irrigation the soil and climate are suitable for the profitable production of apricots, peaches, nectarines, prunes, pears, plums, certain varieties of apples, almonds, melons, cantaloupes, and citrus fruits; also wine and table grapes, raisins, sultanas, figs, olives, and most varieties of vegetables and fodder crops. Dairying and pig-raising are being conducted successfully by settlers in the areas, and stock are raised in the drier parts.

Farms varying in size from 1 acre to 250 acres are made available from time to time. The average agricultural farm is from 15 to 25 acres in extent, but to suit the requirements of dairymen and other stock farmers, blocks of larger areas have been made available. These include non-irrigable or "dry" areas, in addition to the irrigable portion. The tenure of all farms is perpetual leasehold, involving residence, but provision for irrigation purchases was made in 1924, and in 1926 the first conversions were made. A specified number of acre-feet of water is allotted at a fixed charge to each holding. In 1926-27 the quantity of water distributed was 104,158 acre-feet, and the approximate area watered 59,795 acres. The total revenue from water rights was £23,769, and from sales of additional water or of water to holdings with no water rights was £22,370. An acre-foot of water means such a quantity as would cover 1 acre with water 12 inches deep.

Subject to such conditions as to security and terms of repayment as the Commission may require, settlers may obtain an advance of money, or have suspended the payment of amounts owing, in order to assist them in developing their holdings. Such advances are limited to the total amount of funds made available by Parliament for the purpose. Special provision was made for monetary assistance to returned soldier settlers who took up farms with little or no capital. At 30th June, 1927, the amount of capital advances to settlers was £1,741,353. The Rural Bank Commissioners also have statutory powers to make loans upon mortgage of irrigation farm leases.

Towns and villages have been established at convenient centres on the Yanco and Mirrool irrigation areas. The principal settlements are Leeton, Griffith, Yanco, and Yenda. Until the establishment of two shires within the area on 6th January, 1928, the Commission performed municipal functions.

Abattoirs, and butter, cheese, bacon, and fruit-canning factories were established on the areas by the Commission to treat the produce of the settlers. The butter and bacon factories and the abattoirs were sold to the Murrumbidgee Irrigation Dairy Co-operative Society Ltd. on 1st July, 1921, and are now operated by the settlers, in conjunction with a butchery and agistment paddocks. Except within shires the Commission provides such municipal services as domestic water and electricity supplies, and supervises matters of health and sanitation, besides engaging in trading operations to supply settlers with live-stock, stores, and nursery stock. Co-operative enterprise is receiving every encouragement, and a number of co-operative organisations have been established to handle produce and supply the settlers' requirements.

An experiment farm is maintained at Yanco under the control of the Department of Agriculture; also a viticultural nursery at Griffith (in the Mirrool irrigation area) for the propagation of vines on phylloxera-resistant stocks. An Agricultural High School has been established by the Department of Education at North Yanco on the irrigated area.

The capital debt on the works utilised in connection with the area as at 30th June, 1927, was £8,735,466, including £8,545,652 on loan account, £179,316 from the Public Works Fund (revenue), £4,035 from consolidated revenue, and £4,035 owing to sundry creditors. In addition a sum of £3,903,333 had been paid from the Consolidated Revenue of the State to meet interest charges accrued on loan expenditure from the establishment of the works to 30th June, 1927.

The principal items of capital expenditure after deducting remissions and outstanding vouchers were: Burrinjuck Reservoir, £1,645,464; main canal and weir, £1,269,662; construction of channels, etc., £1,296,993; acquisition of land £1,063,761; advances to settlers, £1,741,354; surveys, clearing, subdivision and roads, £590,032; factories, machinery, and plant, £552,233; and buildings, water supply, etc., £284,246.

The irrigation settlement is as yet only partly developed and may be regarded more as an investment than as a productive undertaking.

During the season 1926-27 the total area of crops irrigated in the State was 89,528 acres, including 18,836 acres of oats, 15,699 acres of fruit, 13,465 acres of lucerne, 22,474 acres of wheat, 6,995 acres of vines, 4,743 of market gardens, and 3,958 acres of rice. The total value of agricultural and pastoral production on the area was estimated at £884,000 in 1926-27, £800,000 in 1925-26, £720,000 in 1924-25, £600,000 in 1923-24, and £575,000 in 1922-23. Details of the quality of production will be found in a statement on a later page.

#### *Hay Irrigation Area.*

The irrigation area at Hay, on the Murrumbidgee River, consists of about 4,500 acres of land, part of which was made available in 1893. Prior to 30th June, 1912, the area was controlled by a trust appointed in 1897. It

was placed under the control of the Commissioner of Water Conservation and Irrigation on 1st July, 1913. The area used for irrigation purposes on 30th June, 1927, was 1,035 acres, held by 63 settlers, in 107 irrigation blocks, ranging from 3 acres to 30 acres in size; generally the term of lease is thirty years, and the annual rental from 5s. to 12s. per acre. In addition, 2,884 acres of non-irrigated land had been taken up in 52 blocks for short terms up to five years' duration with rentals of 1s. to 10s. per acre. The water-rate is fixed from time to time; during 1926-27 it was 30s. per acre per annum. The pumping machinery consists of a suction-gas plant, supplying two engines of about 55-brake horse-power each, working two centrifugal pumps, with an average combined capacity of about 4,000 gallons per minute. The total quantity of water pumped was 4,306 acre-feet. There were nine waterings, the average area watered by each being 1,005 acres. Dairying and pig-raising are the principal industries, the cultivation of fruit being very limited. The expenditure by the State on maintenance for the year 1926-27 was £2,575 and the revenue £2,077.

#### *Curlwaa Irrigation Area.*

The Curlwaa irrigation area, situated at Wentworth, on the Murray River close to the junction of the Darling, consists of 10,550 acres, made available in 1894, of which 1,939 acres were held in 150 irrigated holdings by 115 settlers on 30th June, 1927. Practically the whole of this area had been taken up in areas varying from 1½ acres to 37 acres. There are a number of non-irrigated farms containing 7,572 acres, inclusive of 680 acres of irrigable land held on day to day lease pending application. The remainder of the area comprised 241 acres of irrigated holidays vacant, and 122 acres of dry areas vacant and 893 acres of roads, channels and reservoirs. During the year 1926-27 the area under fruit was 1,274 acres, of which 1,068 acres were bearing. The estimated value of the production from the settlement in 1922-23 was £58,900, in 1923-24 £75,700, in 1924-25 £72,973, 1925-26 £73,804, and 1926-27 £86,400, the latter amount including dried fruit—£62,464, fresh fruit—£19,606. The quantities were as shown on the next page. Oranges, peaches, apricots, nectarines, pears, grapes, sultanas, and currants are grown.

The pumping plant consists of a suction-gas engine in three units, having a total capacity of 12,500 gallons per minute. The maximum lift is 36 feet. The main channels measure about 9 miles and 10 chains in length. The quantity of water pumped from the Murray River in 1926-27 was 5,317 acre-feet and the average area watered at each of the six waterings was 1,548 acres. The rainfall for the year was 4.97 inches.

The land is leased for periods not exceeding thirty years, the annual rent for irrigated blocks at the present time varying generally from 3s. to 10s. per acre, though the rent ranges to 35s. per acre on blocks set part in recent years; rentals for non-irrigated blocks range from 7d. to 5s. per acre. The rate for water is fixed from time to time by the Commission, and is at present 20s. per acre per annum, except in a few special cases, and there is in addition a general rate of 14s. per acre in productive bearing. Each lessee is entitled to receive a quantity of water equivalent to a depth of 30 inches per annum, limited to 4 inches in any one month. During the year 1926-27 the expenditure on maintenance was £5,271, and the revenue £3,140.

## PROGRESS OF IRRIGATION SETTLEMENTS.

Comparative statistics of the irrigation settlements in New South Wales are shown in the following statement; the particulars for 1910-11 relate to the Hay and Curlwaa settlements only, as farming operations on the Murrumbidgee area did not commence until the season 1912-13:—

Particulars.	1910-11.	1915-16.	1926-27.			
			Murrumbidgee.	Hay.	Curlwaa.	Total.
Cultivated Holdings ... .. No.	86	771	1,495	3	144	1,642
Area under—						
All Crops ... .. Acres	862	22,488	66,491	28	1,745	68,264
Grain ... .. "	2	4,287	31,021	...	...	31,021
Hay and Green Food ... .. "	399	13,631	16,491	25	34	16,550
Grape Vines—						
Bearing ... .. "	186	353	4,617	...	524	5,141
Not yet Bearing ... .. "	74	486	529	...	400	929
Orchards—						
Bearing ... .. "	58	440	7,771	3	483	8,257
Not yet Bearing ... .. "	139	2,896	5,609	...	303	5,912
Live Stock—						
Horses ... .. No.	239	3,300	6,256	124	194	6,584
Cattle—						
Dairy ... .. "	484	2,461	*4,220	*352	*...	*4,572
Other ... .. "	530	1,488	5,485	276	67	5,828
Sheep ... .. "	703	32,440	28,499	989	21	29,509
Swine ... .. "	134	2,799	3,123	134	21	3,278
Production—						
Wine ... .. gal.	...	650	1,156,730	...	...	1,156,730
Sultanas ... .. cwt.	...	2,778	15,836	...	7,797	23,633
Raisins ... .. "	1,009	1,499	525	...	2,062	2,590
Currants ... .. "	...	1,848	1,953	...	3,792	5,745
Oranges—						
Washington Navel ... bush.	...	...	121,579	64	10,927	141,570
Valencia... .. "	273	4,988	67,211	80	4,137	71,428
All other ... .. "	...	...	11,590	...	934	12,574
Lemons ... .. "	...	...	46,205	60	1,891	48,156
Peaches—						
Dessert and Drying ... .. "	...	...	56,708	160	17,056	73,924
Canning ... .. "	2,467	25,861	171,467	...	540	172,007
Nectarines ... .. "	...	...	403	48	1,296	1,747
Apricots ... .. "	2,905	10,690	136,731	...	10,983	147,714
Prunes ... .. "	...	...	21,590	...	1,923	23,513
Butter ... .. lb.	5,100	189,420	840,505	1,141	540	842,186
Bacon and Ham ... .. "	820	8,865	379,500	1,201	...	380,701

\* Cows in registered dairies only.

The area devoted to fruit-growing has increased steadily, but nearly half of the area planted with fruit trees has not yet reached the stage of production. Oranges, peaches, apricots, and prunes are the principal kinds of fruit produced. The yields of these may be expected to increase rapidly as the young trees become increasingly productive.

The following statement shows the number of fruit trees of the principal varieties, distinguishing the productive from those not yet bearing:—

Fruit trees.	1910-11.		1915-16.		1926-27.	
	Pro-ductive.	Not yet Bearing.	Pro-ductive.	Not yet Bearing.	Pro-ductive.	Not yet Bearing.
Orange—						
Seville ... ..					313	30
Washington Navel ..	202	3,606	6,509	67,020	138,337	149,605
Valencia ... ..					77,956	73,064
All other ... ..	119	136	439	9,388	11,231	5,520
Lemon ... ..	...	...	*	*	28,490	8,065
Mandarin ... ..	...	...	*	*	6,714	15,660
Peach—						
Dessert and Drying...	1,752	4,503	16,812	101,113	40,073	9,994
Canning ... ..					147,652	86,476
Nectarine ... ..					4,650	1,410
Apricot ... ..	2,033	2,969	5,927	42,066	106,841	18,120
Prune ... ..	...	...	...	10,290	82,738	35,918
Plum ... ..	98	282	632	5,897	7,074	3,375
Pear—						
Williams ... ..	165	1,096	2,278	14,336	16,352	6,462
Other ... ..					8,477	3,481
Apple ... ..	400	718	1,256	3,065	14,538	67,792
Fig ... ..	201	38	303	3,395	2,038	6,127
Almond ... ..	...	140	582	5,446	11,606	20,353

\* Not available.

It is noteworthy that while the growing of oranges is the most extensive activity, the development of peach-growing, especially for canning, has been very rapid, and that apricots, prunes, pears, and apples are also receiving considerable attention.

IRRIGATION PROJECTS.

*Murray River.*

This scheme is being carried out under agreement between representatives of the Commonwealth, New South Wales, Victorian, and South Australian Governments, signed on 9th September, 1914, and an amending agreement, signed on 8th August, 1923, replacing the agreement of 23rd November, 1920.

The outstanding matters provided by the original and amending agreements were:—(a) Provision of water for irrigation purposes; (b) preservation of facilities for navigation; (c) allotment of equitable proportions of the available water for use by settlers in New South Wales, Victoria, and South Australia; (d) equal apportionment of the costs between the four Governments ratifying the agreement; (e) the appointment of a joint commission to carry the agreement into effect. In 1922 a proposal was made to use the Hume Reservoir for hydro-electric development and to increase the capacity of the reservoir as designed.

It has been agreed to construct outlet works at the Hume Reservoir suitable for generating hydro-electricity. The estimated cost of such works (£40,000) is to be borne in equal shares by the Governments of New South Wales and Victoria, and they will have the sole use of any power generated at the reservoir. It was also decided at the end of 1926 that the design of the works should be amended to provide for a storage capacity of 2,000,000 acre-feet. The additional water so provided is to be used for meeting the

present allocations provided under the River Murray Agreement and as a reserve for dry years subject to the discretion of the River Murray Commission.

The agreement was brought into operation on 31st January, 1917, and it was provided that the works were to be completed within twelve years from that date. Though minor operations on locks and weirs had been carried out in South Australia, construction of the main reservoir was not begun until the 28th November, 1919. It was stated in the report of the River Murray Commission (1920-21) that the work could not be completed within the prescribed time.

The original scheme agreed upon provided for the construction of (a) a dam and storage reservoir to be known as Hume Reservoir, with a capacity of one million one hundred thousand acre-feet of water, at a cost of £1,353,000, situated on the Murray River 10 miles above the town of Albury; from this reservoir waters are to be released to supply the needs of irrigation settlements in New South Wales and Victoria, and to provide sufficient waters for permanent navigation on the river; (b) for storage works in connection with Lake Victoria near the western boundary of New South Wales, with a capacity of 500,000 acre-feet, at a cost of £429,674 as further revised on 14th June, 1924—the waters so impounded are to be utilised for irrigation purposes in South Australia, and to maintain the flow of the river for navigation purposes; (c) thirty-five weirs and locks, at intervals along the river and its tributaries, to control the flow of the river. One lock is to be constructed by the Victorian and New South Wales authorities at a point below the confluence of the Murray and Darling Rivers. The total cost of all joint works originally agreed upon was estimated (on the basis of pre-war conditions) at approximately £4,663,000, but it is anticipated that the ultimate cost of the revised scheme of works will be approximately £14,000,000.

At the end of January, 1924, the estimated cost of the Hume reservoir was revised as follows:—Estimated cost of reservoir of 1,100,000 acre-feet capacity, £2,547,000; estimated cost of special outlet works for generating electricity, £40,700; approximate cost of additional work necessary to permit of the reservoir being increased at a later date to 2,000,000 acre-feet, £350,000; total, £2,937,700. In January, 1927, the estimated cost was revised to a total of £4,563,100, viz., £2,288,100 for the New South Wales section and £2,275,000 for the Victorian section of the work. In view of the increased expenditure contemplated the Commission decided to limit construction during the six years ended 30th June, 1932, to the completion of the Hume Reservoir to a capacity of 2,000,000 acre-feet, the completion of Lake Victoria storage, of all weirs and locks up to No. 11 (Mildura), of weir and lock No. 15 (Euston), and the construction of other weirs and locks specially required for the development of lands along the Murray River.

When the scheme is carried out the river will be "canalised," or converted into "a succession of pools," whose levels may be regulated so that they will furnish permanent supplies for irrigation, as well as a means of navigation on the most important waterway of Australia. A minimum depth of 5 feet of water will be maintained as far as Echuca, the present head of navigation. The allotment of the available water to the respective States was approximately two-fifths of the total each to New South Wales and Victoria, and one-fifth to South Australia.

The total area of land irrigable from the River Murray and its tributaries is estimated to be approximately 1,500,000 acres, and, an investigation is in progress to determine how the irrigable lands of New South Wales may be used most profitably.

The works at Lake Victoria storage have been practically completed; the total capacity when completed will be 514,000 acre-feet. The quantity of water in the storage on 31st October, 1926, was 479,590 acre-feet, and on 30th June, 1927, 184,720 acre-feet.

The following statement shows particulars of the expenditure on each of the principal works in hand or completed at 30th June, 1927:—

Constructing Authority.	Work.	Expenditure to 30th June, 1927.	Remarks.
		£	
New South Wales and Victoria.	Hume Reservoir... ..	2,136,567	Estimated Cost £4,563,100.
	Torrumbarry Lock .. ..	284,889	Completed
	No. 15 Lock (Euston) .. ..	.....	Estimated Cost, £302,400.
	No. 11 Lock (Mildura) .. ..	353,788	Estimated Cost, £320,000.
	No. 10 Lock (Wentworth) ..	173,477	Estimated Cost, £337,000.
	Lake Victoria Storage ... ..	443,697	Practically Completed.
South Australia ... ..	No. 9 Lock ... ..	302,696	Practically Completed.
	No. 6 Lock ... ..	.....	Estimated Cost, £276,000.
	No. 5 Lock ... ..	303,369	Practically Completed.
	No. 4 Lock ... ..	75,226	Estimated Cost, £287,359.
	No. 3 Lock ... ..	241,325	Completed.
	No. 2 Lock ... ..	222,353	Estimated Cost, £276,195.
	No. 1 Lock ... ..	229,045	Completed.

In some cases the estimates of cost are exclusive of subsidiary works.

The total amount expended to 30th June, 1927, was £5,105,730, the amount expended by each constructing authority being—New South Wales, £1,409,059; Victoria, £1,660,179; South Australia, £2,034,282; joint expenditure, £2,210. The amount expended on the works during 1925-26 was £785,297, and during 1926-27 £880,542.

Each of the four contracting Governments contributed £227,500 during the year 1926-27. The amount of contributions paid by the Commonwealth and by each of the three State Governments concerned to 30th June, 1927, was £1,283,625.

The outflow of the Murray River at Renmark in 1926-27 was 10,417,218 acre-feet, the average being 8,500,000 acre-feet per year. In 1926-27, 608,162 acre-feet of water were diverted from the river and its tributaries in New South Wales; 1,312,640 in Victoria, and 92,268 above Renmark, in South Australia. The bulk of the diversions in South Australia were below Renmark.

#### *Cooamealla Irrigation Area.*

On 20th September, 1922, the Murray Lands Advisory Committee recommended that an irrigation district of approximately 20,000 acres (including 1,200 acres of the adjacent irrigation area at Curlwaa, near Wentworth) should be established and subdivided into farms of from 15 to 20 acres. The area actually set aside comprises approximately 34,800 acres. The work is proceeding in stages, and operations in the first section of 3,090 acres were commenced in July, 1923. By June, 1927, an area of 2,314 acres had been subdivided into 129 horticultural farms and 43 residential holdings. The average area of horticultural farms is 17.4 acres, of which 15.4 acres are irrigable. At the end of June, 1927, 71 farms and nine residential blocks comprising 1,362 acres were occupied. The tenure of the lands taken up is mainly farm purchase extending over thirty-six and a half years, but seven blocks are under perpetual lease and four under permissive occupancy.



Water for irrigation is pumped from the Murray River by means of a steam-driven pumping plant with a capacity of 38 cubic feet per second through a steel rising main 5 feet 6 inches in diameter. This main will be of sufficient capacity to supply the whole area of about 8,000 acres which can be supplied by the lower lift which is at present 81 feet. When the lock and weir at Mildura is completed the lift will be reduced to 74 feet.

The total loan expenditure on the work to 30th June, 1928, was £124,168.

#### *Lachlan River.*

Investigations into the irrigation possibilities in connection with this river have been conducted for a number of years. In 1922 a full report was prepared by the Water Conservation and Irrigation Commission, and another by the Public Works Committee in 1926.

Three proposals were considered—(a) the Wyangala Dam (situated 14 miles west of Cowra), to provide a storage of 273,694 acre-feet of water at an estimated cost of about £1,300,000, including resumptions; (b) a proposal to increase the present storage at Lake Cudgellico from 23,640 acre-feet to 46,689 acre-feet at an estimated cost of £75,000, including land resumptions; and (c) the construction of a series of low weirs from Goolagong to Booligal at a cost of £1,375,000. The storage at the Wyangala Dam would be equal to 35 per cent. of that of Burrinjuck. The distance from Goolagong to Booligal is 548 miles.

The Committee recommended the construction of the Wyangala dam, provided an area of approximately 600,000 acres of Crown lands situated west of the Lachlan River were made available for wheat-growing in closely-settled areas. The water from the dam would be used to supply stock and domestic requirements on this area, and to assure a water supply for stock and domestic purposes along 767 miles of river frontage, embracing approximately 1,350,000 acres, and reducing the mortality among live stock on this area. Water for irrigation would be available in the upper section of the river near the dam. Town supplies also would be assured.

It is pointed out by the Committee, however, that the work would not directly produce sufficient revenue to meet cost of maintenance and interest charges. Construction was commenced in December, 1928.

#### *Macquarie and Namoi Rivers.*

A suitable site for a dam on the Macquarie River has been located at Burrendong, a short distance below the junction with the Cudgegong River, and the storage possibilities have been investigated. The capacity of the dam would be 407,000 acre-feet with water stored to a maximum depth of 120 feet; but if this were increased to 150 feet the storage would be 797,000 acre-feet. Examination of the site is proceeding, and the work has been referred to the Public Works Committee for report.

Investigations are being made in respect of the Namoi and Peel Rivers. Sites at Blue Hole, above Manilla, and Keepit, near the junction of the Peel River, are being considered in connection with the Namoi River, and at Bowling Alley Point in connection with the Peel River.

#### *Warragamba Scheme.*

A proposal has been made to irrigate lands in the vicinity of Penrith from the Warragamba Dam, which is intended primarily to supplement the water supply of Sydney. This proposal is under the consideration of a special board of experts.

## WATERWORKS.

Provision is made by the Water Act, 1912, as amended in 1924, that all waterworks constructed by private individuals in connection with natural sources of water must be approved and licensed by the State. During the year ended 30th June, 1927, 132 licenses were granted and 34 were allowed to lapse, so that at 30th June, 1927, there were in force 2,060 licenses for pumps, dams, and other works, small fees being charged in each case.

*Water Trusts and Bore Trusts.*

Part III of the Water Act, 1912, empowers the State to construct works to provide supplies of water for irrigation, stock, or domestic purposes, and for drainage. The capital cost of such works are repaid by beneficiaries, with interest in instalments spread over a period of years. The works are administered by trustees appointed from among the beneficiaries under the Act, except in the case of trusts in the Western Division, when the Western Land Board is appointed as trustee.

For the supply of water under these conditions works have been carried out by the State, and local trusts have been constituted in connection with (a) 12 artesian wells, which cost £22,758 and embrace an area of 324,947 acres, with 108 miles of drains; 72 artesian bores, which cost £228,457 and embrace 4,395,825 acres, with 2,845 miles of drains; (b) 14 schemes of improvements to natural off-takes of effluent channels, for the purpose of diverting supplies from the main rivers, the trust districts embracing 2,002,955 acres at a gazetted cost of £36,937, and 3 similar schemes relating to 1,409,219 acres, whose works are incomplete, the gazetted estimated cost being £67,682.

The bores, which are controlled by trusts, are constructed by the Government, to whom the cost is repaid by the residents in instalments extending over twenty-eight years. The rates levied by the trusts in their districts range from 0·11d. to 1·15d. per acre. These rates are applied to repaying Crown instalments and defraying maintenance and administrative costs.

*Private Irrigation Schemes and Trusts.*

The Water (Amendment) Act, 1924, enables the Water Conservation and Irrigation Commission to exercise control over the subdivision of private holdings for sale in small areas as irrigated blocks and for the taking over of private irrigation schemes. Both of these powers are now being exercised and certain schemes hitherto illegal will be placed on a legal basis. In addition trust proposals are being formulated in respect of 225,751 acres of land embracing the supply of water for stock, domestic purposes and the irrigation of fodder crops. Action is being taken to constitute a private trust on the Murray River embracing an area of 1,785 acres of which 1,470 acres have been subdivided into 81 farms for fruit-growing. At 30th June, 1927, 54 of these farms were occupied.

*Artesian Bores.*

That portion of the great Australian artesian basin which extends into New South Wales covers approximately 70,000 square miles, and is situated in the northern and north-western hinterland of the State.

The first artesian bore was sunk in 1879 on the Kallara pastoral holding, between Bourke and Wilcannia, and the first Government bore was completed in 1884 at Goonery, on the Bourke-Wanaaring road.

The following statement shows the extent of the work which has been successfully effected by the Government, and by private owners, up to the 30th June, 1927:—

Bores.	Flowing.	Pumping.	Total.	Total Depth.
				feet.
For Public Watering-places, Trust Bores, etc. ...	134	37	171	356,979
For Country Towns Water Supply ... ..	3	1	4	6,533
For Improvement Leases ... ..	20	6	26	38,521
<b>Total, Government Bores ..</b>	<b>157</b>	<b>44</b>	<b>201</b>	<b>402,133</b>
Private Bores... ..	<b>230</b>	<b>96</b>	<b>326</b>	<b>485,072</b>

The average depth of Government bores is 2,001 feet, and of private bores 1,488 feet, and they range from 89 to 4,338 feet.

The deepest wells in New South Wales are in the county of Stapylton, one at Boronga having a depth of 4,338 feet and an outflow at present of 825,410 gallons; another at Dolgelly has a depth of 4,086 feet, and a discharge of 464,390 gallons per day. The largest outflow at the present time is at the Angledool No. 2 bore, in the county of Finch, which yields 1,330,285 gallons a day, and has a depth of 3,479 feet.

Of the 576 bores which have been sunk, 387 are flowing, and give an approximate aggregate discharge of 80,285,457 gallons per day; 140 bores give a pumping supply, the balance of 49 being failures. The total depth bored is 949,553 feet.

The flow from 91 bores is utilised for supplying water for stock on holdings served in connection with bore-water trusts and artesian districts under the Water Act, 1912. The total flow from these bores amounts to 34,015,591 gallons per day, watering districts of an area of 4,870,892 acres by means of 3,080 miles of distributing channels. The average rating by the bore trusts is 2.06d. per acre, including the cost of maintenance and administration.

In the majority of cases the remaining bores are used by pastoralists for stock-watering purposes only, but in a few instances the supply is utilised in connection with country towns.

The watering of the north-western country by means of bore-water has largely increased the carrying capacity of the land; and, what is perhaps of greater importance, it has made practicable some pastoral settlement on small holdings in areas previously utilised by companies holding extensive areas.

It has been determined that the multiplicity of bores is the chief factor governing the annual decrease in bore-flows, also that the limitation of the discharge of water from a bore will prolong its existence as an efficient flow; action has been taken, therefore, to prevent any waste by the control of the bore-flow, and by its adjustment to actual needs. It is anticipated that this action will materially reduce the rate of decrease in the future.

#### *Private Artesian Bores.*

Much has been done in the way of artesian boring by private enterprise. So far as can be ascertained, 351 private bores have been undertaken in New South Wales, of which 25 were failures. The yield of the flowing bores is estimated at 38 million gallons per day. No data are available regarding the pumping bores.

*Shallow Boring.*

Arrangements were made by the Government in 1912 to assist settlers by sinking shallow bores, and the scheme, which was described fully in the 1916 issue of this Year Book, has met with considerable success. Operations were commenced with one plant only, but the number has been increased gradually and 36 are now at work. During the year 1926-27, 454 new applications were received for use of the plant of the Commission, and 287 bores were completed during the year.

Up to the 30th June, 1927, 2,109 bores had been sunk, including 370 failures, the total charges for sinking being approximately £448,000. The total depth bored was 574,962 feet, the greatest depth of any bore being 1,307 feet. During the year £61,502 were expended from loan moneys on shallow boring operations, and £38,298 were repaid by settlers to the Government. The operations of the year resulted in a trading profit of £3,590.

In 1925 a scheme of boring by private plants was sanctioned by the Government, who arranged to advance the necessary money to settlers for approved schemes, such advances being repayable by instalments with interest. Fifteen bores have been sunk under this scheme, the total depth being 7,375 feet at an average cost of from 15s. 5d. to 36s. 5d. per foot.

In addition to the work conducted under the shallow boring regulations, 22 bores have been sunk in the Pilliga Scrub and on Crown lands for the Lands Department and Forestry Commission.

*Growth of Artesian and Shallow Boring.*

The rapid development which has occurred in utilising the underground water resources of the State in the past fifteen years is evident from the fact that the number of successful bores of all kinds increased from 458 in 1911 to 2,700 at 30th June, 1927.

## PASTORAL INDUSTRY.

IN New South Wales the pastoral industry has always been the greatest source of primary production, but, within the past twenty years, agriculture and dairying have developed rapidly, and the pastoral industry has assumed a place second in importance to the manufacturing industries, as measured by the value of production.\*

### LIVE STOCK.

New South Wales does not possess any indigenous animals which would give rise to a large industry, and of those introduced, sheep only have developed into a prolific source of wealth. Indeed, the development of the sheep industries has been so remarkable that it has, in a sense, precluded the rise of other pastoral activities. Horses have been bred principally for their utility in various industries and for racing purposes, and there is a small oversea trade in remounts, but, generally speaking, horse-breeding is declining. For many years cattle were produced only to supply local requirements of meat and dairy produce, but later an export trade was established, and considerable expansion took place in the number of cattle depastured. Pigs are bred principally as a by-product of the dairying industry, and the number does not fully meet local requirements.

The following table shows the number of the principal kinds of live stock in New South Wales at the end of each decennial period, from 1861 to 1921, and annually thereafter:—

As at 30th June.	Horses.	Cattle.	Sheep.	Pigs.
1861*	233,220	2,271,923	5,615,054	146,091
1871*	304,100	2,014,888	16,278,697	213,193
1881*	398,577	2,597,348	36,591,946	213,916
1891*	469,647	2,128,838	61,831,416	253,189
1901*	486,716	2,047,454	41,857,099	265,730
1911*	683,004	3,194,236	48,830,000	371,093
1921	663,178	3,375,267	37,750,000	306,253
1922	669,800	3,546,530	41,070,000	383,669
1923	660,031	3,251,180	38,760,000	340,853
1924	658,372	2,938,522	41,440,000	323,196
1925	647,503	2,876,254	47,100,000	339,669
1926	651,035	2,937,130	53,860,000	382,674
1927	623,392	2,818,653	55,930,000	332,921

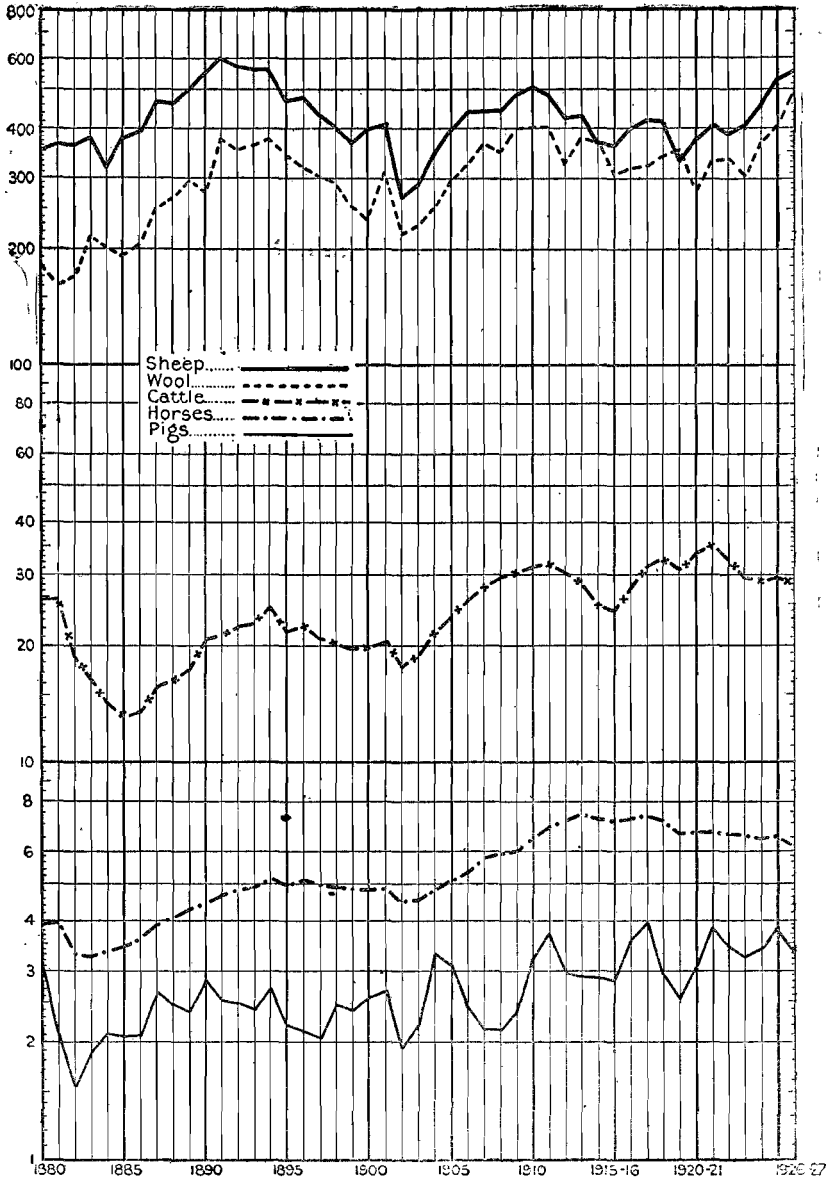
\* At 31st December.

Particulars of other live stock are shown on a later page.

\* See Chapter "Production" of this Year Book.

LIVESTOCK AND PRODUCTION OF WOOL 1880 to 1926-27.

Ratio Graph.



The numbers at the side of the graph represent 1,000,000 lb. of wool (as in grease) produced during year ; and 100,000 sheep, cattle, horses, and pigs at end of year.

The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual data are shown by means of the numbers at the side of the graph.

To obtain an idea of the varying extent of pastoral pursuits in the State as represented by the number of live stock grazed it is necessary to express the various species in common terms. This cannot be done with exactitude, but, adopting the arbitrary equivalent of eight sheep to each head of large stock, as mentioned in section 18 of the Pastures Protection Act, the following comparison is obtained:—

Year.	Equivalent in Sheep of Live Stock grazed.	Year.	Equivalent in Sheep of Live Stock grazed.
1861	25,656,000	1911	79,896,000
1871	34,831,000	1921	70,058,000
1881	60,559,000	1926*	82,565,000
1891	82,619,000	1927*	83,466,000
1901	62,130,000		

\* At 30th June, previous years at 31st December.

The number of live stock grazed declined on the whole by about 24 per cent. between 1891 and 1920. The decline was attributable to a decrease in the number of sheep, but under the favourable conditions of recent years the number of live stock has increased, until in 1927 it was in excess of the total in 1891. It should be noted that careful breeding has led to marked improvement in the type of sheep depastured, and the average productive capacity of present-day sheep is very much greater than that of sheep depastured in 1891.

*Comparison—Live Stock in the Commonwealth.*

A comparison of the number of horses, cattle, sheep, and swine in New South Wales and in the other States of the Commonwealth is shown in the following table. The figures for horses, cattle, and swine in New South Wales are as at 30th June, 1927, but otherwise the numbers are as at 31st December, 1927:—

State.	Horses.	Cattle.	Sheep.	Swine.
New South Wales* ... ..	623,392	2,818,653	55,930,000	332,921
Victoria‡ ... ..	428,666	1,327,077	15,557,067	212,785
Queensland ... ..	548,333	5,225,804	16,642,385	191,947
South Australia ... ..	224,027	316,314	7,542,345	60,733
Western Australia† ... ..	166,463	827,303	8,447,750	69,798
Tasmania† ... ..	36,830	213,112	1,860,000§	38,906
Northern Territory† ... ..	42,801	863,597	6,000§	343
Total, Australia ... ..	2,070,512	11,591,860	105,985,547	916,432

\* Including Federal Capital territory. † 31st December, 1926. ‡ March, 1923.  
§ Estimate as at 31st December, 1927.

In New South Wales there are more sheep, horses, and swine than in any other State in the Commonwealth, but Queensland has more cattle.

*Distribution of Live Stock.*

In order to indicate the distribution of flocks and herds in New South Wales the following table has been prepared. It shows the number of live stock, and the number per square mile, in each Division at intervals since 1891.

Division.	Number of Live Stock (000 omitted).					Number per square mile.				
	1891.	1901.	1911.	1921.	1927.†	1891.	1901.	1911.	1921.	1927.†
<b>SHEEP—</b>										
Coastal Belt ... ..	1,483	1,097	1,559	1,048	1,310	42.5	31.4	44.9	30.2	37.7
Tableland ... ..	7,882	8,859	9,785	7,524	11,345	195.3	219.5	235.2	181.8	274.2
Western Slopes ... ..	10,869	11,672	12,167	9,743	17,472	286.8	308.0	275.2	221.0	397.1
C'I Plains & Riverina ...	25,194	14,706	17,433	14,370	18,069	351.8	205.4	269.4	222.1	279.2
Western Division ... ..	16,408	5,523	7,936	5,065	7,734	130.6	44.0	63.2	40.4	61.6
Whole State ... ..	61,831	41,857	43,830	37,750	55,930	199.2	134.9	157.3	121.6	180.0
<b>CATTLE, DAIRYING—</b>										
Coastal Belt ... ..	197	284	653	674	814	5.6	8.1	18.7	19.3	23.4
Tableland ... ..	67	70	107	73	40	1.7	1.7	2.7	1.8	1.0
Western Slopes ... ..	37	40	78	59	42	1.0	1.1	2.1	1.6	1.0
C'I Plains & Riverina ...	35	20	43	36	10	0.5	0.3	0.7	0.5	0.2
Western Division ... ..	7	4	9	2	1	0.1	0.0	0.1	0.0	0.0
Whole State ... ..	343*	418*	895	844	907†	1.1	1.3	2.9	2.7	2.9
<b>CATTLE, OTHER—</b>										
Coastal Belt ... ..	640	667	915	1,009	798	18.3	19.1	26.2	28.6	23.0
Tableland ... ..	465	501	550	580	423	11.5	12.4	13.6	14.4	10.2
Western Slopes ... ..	247	306	422	441	373	6.5	8.1	11.1	11.6	8.5
C'I Plains & Riverina ...	339	115	302	369	234	4.7	1.6	4.2	5.2	3.6
Western Division ... ..	94	41	110	132	84	0.7	0.3	0.9	1.1	0.7
Whole State ... ..	1,785	1,630	2,299	2,531	1,912	5.8	5.3	7.4	8.2	6.2
<b>HORSES—</b>										
Coastal Belt ... ..	163	161	207	203	174	4.7	4.6	5.9	5.8	5.0
Tableland ... ..	92	112	127	112	103	2.3	2.8	3.1	2.8	2.5
Western Slopes ... ..	76	111	180	168	191	2.0	2.9	4.8	4.4	4.3
C'I Plains & Riverina ...	95	78	140	152	128	1.3	1.1	2.0	2.1	2.0
Western Division ... ..	44	25	35	28	27	0.4	0.2	0.3	0.2	0.2
Whole State ... ..	470	487	689	663	623	1.5	1.6	2.2	2.1	2.0

\* Cows in milk only; dry cows and springing heifers are included in the total of Other Cattle.  
 † Cows in registered dairies only. ‡ At 30th June.

Sheep are depastured principally in the hinterland of the State, and are relatively most numerous in the Western Slopes Division. Dairying cattle and, in fact, all cattle and horses, are more numerous in the coastal areas.

The divisional totals as stated for 1927 are not altogether comparable with those shown for the years 1891 to 1921, as they have been compiled in shire areas, and not in counties as formerly. The change in geographical basis involved considerable alteration in the areas comprising divisions of the Western Slopes and the Central Plains, where large numbers of stock are depastured.

The figures for the years 1891 to 1921, however, afford interesting information as to the localities most susceptible to losses of sheep through drought. The greatest decline was on the Central Plains and Riverina, where the numbers fell from 352 to 222 per square mile, and the greatest relative decline was on the Western Plains, where the falling-off was from 131 to 40 per square mile.



*Sheep.*

Investigations carried out in 1926 showed that the numbers of sheep in the State as recorded in landholders' returns had been considerably understated, and, after exhaustive inquiries, it was found necessary to revise the recorded totals back to the year 1908.

The following table shows the number of sheep as recorded in landholders' returns for various years between 1861 and 1906 in comparison with the adjusted totals since 1911. The totals are approximate, but they show the vicissitudes of sheep-breeding in New South Wales:—

Year.	Sheep.	Average Annual Rate of Increase.	Year.	Sheep.	Average Annual Rate of Increase.	Year.	Sheep.	Average Annual Rate of Increase.
1831	5,615,000	...	1901	41,857,000	(-) 2·8	1921	37,750,000	(+) 11·4
1863	11,532,000	(+) 15·5	1906	44,132,000	(+) 1·1	1922	41,075,000	(+) 8·7
1871	16,278,000	(+) 7·1	1911	48,830,000	(+) 2·1	1923	38,760,000	(-) 5·6
1875	25,269,000	(+) 9·2	1916	36,430,000	(-) 1·1	1924	41,840,000	(+) 6·8
1881	36,591,000	(+) 7·7	1917	40,030,000	(+) 8·8	1925	47,100,000	(+) 13·6
1885	39,169,000	(+) 1·4	1918	42,520,000	(+) 5·9	1926	53,860,000	(+) 14·4
1891	61,831,000	(+) 9·6	1919	42,170,000	(-) 0·8	1927*	55,930,000	(+) 3·8
1895	43,318,000	(-) 4·8	1920	33,153,000	(-) 11·4			

\* At 30th June each year since 1916. (—) Denotes decrease.

At 31st December, 1927, the number of sheep in the State was 48,920,000. The number of sheep in the State was greatest in 1891, and thereafter lowest at the end of 1902 by reason of drought. The main cause of the reduction in the number of sheep between 1891 and 1923 seems to have been a remarkable deterioration of seasons, due to diminished rainfall. This may be illustrated briefly by stating that the weighted average annual rainfall of the State was about 3½ inches less in the twenty years which followed 1894 than in the preceding quarter of a century, and that this decline was proportionally heaviest in the plain districts of low average rainfall, which in 1891 carried two-thirds of the sheep depastured in the State. The rabbit pest, too, has become so general as to aggravate the effects of dry weather through destruction of natural herbage, while the growth of the agricultural industry has caused land to be diverted from the purpose of sheep-breeding.

The sudden transition from very good to very bad seasons, which occurred in the early nineties, wrought such havoc amongst the flocks depastured on the immense western plains that by 1901 the returns showed a decrease from 16,400,000 to 5,500,000 sheep in the plains of the Western Division, and from 25,200,000 to 14,700,000 in the plains of the Central Division, and in 1902 these numbers were further reduced by 1,900,000 and 7,600,000 respectively. It is noteworthy that in 1927 there were many more sheep in the Tablelands and Western Slopes Divisions than in 1891, though considerably less on the plains, Riverina, and Western Divisions than in 1891 (see table on previous page).

Estimates based on returns supplied by landholders show the following approximate distribution of the flocks according to sex, also the number of lambs:—

As at 30th June.	Rams.	Ewes.	Wethers.	Lambs (under 1 year).	Total.
1924 ... ..	550,000	21,670,000	11,060,000	8,160,000	41,440,000
1925 ... ..	580,000	23,040,000	12,340,000	11,140,000	47,100,000
1926 ... ..	670,000	25,920,000	15,360,000	11,910,000	53,860,000
1927 ... ..	740,000	27,770,000	15,330,000	12,090,000	55,930,000

The following table, compiled from the best data available, shows as nearly as may be the extent of each of the principal factors in the rise and fall in the number of sheep in New South Wales since 1917.

Year ended 30th June.	Lambs Marked.	Sheep and Lambs Slaughtered.	Excess of Imports (+) or Exports (-)	Estimated number of Deaths* (Balance).	Net Increase (+) or Decrease (-)	Sheep at 30th June.
Thousands (000) omitted.						
1917	10,100	3,760	(+) 10	2,750	(+) 3,600	40,000
1918	10,210	3,200	(-) 230	4,350	(+) 2,430	42,520
1919	8,780	4,280	(-) 1,040	3,810	(-) 350	42,170
1920	5,230	5,540	(-) 1,380	7,330	(-) 9,020	33,150
1921	8,750	3,850	(+) 1,980	2,280	(+) 4,600	37,750
1922	10,860	5,230	(+) 150	2,460	(+) 3,320	41,070
1923	8,180	5,670	(-) 2,170	2,650	(-) 2,310	38,760
1924	9,080	3,620	(-) 140	2,640	(+) 2,680	41,440
1925	12,000	3,390	(-) 870	2,080	(+) 5,660	47,100
1926	13,100	4,250	(-) 610	1,480	(+) 6,760	53,860
1927	12,630	5,619	(-) 2,636	2,305	(+) 2,070	55,930

\* The figures in this column represent a balance and are only rough approximations.

While the returns as to slaughter and border movement are considered accurate, the numbers of lambs marked and of sheep at the end of the year are revised estimates based on landholders returns and other data. The estimated number of deaths is a balancing column and its accuracy is affected by the degree of approximation present in the other items in the table. The numbers shown under this heading, however, represent roughly the extent of the annual losses from drought, disease, pest, and natural causes generally.

The effect of adverse seasons on the sheep flocks is apparent in four directions, viz., losses by death attributable mainly to lack of fodder and water, increase in the slaughtering of fat stock, decrease in lambing, and increased export to other States.

A brief review of the rise of sheep breeding in New South Wales was published on page 771 of the Year Book for 1921, but this is now modified by the remarks made on a previous page regarding the recorded totals in earlier years.

#### *Interstate Movement of Sheep.*

Apart from the seasonal movement of stock to and from agistment in other States, there appears to be a regular export of sheep from New South Wales to Victoria, and an import from Queensland to New South Wales borderwise. The interchange across the border with South Australia and with other States and countries by sea is very small. During the past five years, 9,216,000 sheep have been moved from New South Wales to Victoria, and 2,646,000 from Victoria to New South Wales, leaving an excess of exports to Victoria of 6,570,000. In the same period, 3,513,000 sheep have been imported from Queensland to New South Wales, and 2,886,000 have been exported from New South Wales to Queensland, leaving an excess of imports of 827,000 to New South Wales from Queensland. Owing to the drought in Queensland, however, the exports from New South Wales were much greater than usual. The excess of exports to other destinations during the same period was 506,000, chiefly to South Australia, and the total excess of exports of live sheep from New South Wales for the period 6,249,000.

The following table shows the movement of sheep from and to New South Wales, so far as is recorded, in recent seasons:—

Year.	Sheep from New South Wales.				Sheep to New South Wales.				Excess of Imports (+) or of Exports (—).
	To Victoria.	To Queensland.	To South Australia and by Sea.	Total.	From Victoria.	From Queensland.	From South Australia and by Sea.	Total.	
	000	000	000	000	000	000	000	000	000
1919-20	2,289	335	218	2,842	689	750	26	1,465	(—) 1,377
1920-21	850	97	125	1,072	936	2,050	70	3,056	(+) 1,984
1921-22	1,383	245	108	1,736	541	1,306	42	1,889	(+) 153
1922-23	2,008	344	336	2,738	225	313	33	571	(—) 2,167
1923-24	1,281	208	76	1,565	440	947	37	1,424	(—) 141
1924-25	1,558	203	92	1,858	393	536	7	936	(—) 922
1925-26	1,540	321	83	1,944	561	759	14	1,334	(—) 610
1926-27	2,330	960	300	3,590	314	634	6	954	(—) 2,636
1927-28	2,507	189	122	3,618	933	537	103	1,623	(—) 1,990

#### Lambing.

The greater part of the lambing of the State takes place during the autumn and winter months, although considerable proportions of ewes, varying according to the nature of the season, are reserved for spring and early summer lambing. It is possible to breed from ewes twice per year, but it is not considered good policy and is rarely practised, except, perhaps, after severe losses. Seasonal changes play a large part in determining the proportion of ewes mated and of resultant lambs, and thus cause wide variations in the natural increase. In 1925-26, 19,941,000 ewes were mated and produced 13,100,000 lambs, equal to 65.7 per cent.; and in 1926-27, 18,897,000 ewes mated produced 12,630,000 lambs equal to 66.8 per cent.

#### Size of Flocks.

Particulars of the size of flocks and the number of sheep on holdings of various sizes were published in the Year Book for 1924, but as they are subject to modification by reason of the inaccuracy of landholders' returns they have not been repeated in this issue.

#### Breeds of Sheep.

The principal breed of sheep in New South Wales is the celebrated short-woolled merino strain. The numbers of other pure breeds are very small. Crosses of long-woolled breeds with the merino are not at present numerous, but their numbers vary markedly according to market conditions. Merino comebacks, the progeny of crossbred ewes mated to merino rams are, however, fairly numerous. English long-woolled sheep are represented chiefly by the Lincoln, Romney Marsh, and Border Leicester breeds, while Suffolk and Dorset Horn sheep have been introduced for the raising of early-maturing lambs.

Lincolns, and their crosses with merinos, constitute the largest proportionate number of coarse-woolled varieties. The proportion of English cross-bred and comeback sheep is considerably greater than it was in 1901 prior to the development of export in the mutton trade. It has fallen since 1919 on account of the more favourable market for merino wool.

The estimated numbers of the principal breeds in the State at 30th June, 1927, were:—47,542,000 merino, 286,360 other pure breeds, 6,289,900 merino comebacks, and 1,711,800 crossbreeds.

## WOOL.

The prosperity of New South Wales still depends very largely on its sheep flocks and upon the condition of the wool markets of the world. Latterly secondary industries have become important factors and other primary industries have been developed, but the productivity of the sheep flocks has been increased, and the value of the wool clip is still the most important factor of the year in the primary production of the State.

*Production of Wool.*

Wool is produced in New South Wales principally by shearing the live sheep, but also to a considerable extent by fellmongering. Comparatively little is picked from the carcasses of dead sheep on the holding. Many sheep skins are exported oversea and interstate, and the quantity of wool on these is estimated and included in the total production.

Formerly considerable numbers of sheep were washed before being shorn, and, as particulars of the resultant wool were not recorded separately prior to 1876, the estimates of the quantity of wool produced up to that date are approximate.

The output of wool is stated as in the grease, as data as to its clean scoured yield are not available. A small proportion of the shorn wool is scoured before being marketed, and the whole of the fellmongered wool is in a scoured condition. This is stated at its greasy equivalent by applying a factor determined annually, the proportion being rather more than 2 lb. of greasy to 1 lb. of scoured. Very little wool is now washed on the holding.

The following table shows, in quinquennial periods since 1876 and annually during the past ten seasons, the total quantity of wool produced (as in the grease) in New South Wales, together with the aggregate value, Sydney, and the value to growers. The figures for 1908 and subsequent years are on the revised basis:—

Period.	Wool Produced (000 omitted).		Year.	Wool produced (000 omitted).		
	Quantity as in the Grease.	Value at Sydney.		Quantity as in the Grease.	Value at Sydney.	Value at place of Production.
1876-1880	lb. 718,397†	£ 31,298	1918-19	lb. 340,953	£ 25,518	£ 23,750
1881-1885	943,814†	40,563	1919-20	352,071	26,503	24,674
1886-1890	1,294,781†	44,773	1920-21	275,269	14,163	13,023
1891-1895	1,813,630†	49,025	1921-22	333,856	16,971	15,557
1896-1900	1,408,240†	42,984	1922-23	336,899	24,566	23,048
1901-1905	1,302,585†	46,719	1923-24	303,032	29,672	28,209
1906-1910	1,846,604†	74,738	1924-25	369,118	35,989	34,073
1911-1915	1,786,281	77,339	1925-26	402,460	28,216	26,223
1916-1920*	1,640,325	92,535	1926-27	499,322	35,629	33,234
1921-1925*	1,618,174	121,361	1927-28	444,590	36,123	33,700

\* 5 years ended 30th June.

† Excludes wool exported on skins.

A decline occurred in production between 1911 and 1920 on account of diminution in the number of sheep due to unfavourable seasons. After the breaking of the severe drought in June, 1920, the seasons were favourable up to 1927, and the flocks increased to a number larger than that of any of the previous thirty years. The fleece has also been improved considerably, and the wool production of 1926-27 was more than 23 per cent. greater than in any previous year. The value of the output increased under the influence of a marked rise in prices until exceptionally high levels were reached in January, 1925.

Particulars of the number of sheep shorn, the average weight of wool per sheep, and the respective amounts of shorn and other wool produced since 1916-17 are given below:—

Year ended 30th June.	Sheep at end of year.	Sheep shorn during year.	Average clip per sheep (greasy).	Weight of Wool Produced (as in the grease).				
				Shorn and crutched.	Dead.	Fell- mongered.	Exported on skins.	Total produc- tion.
	Thousands.		lb.	Thousand lb. (000 omitted)				
1917	40,090	35,920	7·8	280,169	998	31,074	6,000	318,241
1918	42,520	39,450	7·3	288,013	1,040	28,702	5,100	322,855
1919	42,170	40,230	7·4	297,699	2,166	32,378	8,710	340,953
1920	33,150	41,280	7·2	297,176	2,528	42,271	10,096	352,071
1921	37,750	34,560	6·8	235,041	1,198	30,840	8,190	275,269
1922	41,070	37,370	7·8	291,500	413	30,445	11,498	333,856
1923	38,760	40,270	7·3	293,997	1,008	27,199	14,695	336,899
1924	41,440	38,370	7·1	272,438	1,249	17,749	11,596	303,032
1925	47,100	41,320	8·2	340,956	755	11,763	15,644	369,118
1926	53,860	45,550	8·1	368,739	761	14,780	18,210	402,490
1927	55,930	51,880	8·8	456,872	680	22,330	19,440	499,322
1928*	†	53,730	7·5	406,080		20,600	17,910	444,590

\* Subject to revision.

† Not available.

The number of sheep at 30th June represents very roughly the number available for shearing in the following year. However, it includes lambs too young to be shorn and fat stock reserved for sale in the wool, and it differs further from the number actually shorn by reason of the incidence of slaughter, deaths, and border movement between 30th June and the time of shearing.

Shearing operations are carried out usually between May and November, and the average weight of the fleece varies very greatly under the influence of the seasonal conditions ruling during the period in which the wool is grown. The proportion of lambs and of merino sheep in the flocks are important factors affecting the average weight of the fleece.

The quantities of skin wool and dead wool produced fluctuate according to slaughtering, and the mortality from other causes. Both are usually high in adverse seasons, e.g., 1919-20. Favourable market conditions also lead to heavy slaughtering.

#### WOOL MARKETING.

For many years the whole of the wool grown in New South Wales was shipped for sale in London. As the number of continental buyers increased, however, there developed a tendency, which harmonised entirely with Australian interests, to seek supplies of the raw material at their source, and after the year 1885 Sydney wool sales began to assume importance.

*Sydney Wool Sales.*

The wool sales in Sydney usually commence about September and continue in series on fixed dates over a period of eight or nine months. These sales are attended by representatives of firms from practically every country in which woollen goods are manufactured extensively. From data at present available it is not possible to state what proportion of the wool received in Sydney is sold locally before export.

The following statement compiled from the records of the Sydney Wool Selling Brokers' Association shows particulars of Sydney wool sales since 1913, omitting from account the four seasons (1916-17 to 1919-20) during which the appraisement system under the Imperial Purchase Scheme was in operation:—

Season.	Wool Sold.*		Proportion of Wool of each Description Sold.						Average weight per Bale.	
	Weight.	Value.	Breed.		Growth.		Condition.		Greasy.	Scoured †
			Merino.	Cross-bred.	Fleece, etc.	Lambs.	Greasy.	Scoured		
	lb.000	£000	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	lb.	lb.
1913-14	277,112	10,333	89.0	11.0	91.4	5.6	88.7	11.3	334	223
1914-15	190,212	6,739	83.8	16.2	95.4	4.6	92.0	8.0	341	217
1915-16	245,298	10,430	84.5	15.5	95.8	4.2	86.7	13.3	332	223
1920-21	107,584	5,610	83.1	10.9	98.9	1.1	93.2	6.8	340	227
1921-22	313,886	14,755	73.2	26.8	95.7	4.3	90.7	9.3	330	240
1922-23	268,873	18,922	79.0	21.0	94.3	5.7	93.3	6.7	321	234
1923-24	224,719	21,445	83.3	16.1	96.6	3.4	92.3	7.4	318	238
1924-25	212,664	21,124	85.9	14.1	94.7	5.3	95.1	4.9	327	232
1925-26	345,685	23,601	86.3	13.4	93.7	6.3	95.2	4.8	315	227
1926-27	374,125	26,377	87.9	12.1	94.9	5.1	94.1	5.9	322	208
1927-28	398,476	26,885	90.3	9.7	95.3	4.7	93.7	6.3	306	226

\* Scoured being included at its greasy equivalent. † Including skin wool.

The figures as to quantity and value in this table are not comparable with any others quoted herein, because considerable quantities of wool grown in New South Wales are sold in other States, notably in Victoria and South Australia, while small quantities of wool from the other States, mainly from Queensland, are marketed in Sydney. The wool produced in any season is not always sold in the same season. The uncertainty consequent on the outbreak of war caused a heavy decline in sales during 1914-15, and sales were retarded again on the resumption of auctions in 1920-21, owing to the existence of large stocks and to uncertain conditions. At the close of sales in June there is usually very little wool remaining unsold in Sydney. The balance remaining unsold in store on 30th June has been appreciable in only three of the last twenty seasons, viz.:—83,400 bales in 1915, 229,127 bales in 1921, and 171,700 bales in 1925. At 30th June, 1928, there were 11,953 bales of unsold wool in store at Sydney

Particulars of the appraisement and purchase of wool under the Imperial Wool Purchase Scheme which operated during the years 1916-17 to 1919-20 were published in earlier editions of this Year Book.

Sydney is by far the largest wool-selling centre of Australia, the quantity sold at Sydney wool sales being, usually, greater than at the two next largest centres (Brisbane and Melbourne) combined. Wool is sold also at Albury, on the southern border, but these sales are comparatively small in extent.

*Prices of Wool.*

On account of the very large number of varieties of wool, of the pronounced changes of condition from season to season, and of the varying proportions of each variety in the total output, it is a matter of great difficulty to obtain price quotations which will show accurately the fluctuations of values from year to year.

However, it appears that the average values of Australian wool per pound have been subject to alternate periods of rising and falling which, on the basis of average export values from New South Wales, have been as follows:—Rising to 1830, falling 1831 to 1849, rising 1850 to 1861, falling 1862 to 1894, rising 1895 to 1907, falling 1908 to 1911, rising 1912 to 1924, falling 1925, rising 1926 to 1928. These periods indicate the general trend only, because in certain years, notably 1900, 1914-15, and 1920, prices varied irregularly.

The following statement, compiled from the official records of the Sydney Wool Selling Brokers' Association, shows the average prices realised for wool at Sydney auctions in the past thirty seasons:—

Season ended 30th June.	Average Prices per lb.		Season ended 30th June.	Average Prices per lb.		Season ended 30th June.	Average Prices per lb.	
	Greasy.	Scoured.		Greasy.	Scoured.		Greasy.	Scoured.
	d.	d.		d.	d.		d.	d.
1899	7½	13½	1909	7½	13½	1919	15	25½*
1900	11½	18½	1910	9½	15½	1920	15½*	26½*
1901	5½	10½	1911	8½	14½	1921	12½	25
1902	6½	11½	1912	8½	14	1922	12½	14½
1903	8	14½	1913	9½	16½	1923	17½	23
1904	8½	14½	1914	9½	16½	1924	23½	36
1905	8½	14½	1915	8½	15½	1925	25½	41½
1906	9	16½	1916	10½	17½	1926	16½	25½
1907	9½	15½	1917	14½*	20½*	1927	17½	29½
1908	9	15½	1918	14½*	23½*	1928	19½	31½

\* Price as appraised under Imperial Wool Purchase Scheme. The average amount to be added to the value of greasy wool in respect of surplus profits is 6½d. per lb., of which one-half accrued to Australian growers.

These figures represent the average price of wool sold during the calendar year, and furnish an accurate guide to the average value per pound greasy of the clip produced in individual years, provided due allowance be made for carry over of unsold wool. Making allowances necessary on this account, the average prices realised for wool produced in various seasons were 12½d. in 1920-21, 23½d. in 1924-25, and 16½d. in 1925-26.

Data as to the clean scoured value of wool in local markets are not at present available for publication. The average prices of greasy wool do not provide an accurate measure of the variations in the value of wool as a commodity, because the market price of the clip in any season is affected by the proportion of natural grease which the wool contains. The quantity of grease varies according to the seasonal conditions. Wool grown in a good season carries more grease than that grown in a dry period. The feeding of sheep on rich rations for the purpose of obtaining a weighty carcase for export also causes an increase in the proportion of grease in the wool. The prices of both greasy and scoured wool shown above are affected by changes in the proportion of merino to cross-bred and of fleece to lambs' wool sold, and by such variable qualities as length, fineness, and soundness.

*British Australian Wool Realisation Association Limited.*

Particulars of the formation and activities of this organisation are contained in the Year Book for 1921 at page 781 and for 1924 at page 580.

The following statement provides a summary of the payments made to wool-growers under the Imperial Wool Purchase Scheme and of the distribution of profits accruing to growers therefrom to 31st December, 1927.

Heading.	Date of Payment.	Amount of Payment in Respect of—		
		Wool grown in the Commonwealth.	Wool appraised in New South Wales.	Wool grown in New South Wales.
<i>Flat Rate of Purchase—</i>		£	£	£
Value of wool as appraised ...	} Upon appraisal	153,743,857	50,000,520	72,930,000*
Add difference between average appraised value and 15½d. per lb. ...		6,856,923	895,370*	1,107,000
Total paid for wool at 15½d. per lb. ...		160,600,780	59,895,890*	74,037,000
<i>Growers' Share of Profits—</i>				
5 per cent. of appraised value distributed by Central Wool Committee ...	27 Oct., 1920	7,686,283	2,767,162	3,445,000
Retirement of small growers and fractional payments	30 July, 1921	249,697	} 1,732,920	} 2,214,000
First payment on priority wool certificates ...	30 July, 1921	4,703,581		
Final payment on priority wool certificates ...	18 May, 1922	5,198,686	1,821,788	2,324,000*
First capital reduction ...	14 Apl., 1923	5,924,021	2,132,825	2,655,000
Second capital reduction ...	12 Feb., 1924	5,331,618	1,909,542	2,380,000
Final capital payment ...	15 Nov., 1927	592,402	213,282	265,000*
First liquidation payment ...	15 Nov., 1927	7,405,026	2,666,031	3,319,000
Total profits distributed	...	37,091,314	13,253,550	16,612,000
Total payments made ...	...	197,692,094	73,49,440*	90,649,000

\* Estimated.

The wool concerned in this purchase was that grown in the 1916-17 season and not disposed of before November, 1916, besides the whole of the produce of the next three seasons, other than wool exported on sheep skins. The amount realised for the growers' share of surplus wools, after paying the flat rate of 15½d. per lb. to the growers, was equivalent to an average of 6.83d. per lb. over the whole quantity of 2,486,721,752 lb. purchased in Australia by the Imperial Government. It is estimated that of this quantity 1,286,000,000 lb. were produced in New South Wales. The estimated average amount which accrued to growers in respect of wool appraised in New South Wales was 18.06d. per lb. in 1916-17; 17.96d. per lb. in 1917-18; 18.36d. per lb. in 1918-19, and 18.58d. per lb. in 1919-20. The owners of skin wools did not participate in the surplus profits, and were paid on the flat rate basis of 15½d. per lb. greasy.



*Destination of Wool Shipped.*

The following statement shows the destination of the oversea shipments of wool from New South Wales during the two years ended June, 1921, and 1928, in comparison with similar information for the year 1913. The figures relate to the cargoes actually despatched during the periods specified, and not to the wool sold during each season:—

Destination.	Oversea Exports of Wool (000 omitted).								
	Greasy.			Scoured.			Tops.		
	1913.	1920-21.	1927-28.	1913.	1920-21.	1927-28.	1913.	1920-21.	1927-28.
United Kingdom ...	59,120	80,322	72,124	10,609	18,161	6,270	40	422	123
Canada ...	...	127	...	...	60	29	...	287	240
Austria ...	7,297	734	...	33	293	...	29	...	...
Belgium ...	27,222	12,114	40,996	2,021	3,562	3,863	...	...	...
France ...	76,486	19,203	61,831	12,653	974	6,905	...	...	...
Germany ...	54,266	5,174	47,947	4,579	185	3,931	...	...	...
Italy ...	3,638	6,243	15,944	132	12	289	...	...	...
Japan ...	5,661	6,179	62,879	124	70	616	3,435	2,466	1,229
Netherlands ...	...	722	...	...	6	13	...	...	...
Russia ...	...	...	4,643	...	...	2,531	...	...	21
United States ...	4,286	15,235	7,624	85	3,217	92	...	1,344	25
Other Countries ...	23	3,007	59	2	63	54	58	761	...
<b>Total</b> ...	<b>223,999</b>	<b>149,091</b>	<b>314,747</b>	<b>30,218</b>	<b>26,411</b>	<b>24,593</b>	<b>3,562</b>	<b>5,280</b>	<b>1,638</b>

It is noteworthy that in 1927-28 the exports to Japan were exceeded only by those to the United Kingdom.

## CATTLE.

Apart from dairying, industries connected with cattle, such, for instance, as the export of beef, have never existed on a large scale in New South Wales. Local production scarcely meets the requirements of local consumption, and only the import of cattle from Queensland enables the maintenance of a small export trade in frozen and tinned beef. From 1916 to 1922 an appreciable increase was apparent in the number of cattle depastured, and the number in 1922 constituted a record for the State. The causes of this increase and the subsequent decline are discussed later.

Just as the first effect of the check to meat prices caused an accumulation of cattle until 30th June, 1922, so did the continuance of unfavourable markets lead to a diminution in herds during the next two years. Breeding operations were curtailed, importation of live stock from Queensland was very restricted, and the herds were heavily depleted until 1924, when relative stability was reached in the vicinity of 2,900,000.

The following table shows the total number of cattle in the State, including dairy cattle, at various dates:—

Year.	Cattle.	Year.	Cattle.	Year.	Cattle.
1861	2,271,923	1901	2,047,454	1921*	3,375,267
1866	1,771,809	1906	2,549,941	1922*	3,546,530
1871	2,014,838	1911	3,194,256	1923*	3,251,180
1876	3,131,013	1916	2,405,770	1924*	2,938,522
1881	2,597,348	1917*	2,765,943	1925*	2,876,254
1886	1,367,844	1918*	3,161,717	1926*	2,937,150
1891	2,128,838	1919*	3,280,676	1927*	2,818,653
1896	2,226,163	1920*	3,084,332		

\* At 30th June.

The totals shown above include cows in registered dairies. These numbered 906,745 in 1927 as compared with 887,222 in 1922.

The principal distinct breeds of cattle in the State are the Durham or Shorthorn, Hereford, Jersey, Ayrshire, and Devon, but crosses from these breeds predominate. The number of pure and stud cattle in the State probably does not exceed 250,000.

The following table contains particulars of the sexes and ages of the cattle in the State in the last five years so far as such particulars have been collected:—

At 30th June.	Bulls, 3 years and over.	Cows in Dairies, and Cows in Milk, but not in Dairies.	Other Cows not in milk.	Steers over 3 years.	Steers and Young Bulls (1 to 3 years).	Calves, under 1 year.	Total.
	No.	No.	No.	No.	No.	No.	No.
1923	40,530	958,287	674,127	587,495	501,634	489,107	3,251,180
1924	38,045	949,135	586,685	563,324	427,941	373,392	2,938,522
1925	*	932,850	*	*	*	422,736	2,876,254
1926	*	984,501	*	*	*	458,939	2,937,130
1927	*	992,419	*	*	*	429,405	2,818,653

\* Not available.

Between 30th June, 1922, and 30th June, 1924, the total decrease in herds was approximately 608,000, made up of 240,300 calves, 137,400 steers over three years, 102,000 young steers and young bulls, 98,000 cows not in milk, 25,000 dairy and milking cows, and 5,300 bulls over three years. Further details regarding dairy and milking cows are published on a later page. The number of calves under one year shows considerable variation on account of seasonal and market influences. The lowness of the numbers recorded on 30th June, 1920, may be attributed to dry seasons. In 1922-23 the number of calves dropped was large, but apparently because of the unprofitable state of the beef market, very many were destroyed or slaughtered. The number of calves dropped in subsequent years has been considerably smaller and the number destroyed or slaughtered for food has reduced the number surviving to a level below the lowest figure of the preceding five years. The slaughtering of calves has increased markedly in the last five years.

#### Cattle Breeding.

The following table shows the number of cows in each class, and the increase in cattle herds from breeding in the past five seasons:—

Year ended 30th June.	Cows in Registered Dairies.			Other Cows.		Total Cows.	Calves.		*Calves slaughtered for food.
	Being Milked.	Springing Heifers	Other.	Being Milked.	Dry.		Dropped during year.	Surviving at end of year.	
1923	404,611	63,100	411,051	79,525	674,127	1,632,414	961,154	489,107	133,524
1924	418,505	71,515	374,435	84,680	586,685	1,535,820	804,928	373,392	123,760
1925	457,217	63,206	368,860	88,567	†	†	†	422,736	159,999
1926	472,273	59,194	362,698	90,336	†	†	881,905	437,943	173,506
1927	462,365	51,422	332,958	85,674	†	†	870,816	393,996	146,882

\* Including a number of calves dropped in the previous year. † Not available.

Rather more than one-half of the cows are in registered dairies and are not generally available for breeding for beef purposes. It was stated before the Select Committee of Inquiry into the Meat Industry Encouragement Bill in 1924 that in a representative dairying district on the North Coast no less than 95 per cent. of bull calves and 75 per cent of heifer calves were destroyed shortly after birth. That this practice is general in dairying districts is shown by the fact that the ratio of calves surviving to calves dropped in 1926-27 was 28 per cent. in the North Coast district and 30 per cent. in the South Coast district. These averages relate to operations on a considerable number of holdings, including a number used for grazing beef cattle only, or partly for grazing beef cattle, hence the proportion in the case of holdings used for dairying only is almost certainly much lower. In districts where dairying operations are relatively small the proportion of calves surviving is very much higher, viz., on the tablelands 87 per cent., on the western slopes 76 per cent., and on the central plains 89 per cent.

#### *Interstate Movements of Cattle.*

By reason of the existence of diseases among the cattle of certain districts, notably the presence of cattle tick in the north-east of New South Wales and in parts of Queensland, the interstate movement of cattle is closely regulated in order to stay the spread of disease. In certain cases cattle are quarantined, dipped or sprayed on admission and subject to special treatment should such become necessary within a fixed period thereafter.

The following statement shows the number of live cattle (so far as recorded) passing into and out of New South Wales during each of the last five years. The movement is practically all overland, comparatively few cattle being transported by sea.

Year.	From New South Wales.				To New South Wales.			
	To Victoria.	To Queensland.	To South Australia and by Sea.	Total.	From Victoria.	From Queensland.	From South Australia and by Sea.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1923-24	114,936	11,574	23,702	150,212	40,757	251,031	1,655	293,443
1924-25	132,425	22,561	15,098	170,084	38,473	207,917	1,739	248,179
1925-26	121,596	53,725	21,631	196,952	72,637	203,236	869	381,742
1926-27	177,140	27,437	17,982	222,559	25,101	250,268	1,560	276,929
1927-28	111,434	9,832	8,385	129,651	36,929	339,587	2,427	378,943

Although the effects of seasonal variations are apparent during this period there is, on the whole, a heavy but fluctuating import of cattle to New South Wales from Queensland, and a considerable export to Victoria. The interchange with South Australia is small.

During the five years covered in the table there was an excess of imports from Queensland of about 1,231,910 cattle, and an excess of exports to Victoria amounting to 443,624. The total net gain to New South Wales from all sources was about 709,778.

*Increase and Decrease of Cattle.*

The number of cattle in New South Wales varies under the influence of three factors, viz., importation, slaughtering, and natural increase, i.e., excess of calving over deaths from causes other than slaughtering. The operation of these during recent years is shown below:—

Year.	Cattle at beginning of Year.	Net Imports of Cattle.	Cattle and Calves Slaughtered.	Cattle at end of Year.
1917-18	2,765,943	101,424	378,123	3,161,717
1918-19	3,161,717	(—) 48,082	437,187	3,280,676
1919-20	3,280,676	22,972	593,997	3,084,332
1920-21	3,084,332	396,611	526,055	3,375,267
1921-22	3,375,267	53,372	631,789	3,546,530
1922-23	3,546,530	5,890	739,050	3,251,180
1923-24	3,251,180	143,231	752,489	2,938,522
1924-25	2,938,522	78,095	818,826	2,876,254
1925-26	2,876,254	184,786	825,807	2,937,130
1926-27	2,937,130	53,761	812,594	2,818,653

(—) Denotes excess of exports.

## HORSES.

There was a great advance in horse-breeding between 1910 and 1918, owing to the increased demand which arose as a consequence of widening settlement, prosperous seasons, and defence requirements. During the lengthy drought which terminated in June, 1920, the numbers declined heavily, and the decline has continued owing to the increased use of motors for transport.

The following table shows the number of horses in New South Wales at the end of quinquennial periods from 1861 to 1916, and annually thereafter:—

Year.	Horses.	Year.	Horses.	Year.	Horses.
1861	233,220	1901	486,716	1921*	663,178
1866	274,437	1906	537,762	1922*	669,800
1871	304,100	1911	689,004	1923*	660,031
1876	366,703	1916*	719,542	1924*	658,372
1881	398,577	1917*	733,791	1925*	647,503
1886	361,663	1918*	742,247	1926*	651,035
1891	469,647	1919*	722,723	1927*	623,392
1896	510,636	1920*	662,264		

\* At 30th June.

The number of horses in the State reached its maximum of 746,170 in 1913, but in 1927 it had fallen to 623,392.

There is a small export trade to India, where the horses are required as remounts for the army. The number of ordinary horses sent there during the year ended 30th June, 1927, was 830, the value being £19,710; and 127, valued at £9,020, were sent to British Malaya.

*Horse Breeding.*

Horse breeding operations have been decreasing since 1913, when the number of foals reared was 79,620. A sudden decrease occurred in the bad season 1919-20, when the number reared was only 24,755, as compared with 40,015 in the previous year. The number of foals reared in 1924-25 and 1925-26 showed some temporary improvement.

The following table shows the number of horses of each sex, and the number of foals at the end of each of the past eight years:—

At 30th June.	Stallions.	Mares and Fillies.	Geldings and Colts.	Foals under 1 year.	Total.
1918	6,407	341,991	347,017	46,832	742,247
1919	5,587	330,540	346,581	40,015	722,723
1920	4,609	305,211	327,689	24,755	662,264
1921	4,270	314,073	324,770	20,065	663,178
1922	4,318	314,276	321,521	29,685	669,800
1923	4,021	310,747	316,647	28,616	660,031
1924	3,809	311,275	318,981	24,307	658,372
1925	*	*	*	39,415	647,507
1926	*	*	*	26,521	651,035
1927	*	*	*	28,282	623,392

\* Not available.

There is comparatively little interstate movement of horses except to and from Queensland, and practically no import by sea. In 1925-26 there was a net export interstate by land of approximately 1,000 horses, and a net import of 5,124 in 1926-27.

**OTHER LIVE STOCK.**

Particulars of the number of pigs in the State are shown on a later page.

The number of goats in New South Wales in June, 1927, was 27,587, including 1,938 Angora goats. Under the provisions of the Dog and Goat Act, 1898, the use of dogs or goats for purposes of draught is prohibited.

In New South Wales camels are used principally as carriers on the Western Plains, but their numbers are steadily diminishing. The number in June, 1927, was only 399, compared with 1,792 at the close of the year 1913.

Donkeys and mules are not extensively used in New South Wales, the numbers in 1927 being 51 of the former and 63 of the latter. Most of these are situated in the Western Division, where they are used for purposes of transport. Movements across the border cause marked fluctuations in the number in the State.

The climate of certain portions of the State is considered suitable for ostrich farming, though it is conducted on a small scale. The number of ostriches at the end of June, 1927, was only 12.

## PRICES OF LIVE STOCK.

The following statement shows the average prices of fat stock in the metropolitan saleyards at Flemington during recent years. The amounts stated are the means of the monthly prices which are published annually in the Statistical Register.

Stock.	1923.	1924.	1925.	1926.	1927.
<b>Cattle.</b>	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<b>Bullocks and Steers—</b> Mean of Prime and Good	10 3 6	9 4 6	10 11 9	11 7 0	14 2 0
<b>Cows and Heifers—</b> Extra Prime and Prime	10 5 6	7 19 0	9 4 6	9 0 0	11 17 6
<b>Calves, Vealers—</b> Good ... ..	2 5 0	2 6 6	2 13 3	2 18 9	3 12 6
<b>Sheep.</b>					
<b>Cross-bred—</b>					
<b>Wethers—</b>					
Mean of Prime and Good	1 8 9	1 17 0	1 14 0	1 4 9	1 2 9
<b>Ewes—</b>					
Mean of Prime and Good	1 5 6	1 13 0	1 9 3	1 1 0	0 19 0
<b>Merino—</b>					
<b>Wethers—</b>					
Mean of Prime and Good	1 13 3	1 16 0	1 15 3	1 4 0	1 2 6
<b>Ewes—</b>					
Mean of Prime and Good	1 4 0	1 9 0	1 6 6	0 19 6	0 17 6
<b>Lambs, and Suckers Woolly—</b> Mean of Prime and Good	1 4 0	1 9 0	1 8 3	1 1 0	1 0 0
<b>Pigs.</b>					
<b>Porkers—</b>					
Mean of Good and Medium	3 2 6	3 7 0	2 19 6	2 13 0	2 16 0
<b>Baconers—</b>					
Mean of Good and Medium	5 2 6	4 11 6	4 0 0	4 0 0	4 4 0

In regard to the monthly prices of sheep it should be noted that the quantity of wool carried of sheep is an important factor affecting the price. As a general rule sheep at market in January and February have been shorn, during March and April they have growing fleece, from May to August they are woolly, and from September to December both shorn and woolly sheep are marketed.

The prices of stock in local markets are influenced very largely by the nature of the seasons, but the condition of oversea markets for wool, meat, hides, skins, etc., is also an important consideration. During bad seasons stock are hastened to market and prices fall, but, when the dry weather breaks, efforts to re-stock cause a decrease in yardings, and prices for a time are abnormally high.

Continued dry weather caused a large supply of stock to be placed on the market during the early months of 1923, and prices declined steadily. In May, however, the seasonal conditions improved, and in the following month beneficial rains fell in the pastoral districts, causing prices of stock to rise rapidly as graziers competed for supplies to replenish their flocks and herds. The upward movement lasted until August in the case of sheep, and

September in the case of cattle. The condition of local cattle had improved and a large number were imported from Queensland. Therefore prices began to fall again. The rise had been so rapid that the average price of prime medium bullocks rose from £9 15s. in April, 1923, to £22 14s. in September, and of prime wethers from 22s. 6d. for crossbred and 31s. for merino in April to 48s. and 55s. 6d. respectively in August. At the end of the year 1923 the corresponding prices were—bullocks £10 13s.; wethers—crossbred 29s. 3d., merino 28s. 6d.

The seasonal conditions throughout 1924 were good, and the price of cows and bullocks declined, owing to the pressure of supplies and the absence of a profitable oversea market. The supplies of sheep were restricted by reason of the excellent prices prevailing for wool, and prices, especially for cross-breds, rose considerably, exceeding the levels reached in 1920. The prices of fat sheep at Flemington declined heavily after 1924 owing to the heavy supply, but there was a sustained improvement in the prices of fat cattle, which continued throughout 1926 and 1927.

#### SLAUGHTERING.

The slaughter of live stock for sale as food, either for local consumption or for export, is permitted only in places licensed for the purpose, in accordance with the Cattle Slaughtering Act, 1902.

The following table shows the numbers of slaughtering establishments and of employees, together with the total number of stock slaughtered in the State at five-yearly intervals since 1901. The figures relating to the establishments and employees, prior to 1921, are in excess of the actual number, as they include a large number of butchers' shops in country districts and the shop hands employed therein.

Year ended 30th June.	Slaughter-houses.		Stock Slaughtered in Establishments and on Farms and Stations.					
	No.	Employees.	Sheep.	Lambs.	Bullocks. †	Cows.	Calves.	Swine.
1901*	1,642	4,675	4,372,016	147,117	202,795	113,374	19,654	248,311
1906*	1,522	4,391	4,229,407	252,648	237,722	94,955	26,200	281,650
1911*	1,287	4,343	6,146,730	400,186	306,773	182,178	59,969	316,331
1916	1,071	3,722	3,815,477	361,831	187,882	165,134	31,986	219,806
1921	960	1,342	3,506,008	345,255	300,941	145,610	79,504	238,259
1926	1,103	1,513	3,253,202	994,203	383,005	268,996	173,806	402,479
1927	1,075	1,327	4,167,866	1,451,536	365,336	300,211	146,947	461,981

\* Calendar Year. † Includes a small number of bulls.

The majority of the stock, except swine, are slaughtered in the metropolitan establishments, though it is considered that many advantages would result if facilities were provided to treat all the stock in the districts where they are depastured. In 1926-27 the stock slaughtered in the county of Cumberland numbered 2,461,375 sheep, 1,250,970 lambs, 193,316 bullocks, 140,974 cows, 125,402 calves, and 217,092 swine. The numbers slaughtered for food on stations and farms were:—Sheep, 987,800; lambs, 16,104; cattle, 27,302; and swine, 16,920.

The particulars stated above relate to the stock slaughtered for all purposes, and the following statement shows the number of sheep and cattle used for local consumption as fresh meat and those frozen for export or

preserved during the last three years. Occasionally, during periods of shortage, meat frozen or chilled for export is released for local consumption. Such a period of shortage was experienced in the latter part of 1923.

Purpose for which slaughtered.	1924-25.		1925-26.		1926-27.	
	Sheep and Lambs.	Cattle (including Calves).	Sheep and Lambs.	Cattle (including Calves).	Sheep and Lambs.	Cattle (including Calves).
Local consumption ...	No. 2,834,890	No. 733,764	No. 3,378,279	No. 751,892	No. 4,117,943	No. 757,414
Export to other States or boiling down for tallow ...	17,821	3,337	18,949	3,956	28,000	3,008
Export oversea ...	534,128	53,148	814,549	49,988	1,225,182	30,247
Meat preserving ...	13,697	23,577	40,628	19,971	248,277	21,925
<b>Total Slaughtered ...</b>	<b>3,399,946</b>	<b>818,826</b>	<b>4,252,405</b>	<b>825,807</b>	<b>5,619,402</b>	<b>812,594</b>

Marked fluctuations are experienced in regard to the frozen and preserved meat industries, and the seasonal influence on supply causes pronounced variations in slaughter for local consumption.

In country towns licensed slaughter-houses are inspected by a local officer appointed and controlled by the Local Government authorities. In Newcastle public abattoirs were established in 1912 under control of a board, elected by the councils of the local areas in the district.

In the metropolitan area stock is slaughtered at the State Abattoirs at Homebush Bay. Animals sold at Flemington are inspected before being killed and the diseased are destroyed, while "doubtful" beasts are marked for further special attention at the abattoirs. There is a staff of inspectors at the State Abattoirs and inspectors are stationed at private slaughtering premises throughout the County of Cumberland. The operations of the inspectorial staff are supervised by the veterinary officers of the Metropolitan Meat Industry Board, who pay regular visits to the different establishments.

Particulars of stock slaughtered at the State Abattoirs, Homebush Bay during recent years are shown in the following statement:—

Year ended 30th June.	Cattle.	Calves.	Sheep and Lambs.	Pigs.
1924	233,930	106,669	1,479,339	134,521
1925	239,500	125,505	1,308,890	142,613
1926	234,925	134,485	1,828,041	182,439
1927	255,595	107,121	2,713,943	202,688
1928*	225,776	111,713	2,418,270	179,391

\* Preliminary.

The following table shows the numbers of stock yarded annually at Flemington saleyards, where most of the stock slaughtered in Sydney are sold:—

Year ended 30th June.	Sheep and Lambs.	Cattle and Calves.	Year ended 30th June.	Sheep and Lambs.	Cattle and Calves.
1919	2,684,652	178,140	1924	2,005,887	320,914
1920	2,792,879	260,306	1925	1,832,981	313,540
1921	2,255,970	251,065	1926	2,673,413	320,255
1922	3,179,875	282,899	1927	3,772,207	377,083
1923	3,558,487	327,506	1928	3,432,961	334,786

Certain aspects of the local meat trade, especially the distribution and consumption of meat, are discussed in the chapter "Food and Prices" of this Year Book.



*Prices of Meat, Sydney.*

The following table shows the average wholesale prices of meat in Sydney in each month since January, 1926:—

Month.	Beef (Ox).						Mutton and Lamb.					
	1926.		1927.		1928.		1926.		1927.		1928.	
	Fores.	Hinds.	Fores.	Hinds.	Fores.	Hinds.	Mutton.	Lamb.	Mutton.	Lamb.	Mutton.	Lamb.
January .. .. .	d. 2.2	d. 5.9	d. 2.3	d. 5.6	d. 3.1	d. 5.9	d. 4.8	d. 6.8	d. 4.1	d. 6.6	d. 4.5	d. 6.1
February .. .. .	2.2	5.3	2.2	5.7	3.1	6.2	4.2	5.9	3.4	5.3	4.9	6.6
March .. .. .	2.2	5.6	2.0	5.4	2.7	5.6	4.6	6.3	3.0	5.4	5.4	6.8
April .. .. .	2.5	5.7	2.1	5.5	2.7	5.3	5.5	7.9	2.9	5.4	5.5	7.4
May .. .. .	2.7	5.4	2.2	4.9	2.9	4.9	5.2	7.3	3.1	5.4	4.8	7.1
June .. .. .	2.8	5.1	2.2	4.6	2.8	4.8	4.6	7.2	3.0	5.5	4.5	6.9
July .. .. .	2.4	4.3	3.0	5.6	3.3	5.4	3.3	6.3	3.2	6.3	4.6	7.1
August .. .. .	2.3	4.6	2.7	5.5	2.8	5.0	3.3	6.0	4.0	6.6	4.3	7.2
September .. .. .	2.1	4.5	3.5	6.8	2.6	4.9	3.1	5.5	4.8	6.3	4.2	6.9
October .. .. .	2.2	4.5	4.2	7.1	..	..	3.2	5.3	5.4	7.1	..	..
November .. .. .	1.3	4.4	4.1	7.1	..	..	3.0	4.8	5.3	6.6	..	..
December .. .. .	1.9	5.1	3.7	6.5	..	..	5.2	5.7	5.2	6.6	..	..
Average .. .. .	2.3	5.1	2.8	5.9	..	..	4.0	6.2	3.9	6.2	..	..

During the year ended 30th June, 1926, the price of beef rose appreciably while prices of mutton and lamb declined. Intermittent periods of dry weather caused a rush of supplies to market until September, 1927, when relief rains led to a curtailment of supplies for re-stocking, and as a result of the paucity of fat stock prices rose sharply, and continued at a high level during 1928.

## MEAT TRADE.

*Meat Export Trade.*

The meat export trade commenced to assume importance in New South Wales toward the end of the nineteenth century, when the export of frozen and chilled meat became possible through the provision of refrigerated space in ocean steamers.

Whereas, in the earlier years, surplus stock frequently found no better outlet than boiling-down works, and were, therefore, of no greater value than that of the hides or skins and tallow produced from them, an oversea market for both frozen and canned meats has been opened up. Boiling-down operations have practically ceased, and the export trade has grown considerably, although its progress has been subject to vicissitudes.

Especial attention is given to preparation and transport of meat for export in order to ensure a high standard in the product. Stringent regulations have been issued by the Department of Trade and Customs regarding inspection and shipment of meat exported. The work is carried out by the Commonwealth authorities. All stock killed for export are examined in a manner similar to those for local consumption, and carcasses which have been in cold storage are re-examined immediately before shipment. In all the large modern steamers visiting the ports of New South Wales refrigerated space has been provided.

The number of stock available for export depends mainly upon the season, as in periods of scarcity the local demand absorbs the bulk of the fat stock marketed.

The quantity of frozen meat exported oversea in various years since 1891 is shown below. Ships' stores, amounting annually to several millions of pounds in weight, are not included in the table:—

Year.	Frozen or Chilled.				Preserved.		Value of all Meat Exported.†
	Beef.	Mutton and Lamb.	Total Weight.	Total Value.	Weight.	Value.	
	cwt.	cwt.	cwt.	£	lb.	£	£
1891	*	*	105,013	101,823	6,509,923	85,029	201,421
1893	26,529	559,507	586,036	294,596	14,365,300	187,957	562,389
1901	115,050	351,516	466,566	511,525	10,086,940	209,697	914,573
1906	32,640	455,165	487,805	579,294	3,121,933	62,307	724,048
1911	65,097	535,259	600,356	758,155	20,783,779	401,334	1,291,404
1915-16	7,000	236,099	243,099	562,262	4,087,618	159,711	771,502
1920-21	110,727	166,039	276,766	937,040	4,479,460	235,801	1,225,354
1925-26	44,172	432,800	474,972	999,243	3,786,003	126,884	1,177,712
1926-27	90,143	410,588	500,731	1,013,959	6,002,937	211,210	1,304,650
1927-28	31,464	157,775	189,239	474,933	2,621,283	93,308	631,711

\* Not available

† Fresh, frozen, preserved, and salted beef, mutton, and pork.

The movement of the London prices for Australian frozen meat during the last four years in comparison with 1913 is shown below. The quotations represent the monthly average of the weekly top prices and the annual averages are the means of the monthly quotes.

Month	Frozen Beef (Hinds) per lb.					Frozen Mutton per lb.				
	1913.	1924.	1925.	1926.	1927.	1913.	1924.	1925.	1926.	1927.
January	3½	4½	5½	4¾	4	4	6¾	8½	5½	4½
February	3½	4½	5½	4½	4	4	7	8	5	4½
March	3½	*	6	4½	4	3½	6½	*	4½	4
April	3½	*	5½	5	4½	4	*	*	3	3½
May	3½	*	5½	5	4½	3¾	*	*	5½	4
June	3½	*	5	5½	5¾	4	*	*	4½	4
July	4	*	5½	5½	5¾	4	*	*	4½	4
August	4	5½	5½	5½	5¾	4	*	*	4½	4½
September	4	5½	5½	5½	5½	4	*	*	4	5
October	4½	5	5½	5	5	4	7	*	4½	4½
November	4½	5½	4¾	4½	5½	4	7½	6	4	4½
December	4½	5½	5	4	5½	4½	8	5½	4½	5
Annual Average	4	4¾	5½	4¾	5	4	7½	6¾	4¾	4¾

\* No quotation.

Supplies of chilled beef from South America have, since 1920, increased, and now exceed their pre-war volume, while importations of frozen beef from all sources, including Australia, have decreased heavily. Supplies of beef were excessive during 1922 and 1923, and prices remained throughout the year at about the same level as in the latter part of 1913, which, on account of increased freight and handling charges proved unprofitable to local growers. Towards the end of 1924 and during 1925 there was an appreciable rise in the prices of frozen beef, due to a falling-off in supplies from South America, but the supply increased again in 1926 and prices receded.

The demand for mutton was well sustained until toward the end of 1925, but the average price of 1926 was only 15 per cent. above the pre-war average.

The following comparison of the imports of meat to the United Kingdom during the past three years with the annual imports before the war shows the relative importance of the principal suppliers in relation to Australia:—

Year.	Beef (000 omitted) Frozen and Chilled.				Mutton and Lamb (000 omitted).			
	South American.	Australian.	Other.	Total.	South American.	New Zealand.	Australian.	Total.
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
1912	341	45	14	400	86	108	49	243
1913	380	67	13	460	67	110	83	260
1914	336	78	28	442	67	119	66	252
1925	511	68	39	618	112	125	26	268*
1926	571	57	35	663	92	134	38	267*
1927	617	32	22	771	106	137	31	276*

\* Including other.

The average wholesale prices per pound obtained in each of the past ten years for Scottish and frozen mutton sold in London were:—

Year.	Best Scottish.	New Zealand.	Australian.	Argentine.	Year.	Best Scottish.	New Zealand.	Australian.	Argentine.
	d.	d.	d.	d.		d.	d.	d.	d.
1918	13 $\frac{3}{4}$	9	9	13 $\frac{1}{2}$	1923	15	8 $\frac{3}{4}$	6 $\frac{1}{2}$	7
1919	14 $\frac{1}{2}$	12	12	12	1924	14 $\frac{3}{4}$	8	7 $\frac{1}{2}$	7 $\frac{1}{2}$
1920	19 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	1925	13 $\frac{3}{4}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$
1921	18	8 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	1926	11 $\frac{3}{4}$	6 $\frac{1}{2}$	4 $\frac{3}{4}$	6
1922	16 $\frac{1}{2}$	7 $\frac{1}{2}$	6 $\frac{3}{8}$	7 $\frac{1}{4}$	1927	11 $\frac{1}{2}$	6 $\frac{3}{8}$	4 $\frac{3}{8}$	5 $\frac{3}{8}$

### Meat Works.

Apart from slaughtering, important subsidiary industries in the handling of meat have arisen in the form of refrigerating and meat-preserving works. The extent of their activities, however, is subject to marked seasonal fluctuations. Particulars of the numbers of sheep and cattle handled in the various works, and of the output during the past five years are shown below:—

Year.	Carcases etc. Treated.					Output of Meat Preserving Works.		
	Refrigerating Works.		Meat Preserving.			Tinned Meat.		By-Products, etc.
	Cattle.	Sheep.	Cattle.	Sheep.	Meat and Sundries.	Weight.	Value.	Value.
	No.	No.	No.	No.	lb. (000).	lb (000).	£	£
1922-23	36,183	1,394,484	12,601	83,465	7,551	4,460	168,395	53,526
1923-24	14,077	485,394	...	1,054	6,358	2,713	111,213	35,250
1924-25	52,883	531,474	...	557	11,904	5,144	173,078	64,160
1925-26	50,882	804,857	...	1,423	11,758	4,988	186,815	74,586
1926-27	30,247	1,225,182	...	60,507	18,496	6,673	217,238	138,653

Included in the meat and sundries treated in meat preserving works in 1926-27 were 10,346,835 lb. of beef, 7,539,704 lb. of mutton and 609,568 lb. of sheep and ox tongues.

### OTHER PASTORAL PRODUCTS AND BY-PRODUCTS.

The minor products accruing from pastoral occupations include skins and hides, tallow, lard and fat, furs, hoofs, horns, bones, bone-dust, glue pieces, and hair. Some of these are discussed in the chapter relating to factories, and will be given only brief mention here.

The oversea trade in these products is considerable, and though there was a marked decline in the volume of exports of many of the commodities during the war period, owing to restrictions arising from war conditions, there was an increase in the total value, as higher prices were obtainable. Early in 1920, however, there was a pronounced drop in prices, and the trade experienced a serious setback. In the following year conditions improved, and the general tendency of prices was upward, though the movement was very irregular.

The following table contains particulars of the oversea exports of minor pastoral products at intervals since 1901:—

Products.	Oversea Exports.					
	1901.	1906.	1911.	1915-16.	1925-26.	1927-28.
Skins and Hides—						
Cattle ... .. No.	91,084	72,743	263,306	431,731	468,665	675,525
Horse ... .. No.	472	722	1,392	1,706	1,078	2,277
Rabbit and Hare ... lb.	*	7,380,455	5,795,839	4,352,640	11,004,446	9,316,863
Sheep ... .. No.	*	2,706,027	2,410,543	3,447,212	2,500,246	3,437,720
Other ... .. £	184,522	140,050	296,872	272,622	398,698	468,668
Bonedust ... .. cwt.	66,473	56,415	116,733	71,795	4,811	70
Bones ... .. cwt.	3,207	2,431	6,807	6,963	16,194	8,594
Furs (not on the skin) ... £	767	180	117	...	400	...
Glue-pieces and Sinews ... cwt.	12,862	11,003	20,580	13,276	7,566	6,595
Glycerine and Lanoline ... lb.	*	336,586	198,347	218,673	7,007	1,127
Hair (other than human) ... lb.	165,562	142,636	256,819	330,765	341,291	119,701
Hoofs ... .. cwt.	2,215	2,839	3,733	4,518	9,131	5,710
Horns ... .. cwt.	12,532	11,979	13,475	3,455	11,410	7,436
Lard and Refined Animal Fats lb.	13,633	56,737	227,000	73,461	745,465	230,671
Leather ... .. £	374,541	411,030	394,996	561,026	449,753	339,393
Sausage-casings ... .. £	2,567	17,033	52,562	31,595	336,615	194,741
Tallow (unrefined) ... .. cwt.	305,227	357,031	612,931	128,290	310,903	284,240
Total Value of minor Pastoral Products exported	£ 1,223,728	1,780,466	2,486,492	2,176,888	5,634,175	5,594,507

\* Not available.

Skins and hides are the most important of the items included in the table, and the number and value of these vary seasonally in accordance with slaughtering operations and the prevalence or otherwise of rabbits.

VALUE OF PASTORAL PRODUCTS EXPORTED.

The total value of goods exported oversea, which may be classed as pastoral products or by-products (apart from dairy and farmyard products), is very large. Particulars of the value, as declared upon export, of such products exported oversea from New South Wales during each of the past five years are shown in the following table:—

Commodity.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.
	£	£	£	£	£
Wool ... ..	23,271,552	26,958,270	26,282,052	28,896,682	30,320,197
Meat ... ..	595,949	833,724	1,177,710	1,301,652	631,711
Live stock... ..	32,903	94,128	68,829	87,270	84,432
Other* ... ..	3,997,393	5,523,641	5,634,175	6,307,155	5,594,507
Total ... ..	27,897,802	33,409,763	33,162,766	36,495,759	36,630,847
Proportion of total exports oversea	per cent. 64.7	per cent. 55.1	per cent. 61.4	per cent. 58.1	per cent. 70.60

\*Items listed in previous table.

The above figures are not comparable with those relating to the value of production which follow, since they contain items which have been enhanced in value by manufacture and other processes. In addition, they are not valued as at the place of production, but on the basis of f.o.b. Sydney, and they do not relate to goods produced during the year as do the estimates of the value of production.

## VALUE OF PASTORAL PRODUCTION.

It is difficult, from the nature of the industry, to estimate the return from pastoral pursuits as at the place of production; but, taking the Sydney prices as a standard, and making due allowance for incidental charges, such as railway carriage or freight and commission, the farm value of pastoral production from the different kinds of stock during various years since 1901 are shown in the following table:—

Year.	Annual Value of Pastoral Production (000 omitted).								
	Wool.	Sheep.		Cattle.		Horses (cast.).	Total.	Per head of Population.	
		Slaught-ered.	Export and Increase.	Slaught-ered.	Export and Increase.				
	£	£	£	£	£	£	£	£	s. d.
1901	8,425	2,071	...	1,229	...	722	12,447	9	2 1
1906	13,792	3,514	...	1,520	...	885	19,711	13	5 6
1911	14,085	2,811	...	1,689	...	2,001	20,586	12	7 3
1915-16	13,298	4,295	...	3,729	...	2,172	23,494	12	8 1
1920-21	13,023	2,313	...	2,973	...	2,027	20,336	9	14 7
1921-22	15,557	4,144	...	3,278	...	2,041	25,020	11	15 2
1922-23	23,048	6,766	...	4,912	...	2,057	36,783	16	18 6
1923-24	28,209	5,446	...	4,117	...	2,003	39,775	18	0 1
1924-25	34,073	4,752	...	5,365	...	1,838	46,028	20	8 9
1925-26	26,223	4,323	7,139	4,816	(—) 580	448	42,369	18	8 10
1926-27	33,234	4,47	4,604	5,037	(—) 240	440	47,822	20	7 4

In 1925-26 items of production formerly omitted were included in terms of resolutions carried at the Conference of Statisticians (1926). These items represented the value of the natural increase in sheep and cattle plus the value of exports and minus the value of imports of live animals at appropriate prices. In view of the diminution of horse-breeding the method of calculating the value of the cast was revised, and this led to a substantial reduction in the total.

## NOXIOUS ANIMALS.

The only large carnivorous animals dangerous to stock in Australia are the indigenous dingo, or so-called native dog, and the fox, which has been introduced from abroad; but graminivorous animals, such as kangaroos, wallabies, hares, and rabbits, particularly the last-named, which are of foreign origin, are deemed by the settlers even more noxious. In the latter part of 1920, however, native dogs became an increasing menace to flocks in the Western Division, and added considerably to the difficulties experienced by graziers in that region. In 1921 a Wild Dog Destruction Act was passed, placing the matter in the control of the Western Land Board. This board was charged with the maintenance of the border fence between Queensland and New South Wales and with the prosecution of measures calculated to destroy the dingo pest. During the year ended 31st December, 1926, a sum of £10,902 was collected as rates under this Act, and £10,969 was expended in combating the pest, which has been so far checked that it was possible to re-stock with sheep, holdings that for some time had been used exclusively for cattle. The rate imposed under the Act has been reduced from  $\frac{1}{3}$  d. per acre to  $\frac{1}{10}$  d. per acre.

*Rabbits.*

Rabbits, which are the most serious pest to the pastoral industry, found their way into this State from Victoria, where they had been introduced from overseas. Their presence first attracted serious attention in 1881, and they

multiplied so rapidly that, in 1882, they were to be met with on most of the holdings having frontages to the Murray River. A brief account of the measures taken to combat the pest was published on page 794 of the Year Book for 1921.

In order to check the migrations of rabbits, the Government has erected a number of rabbit-proof fences. The longest of these traverses the whole State from north to south, proceeding from Barrington on the Queensland border, to Bourke, thence following the western side of the railway line, *via* Blayney and Murrumburrah, to Corowa, on the River Murray, a total distance of 696 miles. Another fence extends from the Murray northwards, 350 miles along the whole border between New South Wales and South Australia. A third, built at the joint expense of the Governments of Queensland and New South Wales, extends from Mungindi to the Namoi River, about 115 miles.

The evil wrought by the rabbits is incapable of measurement, but estimates indicate that the losses due to the pest have been large; and besides the expenditure on rabbit-proof fences considerable expense has been incurred in coping with it by means of poisoning, digging-out, etc. It is contended that the sheep-carrying capacity of the State has been reduced heavily as a consequence of the damage they cause to pastures.

Although the damage is considerable, it is compensated to some extent by the local use of rabbits for food and by the value of frozen rabbits and skins exported.

Within the State these animals form a common article of diet, both in the metropolis and in the country, especially during the winter months, when large numbers of men are engaged in their capture and treatment. At the census of 1921 the number of men returned as engaged in trapping and kindred callings was 1,692, most of whom were engaged in rabbit-catching. The local consumption of rabbits as food is estimated at about 80,000 pairs per week. The fur of rabbits and hares is used largely in the manufacture of hats and of ladies' fur garments.

The following table shows the quantity and value of frozen rabbits and hares, and of rabbit and hare skins exported from New South Wales to countries outside Australia:—

Year.	Exports Oversea.				
	Frozen Rabbits and Hares.		Rabbit and Hare Skins.		Total Value.
	Quantity.	Value	Quantity.	Value.	
	pairs.	£	lb.	£	£
1901	*	6,158	*	9,379	15,537
1906	5,938,518	246,803	7,380,455	293,260	540,063
1911	6,806,246	330,741	5,795,839	295,476	626,217
1915-16	9,487,687	607,711	4,352,640	210,935	818,646
1922-23	4,096,054	309,189	11,454,638	1,701,921	2,011,110
1923-24	3,304,669	302,783	6,473,329	1,044,373	1,347,156
1924-25	3,288,284	299,991	10,851,764	2,112,674	2,412,665
1925-26	3,510,311	340,171	11,004,446	2,231,637	2,571,808
1926-27	2,831,701	257,641	11,860,570	2,437,010	2,694,651
1927-28	2,884,026	262,759	9,316,863	1,886,523	2,149,282

\* Not available.

It is apparent that the rabbit industry has assumed an important place in the oversea trade of the State, although its volume is subject to pronounced seasonal and market fluctuations.

*Wire-netting Advances.*

Under the provisions of the Pastures Protection Act for the destruction of rabbits and noxious animals, the Minister for Lands is empowered to advance to Pastures Protection Boards money voted by Parliament for the purchase of netting and other materials used in the construction of rabbit-proof fences. Each board thereupon becomes liable to repay the advances by instalments with interest over a period not exceeding twenty years. In case of default in repayment the Colonial Treasurer is empowered to take possession of any moneys or property vested in the board and to levy rates as prescribed by the Act. The boards are empowered to sell such wire-netting and other materials to owners of private lands, repayments to be made by instalments with interest over a fixed period. The purchase money and interest is a charge upon the holding of the owner, and has priority over all debts other than debts due to the Crown.

The amount of wire-netting supplied to any individual is limited to 5 miles, and the rate of interest on advances is fixed at 6 per cent.

During 1926-27 the quantities of material supplied to landholders under this scheme were 1,496 miles of wire-netting, 101 tons fencing wire, 51 tons barbed wire, in addition to sundry materials, the total value being £65,899. Repayments during the year amounted to £69,209. A sum of £470,000 has been voted by Parliament since 1905 for the purpose of making wire-netting advances. By utilising this sum and re-advancing moneys repaid the Department of Lands has made advances amounting to £863,768.

During the year operations were continued under the Advances to Settlers Act (Commonwealth), and approval was given to 103 applications for a supply of wire-netting at a cost of £16,126. The total expenditure under this Act to 30th June, 1927, was £51,153, and the repayments £5,722.

## PASTURES PROTECTION BOARDS.

For the purpose of administering the Pastures Protection Act which relates to destruction of rabbits and noxious animals, diseases of sheep, importation of sheep, travelling stock, sheep brands and marks, and certain minor matters, the State is divided into 64 Pastures Protection Districts, for each of which there is constituted a board of eight directors, elected every three years by ratepayers from among their own number. There is also a Chief Veterinary Surgeon, appointed by the Governor, besides other inspectors, similarly appointed, who are paid from the funds of the Pastures Protection Districts to which they are attached. Each director of a board is *ex officio* an inspector in certain matters under the Act.

Rates to provide funds for the purposes of the boards are levied upon owners of ten or more head of large stock, or 100 or more sheep, at a rate not exceeding fourpence per head of large stock and two-thirds of a penny per head of sheep, but a reduction of one-half is made to occupiers of holdings which are considered rabbit-proof. Subsidy in respect of public lands may be paid to any board by the State. The funds so raised may be applied by the board to defraying expenses incurred in administering the Act, to clearing scrub, exterminating noxious weeds and noxious animals on travelling stock and camping reserves; and to any other approved purpose. In addition, the Governor may call upon the boards in any year to pay a proportion not exceeding 3 per cent. of their funds into the Treasury to cover the cost of administering the Act.

Since 1918 the boards have levied rates on travelling stock in the Eastern and Central Divisions to constitute a fund for the improvement of travelling stock and camping reserves handed over to the board's supervision.

The boards are empowered also to erect rabbit-proof fences as "barrier" fences wherever they deem necessary, to pay a bonus for the scalps of animal pests, and to enforce the provisions for the compulsory destruction of rabbits.

The amount of rates collected and paid into the Pastures Protection Funds of the 64 Boards operating in 1926 was £94,417. The amount of bonuses paid for scalps, etc., so far as recorded, was £3,301 in 1922, £3,424 in 1923, and £7,641 in 1924, and £9,063 in 1926.

#### *Registration of Brands.*

The Registration of Stock Brands Act, which came into force on 13th December, 1921, cancelled the registration of all existing brands and provided for re-registration of those which owners desired to retain, upon application being made within a prescribed period. The Act was amended in 1923. Of approximately 143,000 registered large stock brands in existence at the time of passing the principal Act, 43,229 were re-registered, and to the end of 1927 additional applications to the approximate number of 19,500 had been registered, making the total number at that date 62,765. Excluding transfers and cancellations, etc., it is estimated that the number of individual brands exceeds 62,000.

#### *Cattle Tick Eradication.*

In the cattle districts of the north-east corner of the State, embracing the most productive dairying districts, the menace of the cattle tick has been growing steadily for a number of years, despite the methods adopted to combat it. The first Act dealing expressly with this pest was passed in 1902, giving power to inspectors to deal with infected cattle by quarantine, disinfection, or destruction.

An Act was passed in 1923 to replace the existing legislation and to give wider powers for the control and eradication of cattle tick and the prevention of other stock diseases. The Act commenced on 14th January, 1924. On 24th April, 1924, a new Board was appointed consisting of a Government officer as chairman, two stock-owners nominated by the Government, and two stock-owners elected by persons affected within the quarantine areas. The control of dipping operations which had been discontinued by the board in December, 1921, was resumed in February, 1924, and up to 30th June 231,908 cattle had been dipped. The number of cattle examined was 3,667,450 in 1925-26, and 4,121,147 in 1926-27, including re-examinations. The numbers dipped were 1,127,951 and 659,406 respectively.

In 1926-27 a Cattle Tick Control Commission was appointed to arrange for co-operation between the States of Queensland and New South Wales and the Commonwealth Government in an endeavour to eradicate the pest.

Under the arrangement agreed upon, the Commonwealth Government will contribute one-third of the actual expenditure for tick eradication, up to a maximum of £53,325 per annum. This money is to be expended in New South Wales until the eradication of the cattle tick has been accomplished, and it will then be made available to Queensland in order to enable the campaign to be carried out on an extensive scale in that State. Pending the transfer of operations to Queensland, that State will carry out cleansing work within its borders, and for this purpose is to expend an amount not exceeding £25,000 per annum.



When the work is subsequently transferred to Queensland, New South Wales will continue to contribute to the expenditure at a rate of one-third the amount actually expended in the northern State in cleansing work, but not exceeding £25,000 per annum.

The Commission is to meet at least twice in the year, and its functions are to determine the areas in which the eradication operations shall proceed, methods to be adopted in each area, composition of dipping fluids, the intervals between treatments, the method of application, the condition of the control of stock movements, including straying and unattended stock, the conditions of enclosure of all grazing lands, the location and erection of dips, the general expenditure, and such other matters as are considered essential for eradication.

This co-operative effort will enable tick eradication work to be prosecuted on a more extensive scale than has hitherto been possible.

#### VETERINARY SURGEONS ACT.

The Veterinary Surgeons Act came into operation on 5th December, 1923, to provide for the registration of veterinary surgeons, and to regulate the practice of veterinary science. A board called the Board of Veterinary Surgeons has been established to administer the Act, which specifies the qualifications necessary to obtain registration and prohibits practice by unregistered persons.

Up to 31st December, 1927, the Board had granted registration to 297 veterinary surgeons.

#### AUSTRALIAN PASTORAL RESEARCH FUND.

Following upon a resolution of the Australian Woolgrowers' Council and the National Council of Wool Selling Brokers of Australia, an endeavour is being made to raise a fund of £200,000 to promote pastoral research, the basis of contribution being 2s. per bale on the 1928-29 clip. The object is to combat stock diseases, animal and insect pests, and injurious plant life, and by any other means to advance the pastoral industry.

It is proposed to work in close co-operation with existing State and Federal and other scientific institutions, and if necessary to engage or subsidise specialists to deal with particular pastoral problems.

## DAIRYING INDUSTRY.

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THE natural conditions in parts of New South Wales are highly favourable to the development of the dairying industry. The soil and climate in the coastal portions of the State are suitable for the maintenance of the dairy herds with a minimum of expense and labour, as the rainfall is abundant and the animals do not require housing nor hand-feeding during a long winter, as in cold countries. Natural pasture is generally available throughout the year, and hand-feeding is necessary only in very dry seasons.

Dairying operations in New South Wales are said to have begun during the twenties of last century in the immediate vicinity of Sydney and in the Illawarra districts to supply the population of the metropolis.

The development of dairying as a national industry is, however, comparatively recent, as its progress was slow until the introduction of refrigeration enabled producers to overcome disabilities in manufacturing and distributing perishable dairy products in a warm climate and to export the surplus oversea. Pasteurisation and the application of machinery to the treatment of milk and the manufacture of butter, the development of the factory system, and improvements in regard to ocean transport have enabled production to expand beyond the limits of local requirements, and butter has become an important item of the export trade.

In the drier inland divisions the area devoted to dairying is not extensive, sheep and wheat farming being the main rural industries. In proximity to the centres of population dairy-farming is undertaken to supply local wants, and well-equipped factories have been established in a number of inland centres. Dairying is conducted also on the Murrumbidgee and Hay irrigation areas.

In the coastal division 8,600 holdings are used exclusively for dairying, and 6,800 for dairying combined with other purposes. In the other parts of the State, where fodder must be grown for winter feeding, the industry is nowhere extensive and is conducted usually in conjunction with wheat-farming and grazing—there being less than 500 holdings used solely for dairying, and 3,000 for dairying in combination with other rural pursuits.

Most of the native grasses of the State are particularly suitable for dairy cattle, as they possess milk-producing as well as fattening qualities. In the winter the natural herbage is supplemented by fodder crops, such as maize, barley, oats, rye, lucerne, and the brown variety of sorghum, or the planter's friend. Ensilage also is made for fodder, but the quantity made in each year is not large and varies considerably. The area of land devoted to sown grasses has been extended largely during recent years, and in June, 1927, amounted to 2,036,891 acres, of which 1,981,194 acres were in the coastal district. The produce of this land is used mainly as food for dairy cattle.

A Select Committee of the Legislative Council which investigated the condition of the dairying industry in 1920-21 emphasised the need for a better system of feeding with due regard to conservation of fodder, improvements of pastures, and cultivation of suitable crops. Successful dairying depends

mainly on the proper feeding of the cows, and the conservation of fodder as ensilage was recommended for all dairying districts, especially for those areas where the rainfall is irregular. Another recommendation strongly urged by the Committee was the breeding of dairy stock on the lines of practical utility, and it stressed the need for a "better bull" campaign.

#### SUPERVISION OF DAIRIES AND DAIRY PRODUCTS.

The manufacture, sale and export of dairy products, *i.e.*, milk, condensed milk, butter, cheese, and margarine, are subject to supervision in terms of the Dairies Supervision Act, and the Dairy Industry Act passed in New South Wales in 1901, and December, 1915, respectively, and the Commerce (Trade Descriptions) Act, and the Dairy Produce Export Control Act, passed by the Commonwealth Parliament in 1905 and 1924 respectively.

Under the Dairy Industry Act, 1915, dairy factories and stores must be registered, and are under the supervision of State Government inspectors. Cream supplied to a dairy factory must be tested and graded at the factory, and the farmer is paid on the basis of the butter-fat results, or on the amount of butter obtained from his cream. Butter must be graded on a uniform basis and packed in boxes bearing registered brands indicating the quality of the product and the factory where it was produced. The testing and grading at the factory may be done only by persons holding certificates of qualification.

The State has been divided into nine dairying districts, and in each an experienced dairy inspector is appointed to administer the Act and regulations thereunder. He acts as inspector, instructs the factory managers and cream-graders in matters connected with the industry, and advises the dairy-farmers, especially those supplying cream of inferior quality. He also exercises supervision over the quality of butter produced, and, where necessary, orders structural improvements in factory premises. Since 1919 factory premises have been altered extensively, and in numerous cases entirely new buildings have been erected. Usually the number of factories under the supervision of each inspector does not exceed twenty.

Since the Dairy Industry Act came into force the quality of factory butter has shown a marked improvement, and it was estimated by the Dairy Expert that in the year ended 30th June, 1928, 93 per cent. of the butter made in factories was passed as first grade by State and Commonwealth inspectors.

Particulars regarding the supervision of dairies supplying milk for consumption as fresh milk, are shown in the chapter "Food and Prices."

The Dairies Supervision Act, 1901, consolidated laws designed to prevent the spread of disease through the insanitary conditions under which milk and milk products had been handled. Under this law all dairymen and milk vendors are required to register their premises with local authorities and such premises are subject to the inspection of the authorities. It is illegal for any person to sell milk or milk products produced on unregistered premises. The beneficial effects of this law in relation to public health are referred to in the chapter "Vital Statistics" of this Year Book.

The supervision of dairy products for the oversea export trade is conducted by officers appointed by the Federal Government, under the Commerce (Trade Descriptions) Act of 1905. Since 1st August, 1924, a national brand has been placed on all butter graded for export as choicest quality. This brand consists of the figure of a kangaroo imposed on the boxes along with the ordinary trade-marks in use.

*Dairy Produce Export Control Board.*

This Board was appointed by the Federal Government in May, 1925, under the Dairy Produce Export Control Act passed on 24th October, 1924. The Board consists of a representative of the Commonwealth Government, two representatives elected by the boards of directors of co-operative butter and cheese factories in each of the States of Queensland, New South Wales, and Victoria and one each similarly elected from the remaining three States, two representatives of proprietary butter and cheese factories and one member nominated by the Commonwealth Government to represent the selling agents. The Board is a body corporate and its members hold office for two years. Provision is made for the election of an executive committee and the creation of a London agency of the Board.

For the purpose of enabling the Board to exercise effective control over the export, and the sale and distribution after export of Australian butter and cheese, it is provided that from 1st August, 1925, there shall be no export of these commodities from Australia, except upon the conditions of a license from the Minister upon the recommendation of the Board. Exports to Eastern ports are, however, exempted from the provisions of the Act.

Exporters may place butter and cheese intended for export under the control of the Board, which is given power to make such arrangements as it deems fit for the handling, distribution, and disposal of produce entrusted to it. It has power also to give security over such produce in respect of any advance payment made to suppliers of the produce and, under the Export Guarantee Act, the Commonwealth Government may guarantee repayment of any advance which the Board may obtain up to a maximum of 80 per cent of the value of the produce tendered as security. After a date to be fixed by proclamation no contract may be made for the carriage by sea of any butter or cheese beyond the Commonwealth except by the Board acting as agent of the owners of the produce or in conformity with conditions approved by the Board.

The expenses of the Board are defrayed from a fund created by a levy which may not exceed  $\frac{1}{16}$  d. per lb. on butter and  $\frac{1}{16}$  d. per lb. on cheese exported from the Commonwealth. A levy was imposed on all exports after 1st July, 1925, at the rate of  $\frac{1}{16}$  d. per lb. of butter and  $\frac{1}{8\frac{1}{2}}$  d. per lb. of cheese, these rates have been reduced to  $\frac{1}{20}$  d. and  $\frac{1}{10}$  d. respectively.

During its existence the Board has obtained a reduction in the rates for marine insurance, and reductions in freight, in respect of butter and cheese, a recent reduction of  $2\frac{1}{2}$  per cent. in the rates of freight on butter and cheese shipped to the United Kingdom for the season, represented a saving of about £8,200. Through its London agency the Board acts in conjunction with organisations distributing other Australian products for the purposes of advertising abroad. Its revenue during 1927-28 was £21,613, and the expenditure £23,072, of which £11,000 was for propaganda and advertising.

*Dairying Organisations.*

As is pointed out on a later page, most of the dairy factories of the State are conducted on co-operative principles, and a similar condition exists throughout Australia. This fact has given rise to a considerable number of organisations for promoting the interests of the industry, many of which are federal in character. Principal among these is the Ministerial Dairy Council, consisting of the Commonwealth Minister of Trade and Customs and the Minister of Agriculture of each of the States. This Council meets at least once a year to consider matters of policy and future development.

The Australian Dairy Council, created in September, 1922, consists of twenty-five members, of whom ten are representatives of the various Governments, and fifteen are representatives of producers. In this Council New South Wales is represented by one official and three producers' representatives. The Council is recognised officially, and its functions are to advise the Government upon the administration of the Acts and regulations pertaining to the production, manufacture, and standardisation of dairy produce. It also endeavours to secure uniform legislation and administration in all States. The Dairy Council acts in co-ordination with the Dairy Produce Export Control Board. In each State there is a Dairy Advisory Board, and that in New South Wales consists of representatives of producers and distributors and of the Dairy Export Control Board, and two officials representing the State and Commonwealth Governments respectively.

There are also an Advisory Committee, formed in 1923, for the determination of local prices of butter, and a Committee for stabilising the price of butter. The first-named Committee consists of one representative of each of the three co-operative distributing houses and two representatives of an association of dairymen.

The Stabilisation Committee, consisting of representatives elected by the boards of directors of the butter factories in New South Wales, met for the first time on 3rd April, 1924, to consider ways and means of stabilising prices in the dairying industry.

This Committee has since become part of a Federal organisation—the Australian Stabilisation Committee—and an arrangement known as the "Patterson" scheme was inaugurated on 1st January, 1926, with the object of stabilising the butter markets in Australia. Under this arrangement butter producers pay a levy on all butter produced, and from the funds thus provided a bonus is paid on butter exported. The levy was originally fixed at 1½d. per lb. and the bonus at 3d. per lb.; but a bonus of 4d. per lb. was paid on butter exported between 12th and 31st December, 1927. In October, 1928, it was decided to increase the levy to 1¾d. per lb., and the bonus on butter exported to 4½d. per lb. as from 1st January, 1929. Any balance remaining after the payment of the bonus is returned to the producers. The scheme is designed to bring about a diminution of interstate competition in Australian markets and to promote the sale of Australian butter in competitive markets overseas.

A New South Wales Butter and Cheese Exporters' Association, and a Co-operative Dairy Factory Managers and Secretaries' Association have been in existence since 1906.

#### DAIRY INSTRUCTION.

Educational and experimental work relating to dairying is conducted by the Department of Agriculture at eight of the State experiment farms, and at the Hawkesbury Agricultural College.

The breeds of stud cattle kept at the various farms are as follows:—At Cowra and at Berry, Milking Shorthorn; at Wollongbar, Guernseys; at Grafton, Glen Innes and Yanco, Ayrshires; at Wagga Wagga and Bathurst, Jerseys. At the Hawkesbury Agricultural College a Jersey stud holds a prominent place.

In order to enable factory managers and butter-makers to improve their scientific knowledge, dairy-science schools are held for short terms at different dairying centres, and certificates are given to those who pass examinations in the grading of cream, and in the testing of milk and cream.

During the year 1928 the students at the dairy science schools numbered 129.

## HERD-TESTING.

Farmers who supply cream to factories are paid according to the results of the testing and grading of their consignments, but these results, representing averages, do not disclose the necessary records of individual animals in their herds. Therefore efforts are being made by the dairy instructors to promote herd-testing societies in each dairying centre.

For testing the ordinary dairy herds two schemes are conducted under the supervision of the Department of Agriculture. Under the first, the farmers form a co-operative society and employ a tester to visit their farms at regular intervals. Fees are subscribed by the farmers and are subsidised by the Department at the rate of 50 per cent. for the first year and 25 per cent. thereafter. Under the other scheme, officers of the Department conduct the tests. The farmers who participate pay an annual fee and a testing fee for each cow submitted. In the year ended 30th June, 1925, the number of cows tested under the co-operative scheme was 10,000, and Government officers tested 12,000 cows. In 1925-26 the number tested under both schemes was 27,000, in 1926-27, 26,200, and in 1927-28, 43,000.

The standard lactation period is fixed at 273 days, but tests may be extended to 365 days. Certificates are issued by the Department of Agriculture, and records are published of all cows tested.

## DAIRY CATTLE.

In the dairy herds the Shorthorn preponderates. This breed was introduced into the Illawarra or South Coast districts in the early period of dairying, before the Shorthorn had been developed by English breeders into a beef-producing type. By an admixture with other strains, a useful type of dairy cattle, known as the Illawarra, has been developed, and an association has been formed to establish the breed. There is also a large number of Jersey cattle, and the popularity of the breed for the production of butter is increasing. The Ayrshire is well represented in the dairy herds. It is noted for hardiness, but is considered as better suited for producing milk for human consumption as fresh milk than for the purposes of butter-making.

The number of cows used for milking in the State in each year since 1917 is shown below:—

As at 30th June.	Cows in Milk at 30th June.		Dry Cows.	Heifers.		Average Daily Number of Cows in Milk during Year.
	In Registered Dairies.	Other.		Springing.	Other, over one Year.	
	No.	No.	No.	No.	No.	No.
1917	424,033		319,230	111,369	167,665	551,623
1918	429,556		347,834	110,827	177,872	634,000
1919	445,354		273,154	78,839	173,101	536,200
1920	419,732		277,888	72,311	133,092	511,064
1921	475,785		282,208	86,381	97,368	542,092
1922	414,557*	86,665	*314,771	*68,222	*89,872	580,933
1923	404,611*	79,525	*313,264	*63,100	*97,787	579,516
1924	418,505*	84,680	*282,014	*71,515	*92,421	561,909
1925	457,217*	88,567	*280,186	*68,206	*79,674	614,841
1926	472,273*	90,336	*278,967	*59,194	*83,731	632,331
1927	462,365*	85,674	*286,592	*51,422	*103,266	616,805

\* In registered dairies only.

Although the basis of classification was improved in 1922 in order to provide the return of separate particulars of the cows in registered dairies, the figures of each column are substantially comparable with those of previous years.

During the winter months the number of cows in milk is usually smaller and the number of springing heifers is usually greater than in the summer months, and for those reasons the numbers shown above as at 30th June are not typical of the distribution of cows under the various headings throughout the year.

#### *Dairy Farms and Registered Dairymen.*

Under the Dairies Supervision Act, 1901, every person keeping cows to produce milk for sale for human consumption in any form must register his premises and conform to prescribed standards of cleanliness, etc. Many persons so registered, however, conduct operations on a very limited scale.

The following statement shows a comparison for the past six years of the number of registered dairymen in New South Wales, and the number of holdings of 1 acre and upwards used for dairying operations on a commercial scale:—

Year.	*Registered Dairymen.	† Holdings of one acre and upwards used principally for—				
		Dairying only.	Dairying and Agriculture.	Dairying and Grazing.	Dairying, Grazing and Agriculture.	Total used for Dairying.
1922	20,748	9,002	5,214	2,342	1,818	18,466
1923	22,194	9,222	5,266	2,227	1,642	18,357
1924	21,604	9,191	5,561	1,969	1,756	18,477
1925	21,894	9,499	5,919	1,766	1,900	19,174
1926	21,634	9,766	5,624	1,794	1,734	18,918
1927	21,478	9,081	6,523	1,350	1,892	18,846

\* At 31st December. † At 30th June.

It is apparent that less than one-half of the registered dairymen are dependent exclusively on milk products for their livelihood, but the proportion has increased very greatly in recent years. In 1927 the number of holdings used exclusively for dairying constituted nearly 12 per cent. of the total number of holdings 1 acre or more in extent.

#### *Dairy Factories.*

Although there is some seasonal variation, approximately 90 per cent. of the milk products of the State is handled in factories, the balance being dealt with on the farms principally for domestic purposes. Most of the factories are conducted on co-operative principles, with the suppliers as shareholders, and are situated in the country districts at convenient centres. Particulars of the operations of the butter factories are shown on page 357 of this Year Book.

## DAIRY PRODUCTION.

The following statement shows the quantities of the principal dairy products in each Division of the State during the year ended the 30th June, 1927:—

Division.	Average No. of Cows in Milk during year.	Estimated yield of Milk.	Butter made.	Cheese made.
<b>Coastal—</b>	<b>No.</b>	<b>gallons.</b>	<b>lb.</b>	<b>lb.</b>
North Coast ... ..	287,706	129,199,080	51,345,311	1,546,063
Hunter and Manning ... ..	128,844	58,254,173	24,306,878	865,037
Metropolitan ... ..	21,521	13,344,042	679,254	14,659
South Coast ... ..	73,739	35,431,653	8,036,738	3,748,985
<b>Total ... ..</b>	<b>511,810</b>	<b>236,228,948</b>	<b>84,368,181</b>	<b>6,174,744</b>
<b>Tableland—</b>				
Northern ... ..	14,079	4,772,564	1,324,498	50,092
Central ... ..	17,256	6,969,856	1,675,418	140,400
Southern ... ..	7,185	2,596,364	679,186	9,518
<b>Total ... ..</b>	<b>38,520</b>	<b>14,337,804</b>	<b>3,679,102</b>	<b>200,010</b>
<b>Western Slopes—</b>				
North ... ..	13,697	5,430,291	2,135,171	...
Central ... ..	7,856	3,001,238	803,868	...
South ... ..	23,556	10,456,036	3,764,695	361,206
<b>Total ... ..</b>	<b>45,109</b>	<b>18,887,565</b>	<b>6,703,724</b>	<b>361,206</b>
<b>Plains--</b>				
North Central ... ..	3,053	1,103,898	131,312	...
Central ... ..	3,302	1,160,123	142,424	...
Riverina ... ..	13,967	5,832,715	1,504,913	...
<b>Total ... ..</b>	<b>19,722</b>	<b>8,096,739</b>	<b>1,778,649</b>	<b>...</b>
<b>Western Division ... ..</b>	<b>1,644</b>	<b>564,944</b>	<b>22,082</b>	<b>...</b>
<b>Total, New South Wales</b>	<b>616,805</b>	<b>278,116,000</b>	<b>96,551,738</b>	<b>6,735,960</b>

This statement illustrates the importance of the dairying activities in the coastal division as compared with the remainder of the State. In this area nearly 90 per cent. of the cows in registered dairies are depastured, and approximately 85 per cent. of the total output of milk, butter, and cheese is produced. Fifty-three per cent. of the butter of the State was made in the North Coast Division. The Hunter and Manning division is next in importance, then the South Coast, followed by the south-western slopes where the manufacture of butter is increasing steadily. Formerly the South Coast division was the principal dairying region, but in recent years the industry has made rapid progress in the northern districts, where many large estates, used previously for raising cattle for beef, have been subdivided into dairy farms. The manufacture of cheese is of small extent when compared with the manufacture of butter, and more than one-half of the total output is made in the south coastal districts.



*Milk.*

Particulars of the consumption and supply of milk and milk products are published in the chapter "Food and Prices" of the Year Book.

Cows used for producing milk for sale are inspected by Government officers, who have power to condemn and prevent the use of diseased animals. In 1926 inspections were made of 399,164 dairy cattle, or nearly half of the total herds in registered dairies, and of these 712, or less than two per thousand, were condemned—475 for tuberculosis, 131 for actinomycosis, 96 for cancer, and 10 for other diseases. The standard of milk sold for human consumption is prescribed, the quality of the milk sold is tested frequently, and prosecutions are instituted where deficiencies are found. By these means the purity and wholesomeness of dairy products are protected.

The total yield of milk can be estimated only approximately. Few, if any dairy farmers actually measure the quantity of milk obtained from their cows throughout the year. The majority are concerned principally in producing cream for manufacture into butter. Neither the statistics of milk obtained from farmers nor those of cream shown in the returns of factories are considered satisfactory, and as the estimate of milk produced is necessarily based on these it can be regarded as only approximate.

*Average Yield per Cow.*

The steps being taken to increase the yield of milk per cow are discussed in the earlier pages of this chapter. While sufficient information is not available to show conclusively the average annual production of milk per cow, it is certain that the average is comparatively low, and that, with the natural climatic advantage of a mild winter, great improvement is possible.

A reasonably accurate estimate of the equivalent of commercial butter contained in the milk yielded by cows in registered dairies may be obtained if it be assumed (a) that the milk obtained from those cows and used for purposes other than butter-making would yield, on the average, approximately 3.8 per cent. of butter fat, and (b) that the mean of the number of cows in milk and dry at the beginning and end of any given year represents the average number kept for milking in registered dairies during that year. More than three-quarters of the milk yielded by cows in registered dairies is used for the production of butter, hence the possible margin of error involved in the assumed butter-fat content of milk used for other purposes is comparatively small.

The following table, referring to cows in registered dairies, provides a comparison of estimates compiled on this basis:—

Year ended 30th June.	Mean Number of Cows Dry and in Milk.*	Average Daily Number of Cows in Milk.*	Proportion of Cows in Milk.	Estimated Average Period of Milking during Year.	Estimated Equivalent in Commercial Butter of Average Yield per Cow.
			per cent.	days.	lb.
1923 ... ..	723,600	503,944	69.6	254	125
1924 ... ..	709,200	485,342	68.4	250	126
1925 ... ..	723,146	534,482	73.9	270	189
1926 ... ..	744,316	549,358	73.8	270	168
1927 ... ..	750,099	537,502	71.7	262	165

\* Cows in registered dairies only.

In the two years ended June, 1924, both aggregate production and average yield were below normal by reason of adverse weather conditions. The average yield in 1921-22 cannot be estimated upon the same basis, but it was probably in the vicinity of 160 lb. commercial butter per cow. The average in 1924-25 was more than 42 per cent. higher than in the preceeding season.

The length of the lactation period varies considerably according to the geographical position of dairy farms. While the general average for the State was about 270 days in 1924-25, the average in the tableland division, where the winter is colder, was only about 230 days.

#### *Use of Milk.*

The following statement shows the estimated amount of milk used for various purposes during each of the last three years. For reasons already stated these estimates can be regarded as only approximate.

	1924-25. gallons.	1925-26. gallons.	1926-27. gallons.
Used for butter made on farms ...	13,936,000	15,913,000	14,393,000
"    "    in factories ...	238,115,000	209,354,000	199,440,000
	<hr/> 252,051,000	<hr/> 225,267,000	<hr/> 213,833,000
Used for cheese made on farms ...	108,000	154,000	120,000
"    "    in factories ...	7,907,000	6,409,000	6,742,000
	<hr/> 8,015,000	<hr/> 6,563,000	<hr/> 6,862,000
Used for sweet cream ...	2,973,000	2,583,000	2,649,000
"    condensing ...	2,010,000	2,788,000	2,901,000
Pasteurised for metropolitan and Newcastle markets ...	16,690,000	17,166,000	17,508,000
Balance sold and used otherwise ...	35,187,000	35,693,000	34,363,000
	<hr/> 316,926,000	<hr/> 290,060,000	<hr/> 278,116,000

An estimate of the quantity of fresh milk used for human consumption is shown in the chapter relating to "Food and Prices."

It was ascertained that 698,356 lb. of butter included above was made from cream received at New South Wales factories from supplies in Queensland.

In 1926-27 the milk used for making butter represented 77 per cent. of the estimated total production; 2 per cent. was used for cheese; 1 per cent. for condensed milk; and the balance—20 per cent.—was consumed as fresh milk or sweet cream, or used otherwise.

In recent years it has become the practice to instal hand or small power separators on each farm. The number of farms with power separators in 1926-27 was approximately 1,782. Thus the farmers have been able to effect great economy of time and labour, as the cream need not be taken to the factory at such frequent intervals as formerly, and considerable advantage is derived by the supply of freshly separated milk for the farm stock.

#### *Preserved Milk.*

Various kinds of preserved milk and milk foods are produced in New South Wales, *e.g.*, sweetened condensed milk, unsweetened condensed milk, concentrated milk, and powdered milk.

During the war period there was great progress in the manufacture of preserved milk, and the output was increased from 3,682,800 lb. in 1913 to 14,938,100 lb. in 1920-21. Since that year there has been an amalgamation of the companies engaged in the manufacture of preserved milk products in Australasia and some of the factories in New South Wales have been closed. The quantity made in 1926-27 was 6,315,621 lb., valued at £304,251.

*Butter.*

The following statement shows the quantity of butter made annually at intervals since 1901:—

Year ended 30th June.	On Farms.	In Factories.	Total.	Year ended 30th June.	On Farms.	In Factories.	Total.
Thousand lb. (000 omitted.)							
1901*	4,775	34,282	39,057	1923	4,469	69,255	73,724
1906*	4,637	54,304	58,941	1924	4,654	68,030	72,684
1911*	4,632	78,573	83,205	1925	4,706	112,505	117,211
1916	4,258	55,374	59,632	1926	5,270	101,698	106,968
1921	4,388	79,880	84,268	1927	4,825	91,727	96,552
1922	4,978	95,695	100,673	1928+	.....	93,619†	.....

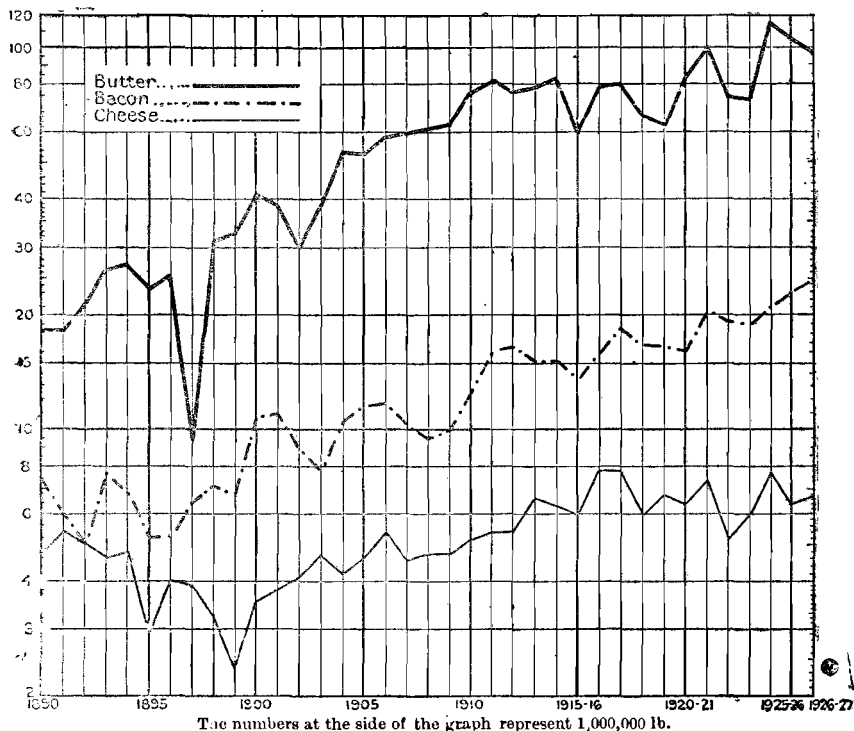
\* Calendar year.

† Subject to revision.

The proportion of factory-made butter in the total production has increased from 72 per cent. in 1895 to 95 per cent. during 1926-27—a result of the greater efficiency of factory as compared with farm methods.

**DAIRY PRODUCTION, 1890 to 1926-27.**

Ratio graph.



The diagram is a ratio graph, and, the vertical scale being logarithmic, the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion, irrespective of absolute numbers. Actual data are shown by means of the numbers at the side of the graph.

*External Trade in Butter.*

Particulars of the external trade in butter during each of the past four seasons are summarised in the following statement:—

Particulars.	1924-25.	1925-26.	1926-27.	1927-28.
	lb.	lb.	lb.	lb.
<b>Imports :—</b>				
Interstate ... ..	3,268,800	3,033,600	4,127,284	5,288,164
From New Zealand ... ..	1,700	805,600	4,271,512*	4,682,229*
<b>Total Imports ... ..</b>	<b>3,270,500</b>	<b>3,839,200</b>	<b>8,398,796</b>	<b>9,970,393</b>
<b>Exports :—</b>				
Interstate ... ..	5,525,400	6,781,500	6,658,400	6,215,020
Overseas—Australian produce ... ..	44,243,500	26,354,600	17,753,508	20,820,334
New Zealand produce ... ..	...	...	195,347	...
Ships' Stores—Australian produce... ..	483,600	653,500	535,659	527,639
New Zealand produce ... ..	...	...	492	...
<b>Total Exports ... ..</b>	<b>50,252,500</b>	<b>33,789,600</b>	<b>25,143,406</b>	<b>27,563,043</b>
<b>Excess of Exports ... ..</b>	<b>46,982,000</b>	<b>29,950,400</b>	<b>16,744,610</b>	<b>17,592,650</b>

\* Includes 450 lb. from Denmark in 1926-27, and 1,302 lb. from various countries in 1927-28.

In 1924-25 the local production of butter was far in excess of local requirements. The quantity exported overseas was very heavy, and there was a considerable export to other States. Very little butter was imported from New Zealand. Towards the end of the following season, however, when prices in Australia were at a comparatively high level, a fairly large quantity of New Zealand butter was brought to Sydney. In 1926-27 the imports from New Zealand increased very substantially again. The import interstate also increased, and the total imports of the year exceeded one-third of the exports.

*Production and Exports of Butter Monthly.*

The following table shows for each month during the four seasons ended 30th June, 1927, the quantity of butter produced in factories in comparison with the quantity exported. Butter may be stored for a considerable period before export, and the figures for production and export each month do not necessarily refer to the same butter. In 1923-24 local production scarcely sufficed to supply local requirements, and the quantity of butter imported interstate and from New Zealand was nearly as great as the quantities exported. The exports overseas in that year probably included some butter imported from other Australian States:—

Month.	Quantity of Butter Produced in Factories.				Quantity of Butter Exported Oversea (Australian Produce).			
	1924-25.	1925-26.	1926-27.	1927-28.	1924-25.	1925-26.	1926-27.	1927-28.
	Thousand lb.							
July ... ..	3,449	4,691	4,958	3,834	676	705	471	201
August ... ..	4,096	4,932	5,462	3,753	2,351	350	1,235	128
September ... ..	6,613	6,839	6,623	3,789	1,523	928	938	109
October ... ..	9,059	8,703	8,299	5,827	2,419	1,430	1,283	42
November ... ..	11,302	10,737	7,432	8,953	3,628	3,139	1,788	1,289
December ... ..	14,643	12,946	6,689	12,010	7,006	5,051	410	2,955
January ... ..	14,135	13,076	11,466	12,402	6,922	4,933	2,622	4,923
February ... ..	13,004	10,161	11,078	11,694	6,256	5,235	5,098	3,973
March ... ..	12,817	8,493	10,347	11,620	5,642	1,785	2,523	2,108
April ... ..	10,198	8,670	8,357	9,692	3,524	496	613	1,425
May ... ..	7,350	7,947	6,659	7,813	1,599	1,412	574	2,466
June ... ..	5,437	5,059	4,616	5,232	2,697	891	198	1,201
<b>Total ... ..</b>	<b>112,103*</b>	<b>101,56*</b>	<b>91,983*</b>	<b>96,619*</b>	<b>41,243</b>	<b>26,355</b>	<b>17,753</b>	<b>20,820</b>

\* Compiled from monthly returns of Dairy Branch. The totals differ slightly from those published elsewhere in this volume.

These monthly records show the pronounced seasonal nature of the production, with the consequent monthly variations in the volume of exports. Production increases in a marked degree during the summer months and decreases during the winter, reaching a minimum usually in July. This is due mainly to fluctuations in the number of cows in milk.

Usually more than 80 per cent. of the butter exported oversea from New South Wales is sent to the United Kingdom, the remainder being sent mainly to countries bordering the Pacific Ocean.

The principal sources from which butter was imported into Great Britain and Northern Ireland during each of the last three years are shown below:—

Year ended June.	Imports of Butter into Great Britain and Northern Ireland from—					
	Australia.	New Zealand.	Denmark.	Argentina.	Other Countries.	Total Imports.
	tons.	tons.	tons.	tons.	tons.	tons.
1925	56,193	67,179	85,206	22,455	46,865	277,898
1926	40,454	51,138	89,732	24,685	72,383	278,392
1927	30,216	56,534	97,795	26,498	77,596	288,639

#### Prices of Butter.

The average monthly prices of butter in Sydney and London markets during each of the past four seasons are shown below:—

Month.	Average Price in Sydney of Choicest Butter per cwt.				Average Top Price in London of Australian Butter per cwt.			
	1924-25.	1925-26.	1926-27.	1927-28.	1923-24.	1924-25.	1925-26.	1927-28.
	s.	s.	s.	s.	s.	s.	s.	s.
July ...	173	174	196	201	185	192	169	162
August ...	174	184	196	209	198	196	170	169
September	176	178	189	224	199	204	161	178
October ...	167	185	173	221	211	213	146	176
November	150	176	168	189	191	200	144	173
December	145	155	184	179	194	174	170	164
January ...	137	170	186	178	165	167	173	163
February ...	132	178	179	168	169	170	170	159
March ...	146	185	170	172	179	169	156	167
April ...	146	194	170	177	166	173	155	162
May ...	157	193	183	177	164	169	160	158
June ...	160	192	197	178	180	173	166	164

The prices quoted in the above table for Sydney and London respectively may not be used to estimate the difference between the actual selling price in Sydney and the local parity of London prices. The Sydney price is an average of daily prices and relates to the official price of butter of choicest quality. No account is taken of under-selling such as occurred in the middle of 1924 through the incidence of interstate competition. On the other hand the London prices are the mean of the top prices quoted weekly in the *Statist* for Australian butter, but owing to the smallness of supplies at certain periods these prices are more or less nominal. Usually there are appreciable quantities of Australian butter on London markets for only about half the year, viz., from November to May inclusive. Under the "Patterson" stabilisation scheme, which is explained above, exporters of butter from Australia were paid a bonus on butter exported from 1st January, 1926.

The cost of marketing butter in London varies from time to time in accordance with changes in rates of ocean freight, exchange, insurance, handling and other charges. During 1924-25 the amount of such charges was approximately 22s. per cwt.

The average price paid to suppliers of cream to local factories was as follows in recent years:—1921-22, 1s. 1.9d.; 1922-23, 1s. 6.9d.; 1923-24, 1s. 4.6d.; 1924-25, 1s. 1d.; 1925-26, 1s. 3.8d.; 1926-27, 1s. 4.2d. per lb. of commercial butter manufactured. These payments include amounts deferred from the previous year, and they do not relate exactly to the financial year.

#### *Cheese.*

Excellent conditions exist in New South Wales for the production of cheese, but cheese-making has not advanced to the same extent as the manufacture of butter, the latter being more profitable.

The industry is retarded by the great disadvantages of cheese as an article of export. It matures quickly and after a short period depreciates in value. Unlike butter it cannot be preserved satisfactorily by freezing. Moreover, cheese represents little more than half the money value of butter for the same weight, while the cost of freight is practically the same. At present, however, sufficient cheese is seldom produced in New South Wales to supply local requirements, and, besides 1,313,000 lb. imported from other Australian States by sea, in 1926-27, approximately 560,000 lb., valued at £45,640 were imported from countries outside the Commonwealth. The quantity exported oversea during the year was 180,347 lb., valued at £9,161, inclusive of ships' stores.

The Select Committee, to which reference was made above, assigned the unsatisfactory condition of this section of the dairying industry to the fact that adequate legislative authority has not been given to control the manufacture of cheese, as in the case of butter. The committee was of opinion that it should be made compulsory to grade and pasteurise milk and cream used in the manufacture of cheese and to grade the cheese according to quality.

From a previous table showing the cheese made in the various divisions of the State, it will be seen that more than half of the total production during the 1926-27 season was made in the South Coast Division.

The following table shows the production of cheese in factories and on farms at intervals since 1901:—

Year ended 30th June.	Production of Cheese.		
	In Factories.	On Farms.	Total.
	lb.	lb.	lb.
1901*	2,428,599	1,410,236	3,838,835
1906*	3,459,641	1,999,004	5,458,645
1911*	4,617,387	843,265	5,460,652
1916	4,969,374	1,010,262	5,979,636
1921	5,965,715	441,494	6,407,209
1926	6,321,111	141,424	6,462,535
1927	6,623,000	107,960	6,735,960

\* Calendar Year.

It is apparent that the annual output of cheese has shown only slight expansion except in occasional years. In 1924-25, however, the quantity produced, 7,705,600 lb. was greater than the output in any other year except 1916-17. Cheese-making on farms was formerly extensive, but is declining into insignificance. The output of factories during 1926-27 represented over 98 per cent. of the total production.

## SWINE.

The breeding of swine is conducted usually on dairy farms, where a large supply of separated milk is available for fattening the stock. Pigs are reared also in agricultural districts, where special crops of maize, peas, etc., are grown as fodder for them.

The principal breeds of swine are the Berkshire, prized because it is fattened readily; the Poland China, which thrives in the North Coastal districts; the Tamworth, which is useful for crossing with fat breeds to secure a good bacon pig; and a type called the Middle Yorkshire, which has been fixed by crossing the Large and Small Yorkshires. Stocks of high-class strains may be purchased at the Government experiment farms and other institutions.

The following table shows the number of pigs in New South Wales at intervals since 1891:—

At 31st December.	Swine.	At 30th June.	Swine.
	No.		No.
1891	253,189	1921	306,253
1896	214,581	1926	382,674
1901	265,730	1927	332,921
1906	243,370		
1911	371,093		
1916	281,158		

The figures show remarkable fluctuations, but, since 1901, there has been a tendency to increase. In 1918 the number, 396,157, was the highest on record, but it declined owing to adverse seasons in 1919 and 1920. There was a substantial increase in 1921, and again in 1926, but the numbers diminished in the last year shown owing largely to an outbreak of swine fever in March, 1927. At 30th June, 1927, the pigs less than one year old numbered 242,047, and the pigs aged one year and over 90,874.

The following statement shows the number of pigs in various divisions of the State and the production of bacon and ham in 1926-27 as compared with the years 1911 and 1920-21:—

Division.	1911.		1920-21.		1926-27.	
	Swine.	Bacon and Ham cured.	Swine.	Bacon and Ham cured.	Swine.	Bacon and Ham cured.
	No.	lb.	No.	lb.	No.	lb.
Coastal ... ..	255,361	13,845,520	208,903	14,781,094	268,186	22,914,620
Tableland ... ..	45,578	1,124,091	29,700	597,872	20,030	543,256
Western Slopes ... ..	42,258	666,173	39,599	422,712	30,586	553,191
Other ... ..	27,896	467,043	28,051	455,564	14,119	591,998
Whole State ... ..	371,093	16,102,827	306,253	16,257,242	332,921	24,603,065

This table shows that the production of bacon has increased since 1911 in the dairying districts of the coastal division, and 93 per cent. of the total production of bacon in 1926-27 was cured in these districts. In the tableland division there has been a marked decline in pig-raising, and little or no progress has been made in other parts of the State.

*Interstate Movement of Pigs.*

The introduction of pigs from other States is closely regulated in order to prevent the spread of the various diseases current among these animals, and, on the whole, few pigs are brought into the State except for slaughtering in adverse seasons. On the other hand there is usually a movement of pigs from New South Wales to Queensland, but in 1927-28 the net import of live pigs from Queensland was 2,240. There was a net export of 2,431 from Victoria.

*Bacon and Hams.*

The production of bacon in New South Wales is not usually sufficient for local requirements, and quantities are imported from other States. Such imports in 1926-27 were approximately 8,000,000 lb.

The output of bacon and hams from factories and farms at intervals since 1891 is shown hereunder:—

Year ended 30th June.	Production of Bacon and Ham.		
	Factory.	Farm.	Total Production.
	lb.	lb.	lb.
1891*	2,120,300	3,889,300	6,009,600
1901*	7,392,100	3,688,800	11,080,900
1911*	13,393,500	2,709,300	16,102,800
1916	11,637,900	1,938,700	13,576,600
1921	14,625,800	1,631,400	16,257,200
1922	18,544,067	1,878,803	20,422,870
1923	17,506,343	1,739,523	19,245,866
1924	17,693,376	1,358,733	19,052,109
1925	19,764,983	1,311,813	21,076,796
1926	21,548,888	1,409,483	22,958,371
1927	23,275,890	1,327,175	24,603,065

\* Calendar Year.

The output of bacon varies in fairly close sympathy with the production of butter.

During the first decade of the period under review the production of bacon showed a substantial increase. The rate of increase during the succeeding decade was much slower as a result of the drought of 1902-03. The production in 1920-21 was only slightly higher than in 1911, but the output in the last six years has been much greater, and in 1926-27 it exceeded 24,000,000 lb. for the first time.

*Lard.*

Statistics showing the total production of lard are not available. During the year ended 30th June, 1927, the quantity extracted in factories amounted to 748,704 lb., valued at £24,989; but as the manufacture of this product is conducted in many other establishments, as well as on farms, this quantity represents only a portion of the total output.

During the twelve months ended 30th June, 1927, the oversea exports of lard and refined animal fats amounted to 215,187 lb., valued at £7,485. as compared with imports from oversea countries amounting to 261,450 lb., valued at £7,143.

## LOCAL CONSUMPTION OF DAIRY PRODUCTS.

The local consumption of dairy products in New South Wales is comparatively high. The average consumption per head in 1926-27 was as follows:—Fresh milk 21 gallons, preserved milk 6.2 lb., butter 33.5 lb., cheese 3.8 lb., bacon and ham 12.6 lb. The local requirements amount to 51,000,000 gallons of fresh milk per annum, 15,000,000 lb. of preserved milk, 81,000,000 lb. of butter, 9,000,000 lb. of cheese, and 30,000,000 lb. of bacon and ham. Comparison with the figures on the foregoing pages shows that the State is self-supporting in regard to milk and butter, and that portions of the supplies of cheese and bacon are imported—generally from the other States of the Commonwealth. During the summer months, when production is at a maximum, a quantity of butter is placed in cold storage in order to ensure an adequate supply during the winter. This matter is treated more fully in the chapter relating to “Food and Prices.”



## EXPORTS OF DAIRY PRODUCTS.

Dairy products for export beyond the Commonwealth are subject to inspection by Federal Government officials under the provisions of the Commerce Act, 1905, and the exportation of inferior products is prohibited unless the goods are labelled as below standard. Since August, 1925, the export of butter and cheese has been supervised by the Dairy Produce Export Control Board, of which particulars are given on page 653.

The following table shows the oversea exports of the principal dairy products from New South Wales, inclusive of ships' stores, at intervals since 1891. The particulars for 1906 and earlier years relate to New South Wales produce only, but in later years the figures include a small quantity of the produce of other Australian States. New South Wales produce exported through other States is excluded from account:—

Year. ended 30th June.	Oversea Exports (including Ships' Stores).							
	Butter.		Cheese.		Milk—Preserved, Condensed, etc.		Bacon and Ham.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb. (000)	£	lb. (000)	£	lb. (000)	£	lb. (000)	£
1891*	11	478	18	411	...	...	9	380
1896*	1,912	75,994	45	821	8	156	40	994
1901*	8,700	379,342	174	4,359	196	2,525	96	3,007
1906*	23,362	978,725	123	3,268	258	4,906	141	4,996
1911*	33,044	1,518,993	127	3,723	1,127	17,471	618	17,561
1916	4,306	259,834	191	9,767	947	22,052	224	11,279
1921	28,429	3,458,280	804	49,813	11,576	691,122	1,357	132,075
1922	36,730	2,327,080	629	26,565	3,634	203,483	1,053	80,641
1923	12,883	1,035,186	293	14,319	688	33,119	757	57,406
1924	10,266	778,963	156	8,902	742	37,382	545	45,170
1925	44,727	2,968,525	878	2,514	647	26,993	766	52,724
1926	27,008	1,943,586	259	12,321	656	26,513	790	61,681
1927	18,485	1,292,737	220	11,714	558	22,172	1,143	86,008

\* Calendar year.

The values of other dairy and farmyard products exported overseas in 1926-27 were as follows:—Frozen pork £5,081, frozen poultry £29,681, eggs £137,887, live pigs and poultry £3,032; making a grand total of £1,588,312, including the items listed above. The total in 1925-26 was £2,125,021.

## POULTRY-FARMING.

Poultry-farming was conducted formerly in conjunction with dairying; but the interests involved have become important commercially in recent years and a distinct industry has been developed. Returns collected as at 30th June, 1927, showed that there were 1,145 holdings of one acre or more in extent devoted mainly to poultry farming, besides 68 combining poultry, bees, and pigs. In addition it is considered that many smaller holdings are used for raising poultry as a commercial pursuit, while many farms, utilised mainly for agriculture, dairying or grazing, also carry large numbers of poultry. The returns showed that at 30th June, 1927, there were in all 2,438 holdings carrying poultry for commercial purposes to the extent of 150 head or more. Of these 1,272 were in the County of Cumberland and 778 in other coastal districts.

To assist poultry-farmers, the Department of Agriculture issues various publications treating of poultry culture, and employs a poultry expert to advise them. A Government Poultry Farm at Seven Hills is used for demonstration and educational purposes in connection with the Department's activities for the benefit of poultry-farmers. Accurate statistics of poultry production are not available, but a general estimate based on accessible returns indicates that the value of production during 1926-27 was approximately £3,617,000. The returns showed that approximately 1,350,000 poultry were marketed for food during the year 1926-27 from holdings of one acre or more in extent.

Special attention is devoted to improving the laying qualities of the different breeds, and egg-laying competitions, organised originally by private subscriptions, have been conducted since 1901 at the Hawkesbury Agricultural College, with the object of stimulating the poultry industry. These competitions have attracted widespread interest among poultry-farmers. The most successful laying strains have proved to be the black orpington, the white leghorn and the langshan. An annual report in bulletin form, giving particulars and tabulated results of these competitions is issued by the Department of Agriculture.

The numbers of poultry enumerated in returns supplied annually under the Census Act are as follow:—

As at 30th June.	Fowls, Chickens, &c.	Ducks, &c.	Geese, &c.	Turkeys, &c.	Guinea fowl, and other.
1921	3,260,000	122,000	18,000	119,000	4,900
1922	3,630,000	159,000	22,000	154,000	3,800
1923	3,600,000	142,000	20,000	136,000	3,800
1924	3,670,000	159,000	17,000	148,000	4,300
1925	4,000,000	159,000	19,000	162,000	4,600
1926	4,020,000	156,000	21,000	159,000	6,300
1927	4,603,000	131,000	20,000	148,000	5,100

Included in the above totals are estimates (made by local collectors) of the number of poultry on holdings less than one acre in extent and on householders' premises. The numbers stated afford some guidance as to the growth of the industry in recent years, but in view of the great difficulty of obtaining accurate records they are probably considerably less than the numbers of poultry in the State. The recorded number of eggs gathered in 1926-27 was 20,750,000 dozen, but except in respect of commercial poultry farms the production is probably incompletely recorded.

The following table shows the recent trend of the oversea export trade in poultry and eggs:—

Year ended 30th June.	Eggs in Shell.		Frozen Poultry.		Total Value.
	Quantity.	Value.	Quantity.	Value.	
	doz.	£	pairs.	£	£
1923	1,049,117	86,122	31,748	41,157	127,279
1924	574,212	47,835	7,493	9,323	57,158
1925	627,473	49,059	7,705	12,182	61,241
1926	802,421	63,833	10,928	23,300	87,133
1927	1,839,046	137,808	18,892	29,681	167,489
1.23	£47,996	34,663	6,453	7,600	42,260

It is noteworthy that there is also a large interstate trade in eggs, and it is estimated that in the year ended 30th June, 1928, New South Wales received 170,000 dozen eggs in shell and the equivalent of approximately 2,400,000 dozen eggs in pulp by boat from other Australian States. Data as to movement by rail are not available.

#### BEE-KEEPING.

The bee-keeping industry is at the present time of small importance, though there is ample scope for further expansion.

The production of honey and of beeswax varies considerably from year to year, as shown in the following table:—

Season.	Bee Hiv. s.			Honey.	Average Yield of Honey per productive Hive.	Beeswax.
	Productive.	Un-productive.	Total.			
	No.	No.	No.	lb.	lb.	lb.
1910-11	55,958	14,308	70,266	2,765,618	49.4	72,617
1920-21	28,041	6,387	34,428	1,443,377	51.5	23,320
1921-22	34,129	7,569	41,498	2,939,074	87.6	28,585
1922-23	26,855	11,549	38,404	1,239,080	46.1	28,442
1923-24	19,987	11,774	31,761	590,980	29.6	12,703
1924-25	34,692	5,431	40,123	3,000,150	89.1	40,108
1925-26	23,901	4,527	41,428	2,235,095	60.3	38,271
1926-27	31,310	7,732	39,042	1,522,540	48.6	22,636

The yield per productive hive improved considerably as a result of the enactment of the Apiaries Acts in 1916 and 1917, but it is subject to marked fluctuations according to seasonal conditions. The average was low during the two seasons ended June, 1924, then it rose to the high level of 89 lb.

Frame hives are now in general use, as the box-hive has been prohibited. Special legislation which has been passed with reference to apiculture is detailed at page 655 of the Year Book for 1918.

In 1926-27 the estimated value of the production from bees was £27,000, the quantity of production in each division being as follows:—

Division.	Honey.	Beeswax.
	lb.	lb.
Coastal ... ..	453,232	7,677
Tableland ... ..	780,189	9,530
Western Slopes ... ..	219,382	4,106
Central Plains and Riverina ... ..	69,437	1,313
Western Division ... ..	300	10
<b>Total ... ..</b>	<b>1,522,540</b>	<b>22,636</b>

Records obtained in 1926-27 showed that beehives were kept on 1,233 holdings, one acre or more in extent.

## VALUE OF DAIRY AND FARMYARD PRODUCTION.

It is evident from the foregoing that the dairying and farmyard industries are important factors in the rural production of New South Wales. The value of production in 1926-27 amounted to £14,591,000, or £6 4s. per head of population. The dairying industry yielded £9,624,000, swine £1,323,000, poultry £3,617,000, and bees £27,000. The value of production in each year since 1911 was as follows:—

Year.	Milk for Butter.	Milk for Cheese.	Milk (not used for Butter or Cheese).	Milch Cows.	Swine.	Poultry and Eggs.	Bees.	Total.
	(000) £	(000) £	(000) £	(000) £	(000) £	(000) £	(000) £	(000) £
1911	3,631	129	619	389	447	1,280	39	6,534
1912	3,895	168	750	406	539	1,401	33	7,192
1913	3,450	170	950	385	590	1,578	30	7,063
1914-15	4,038	170	962	523	538	1,597	18	7,846
1915-16	3,198	167	1,084	419	605	2,144	32	7,649
1916-17	4,740	227	1,059	657	795	1,908	33	9,419
1917-18	4,954	250	1,618	668	990	2,082	73	10,635
1918-19	4,537	204	1,949	709	1,153	2,501	20	11,073
1919-20	4,712	278	2,132	721	1,121	2,814	15	11,793
1920-21	8,411	306	2,751	603	1,130	3,196	50	16,447
1921-22	5,800	228	2,359	899	925	2,650	53	12,914
1922-23	5,057	198	2,553	1,136	976	2,750	22	13,445
1923-24	5,017	213	2,604	1,113	1,037	2,321	12	12,327
1924-25	6,242	197	3,039	1,005	1,107	2,591	55	14,336
1925-26	7,045	233	2,316	439	1,304	3,277	37	14,712
1926-27	6,478	227	2,416	473	1,323	3,617	27	14,591

## PRICES OF DAIRY PRODUCTS.

The average wholesale prices obtained in the Sydney markets for the principal kinds of dairy and poultry farm produce in 1914 and during the last six years are shown in the following table. The average quoted for the year represents the mean of the prices ruling each month, and does not take into account the quantity sold during the month.

Dairy and Poultry Farm Produce.	1911.	1922.	1923.	1924.	1925.	1926.	1927.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Milk ... gal.	0 11 $\frac{3}{4}$	1 8	1 10	1 8	1 6 $\frac{3}{4}$	1 8 $\frac{1}{2}$	1 10
Butter ... lb.	0 11 $\frac{1}{2}$	1 7	1 10 $\frac{1}{2}$	1 5 $\frac{3}{4}$	1 5 $\frac{1}{4}$	1 7 $\frac{3}{4}$	1 10
Cheese ... "	0 7 $\frac{1}{2}$	0 10	1 2 $\frac{1}{2}$	0 9 $\frac{3}{4}$	0 10 $\frac{1}{4}$	0 11 $\frac{1}{2}$	0 11 $\frac{3}{4}$
Bacon (sides) ... "	0 9 $\frac{1}{2}$	1 1	1 2	1 2 $\frac{1}{4}$	1 0 $\frac{3}{4}$	1 0 $\frac{3}{4}$	1 1 $\frac{1}{2}$
Eggs (new laid) doz.	1 4 $\frac{1}{2}$	1 11	1 9 $\frac{1}{2}$	1 11	1 10 $\frac{1}{2}$	1 11	1 8
Poultry—							
Fowls—							
(Roosters) ...pr.	5 5	6 10	7 2	8 2	9 3	10 3	10 5
Ducks—							
(English) ... "	4 5	6 10	10 2	9 9	8 0	*	11 3
Geese ... "	6 8	10 8	10 7	11 0	10 0	9 9	11 2
Turkeys (cocks) "	11 2	36 7	37 3	33 3	30 3	39 3	39 6
Bee produce—							
Honey ...lb.	0 3 $\frac{3}{4}$	0 3 $\frac{3}{4}$	0 4 $\frac{1}{2}$	0 5 $\frac{1}{2}$	0 4	0 4 $\frac{1}{4}$	0 5
Wax ... "	1 2 $\frac{1}{2}$	1 8 $\frac{1}{4}$	1 8 $\frac{1}{2}$	1 3 $\frac{1}{2}$	1 4 $\frac{1}{2}$	1 8	1 9

\* No quotations.

The relative variations in the Sydney wholesale prices of eight principal dairy and farmyard products, viz., butter, cheese, bacon, ham, eggs, condensed milk, honey and lard are shown in the following table of index numbers, in which the prices of 1911 are taken as the base and represented by 1,000:—

Year.	Index Number.	Year.	Index Number.	Year.	Index Number.
1901	963	1916	1,380	1923	1,939
1906	953	1917	1,440	1924	1,671
1911	1,000	1918	1,487	1925	1,612
1912	1,133	1919	1,718	1926	1,760
1913	1,033	1920	2,236	1927	1,831
1914	1,128	1921	2,020	1928	*1,807
1915	1,349	1922	1,735		

\* To June.

Although the average prices of dairy produce have remained very much above the pre-war level the relative increases have been considerably less than those of other products. A comparative table showing the relative increases in each of eight groups of commodities is published in the chapter "Food and Prices" of this Year Book.

## FORESTRY.

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THE forest lands of the State containing timber of commercial value consist of about 11 million acres, of which about 8 million acres are Crown lands. Nearly 7 million acres of State lands have been either dedicated or reserved for the preservation and growth of timber.

The total forest area, although not large, contains a great variety of useful timbers, which in hardwoods number about twenty different kinds of good commercial value, including such renowned constructional woods as ironbark, tallow-wood, and turpentine. In other timbers there are about twenty-five varieties, including such valuable timbers as cedar, beech, pine, and teak. It is estimated that, approximately, five-sixths of the timber supply consists of mixed hardwoods and one-sixth of soft and brush woods.

Following the report of a Royal Commission appointed in 1907, a Forestry Department was established under the Forestry Act, 1909. This Act was repealed by the Forestry Act, 1916, which became law on the 1st November, 1916, and provided for the constitution of a Forestry Commission consisting of three members, one being Chief Commissioner. Another amending Act passed on 23rd December, 1924, provided for a commission of one member at a salary of £1,500 per annum.

The Commission is charged with the administration of the Forestry Act, 1916, which provides for the control and management of the State forests and timber reserves, for the training of forest officers, for the conduct of research work, and for the collection of statistics in connection with forestry.

The Commission may dispose of timber and products of any State forest or timber reserve, and—

- (a) take and sell such timber and products;
- (b) convert any such timber into logs, sawn timber, or any other merchantable article, and sell the same;
- (c) convert any such products into merchantable articles, and sell the same;
- (d) construct roads, railways, and tram-lines and other works for the transport of timber; and purchase, rent, or charter and use vehicles and vessels, with the necessary motive power;
- (e) construct, purchase, or rent sawmills and other mills, with all the necessary machinery and plant for converting timber and manufacturing articles from timber, and use such mills for those purposes.

One-half of the gross amount received from royalties, licenses, and permits, and from the sale of timber, other than the output of the mills as indicated in (e) above, is to be set apart for afforestation, reforestation, survey and improvement of State forests and timber reserves, and for purposes incidental thereto. An annual sum in excess of £100,000 is re-invested in State forests in this way. The expenditure of an amount exceeding £5,000 on any particular work being subject to the approval of the Minister.

The Government may purchase, resume, or appropriate land for the purpose of a State forest, and may dedicate Crown lands as State forests or timber reserves.

Timber-getters' and other licenses may be issued by the Commission, and exclusive rights to take timber products from specified areas of State forests or timber reserves may be granted.

Every person conducting a sawmill for the treatment of timber must obtain a license, keep books and records, and make prescribed returns. Royalty must be paid on timber felled and on products taken from any State forest, timber reserve, Crown lands, or lands held under any tenure from the Crown which requires the payment of royalty. Royalty is not payable, however, on timber exempted by terms of the license or by the regulations, or on timber required for use on any holding not comprised within a timber or forest reserve. Allowance may be made also for any timber which is not marketable. Trees on any State forest, timber reserve, or Crown lands, with the exception of lands held under conditional lease granted before the passing of the Act, must not be ringbarked except under permit.

The Act provides for regulations on the following matters:—Licenses, etc., and the fees and royalties payable; the periods and the conditions under which licenses, etc., may be granted; the protection and preservation of timber; the inspection, cutting, marking, and removal of timber; the kinds, sizes, and quantities which may be cut or removed; the conditions under which fires may be lighted in State forests; and the organisation of a system of education in scientific forestry.

"The Australian Forestry Journal" is issued monthly by the Commission with the object of interesting the public in forestry, and it is distributed gratis among a large number of public bodies.

For the purposes of administration the areas containing State forest lands are grouped in districts, and the work in each district is supervised by a trained forestry officer under the control of the Commission. As the timber is removed from an area it is treated for regeneration, the average area so treated during the last five years being about 45,000 acres per annum.

A large amount of regenerative work has been done in connection with the Murray River and the inland forests. Experimental works have been started in various parts of the coast and highlands to test the capacity of different classes of hardwood forest for reforestation, and to ascertain the best methods of treatment; and stations have been selected for the promotion of afforestation by the establishment of State nurseries, with the object of utilising some of the waste lands of the State, of which about 300,000 acres are suitable for the purpose.

As at 30th June, 1927, a total area of 5,277,739 acres of Crown lands had been dedicated permanently as State forests, and 1,595,726 acres had been set apart tentatively as timber reserves. In addition, there were a number of State forest plantations of an aggregate area of 13,440 acres.

Particulars relating to the State forests and plantations and timber reserves as at the end of each of the last five years are shown below:—

At 30th June.	State Forests.		State Plantations.	Timber Reserves.	
	Number.	Area.	Area.	Number.	Area.
		acres.	acres.		acres.
1923	720	5,315,689	5,204	548	1,561,270
1924	720	5,221,415	7,180	550	1,659,897
1925	714	5,145,957	9,461	552	1,637,458
1926	731	5,250,901	11,214	563	1,653,817
1927	725	5,277,739	13,440	376	1,595,726

The timber reserves are reviewed from time to time, and arrangements are made to dedicate suitable reserves as State forests, in order that they may be reserved permanently for forestry purposes and the reservation of unsuitable areas is revoked to make them available for other uses.

*Location of Forest Lands.*

The principal forest lands of the State are situated in the Zone of Coastal Timbers which consists of a narrow strip of land ranging up to 50 miles in width and extending along the entire coast line. This zone embraces an area of 13,797,000 acres, of which roughly 4,900,000 acres are classified as forest lands. This is a region of high rainfall and it produces an abundant supply of hardwood timbers of good quality. The State forests are distributed in scattered areas throughout the belt, but more especially in the North Coast district, in the vicinity of the coast from the River Hastings south to the Karuah River, and along the South Coast from the Shoalhaven River to the southern boundary of the State. An isolated forest area of considerable importance stretches northward from the Hawkesbury River and terminates to the westward of Lake Macquarie.

The indigenous softwoods of the State are situated mainly in the Zone of Brush Timbers lying in a narrow belt along the eastern foothills of the northern highlands. This zone embraces 6,339,000 acres of land and includes a forest area of approximately 1,500,000 acres, of which a considerable proportion has been dedicated as State forests. This is a region of high rainfall. The timber is mainly softwood of good quality, the chief commercial species being hoop pine.

The rainfall of the remainder of the State is lower than along the coast and although the area of forest lands is considerable, it represents only a small fraction of the total surface. The hinterland may be divided into three zones, viz., a zone of highland timbers, a zone of interior timbers, and a zone practically devoid of timbers of commercial value.

The Zone of Highland Timbers contains in all 30,039,000 acres, of which approximately 1,700,000 acres are forest area favoured by a fair rainfall. The supply of timbers is scattered and sparse, including mainly hardwoods of fair to good quality. Considerable areas in this zone are considered to be suitable for the planting of exotic conifers, and it is proposed to embark on an extensive scheme of afforestation in this connection.

The Zone of Interior Timbers covers 81,000,000 acres, of which approximately 2,900,000 acres are classed as forest area. The rainfall is comparatively low and uncertain and the supply of timber, including both hardwoods and cypress pine is generally scattered, sparse, and of fair quality. State forests are distributed throughout these zones. The majority of them are small, though the largest of the State forests is situated at Pilliga in the zone of interior timbers. This area is 454,200 acres in extent and is timbered with cypress pine, ironbark, gum, box and belah. Another large area comprising 140,266 acres mainly of ironbark is situated a little further south at Geonoo, near Dubbo, and further extensive areas of State forests are situated along the Murray River west of Tocumwal. They contain red gum, white box, yellow box and cypress pine.

The zone almost devoid of timbers of commercial value is practically co-terminous with the Western Division with an average annual rainfall of from 8 to 15 inches per year. This area contains 66,868,000 acres and its timber supply is very sparse, scattered, and of inferior quality.

*State Forest Nurseries and Plantations.*

A State Forest Nursery is maintained at Gosford for the propagation of plants of commercial types; the planted area is about 42 acres. Exchanges of seeds and plants are made with similar institutions in various parts of the world. Branch Nurseries of various dimensions have been established in practically every forestry district in the State. At Tuncurry a pine plantation is worked by prison labour, and about 2,000,000 pine trees have been planted. This establishment provides healthy outdoor work for prisoners, and at the same time utilises land which is not suitable for any other reproductive purpose.



To supplement the supply of softwood in the State, afforestation should be conducted on a more extensive scale than at present, and it has been estimated that it is necessary to plant 5,000 acres per year for thirty years in order to assure adequate supplies. Preliminary surveys in the southern highlands disclose an area of 150,000 acres suitable for the growth of softwoods and indigenous hardwood.

*Production and Consumption of Timber.*

During the year ended 30th June, 1927, there were in operation 501 saw-mills. The employees numbered 5,391, and the value of plant and machinery was estimated at £1,053,000. The output of native timber amounted to 54,685,000 super. feet of softwood and 108,206,000 super. feet of hardwood.

In the forests which have been placed under intensive management the Forestry Commission undertakes the conversion of many classes of forest produce in order to ensure that all saleable timber will be removed promptly from each area to make way for young growth.

The following table shows the average annual output of native timber from saw-mills in New South Wales in successive years since 1918, and the gross consumption of native and imported timbers as estimated by the Forestry Commission.

Year ended 30th June.	Annual Output of Native Timber from Saw-mills. (000 omitted.)	Estimated Gross Consumption of Timber.		
		Native.	Imported.	Total.
		(000 omitted.)		
	cubic feet.	cubic feet.	cubic feet.	cubic feet.
1918	10,562	23,827	7,719	31,546
1919	10,968	24,260	7,224	31,493
1920	12,926	26,503	7,220	33,723
1921	13,009	29,407	8,055	37,462
1922	12,772	29,745	9,185	38,930
1923	12,259	30,476	11,923	42,399
1924	13,958	32,555	14,898	47,453
1925	13,535	44,812	14,553	59,365
1926	14,166	38,791	18,549	57,340
1927	13,574	39,956	17,127	57,083

In recent years there has been remarkable activity in the building trade, and the consumption of timber has increased rapidly. Most of the imported timber consists of softwoods. The native timber consumed in 1926-27 consisted of 21,372,000 cubic feet of hardwood, 4,634,000 cypress pine, 2,250,000 other pine, 700,000 cubic feet of brushwood, and 11,000,000 cubic feet of fuel.

*Value of Production from Forestry.*

The following table shows the value of forestry production as at the place of production in New South Wales at intervals since the year 1901:—

Year ended 30th June.	Value.	Year ended 30th June.	Value.
	£		£
1901*	554,000	1923	1,544,000
1906*	1,008,000	1924	1,659,000
1911*	998,000	1925	1,647,000
1916	1,045,000	1926	1,871,000
1921	1,656,000	1927	1,862,000

\* Year ended 31st December.

*Imports and Exports of Timber.*

The greater part of the softwood used in New South Wales has been drawn for many years from foreign sources of supply, among which New Zealand, the United States of America, Canada, Norway, and Sweden are most important. Steps are being taken, however, to plant extensive areas in New South Wales with high-class American and other softwoods in order to render the State independent of imported timbers.

In the following table particulars are shown regarding the import and export of timber to and from New South Wales at intervals since 1901. The large import reflects a local demand for softwoods. It is not probable that the export trade will ever assume large proportions, though the forests of the State abound in high-class hardwoods.

Year.	Imports Oversea to New South Wales.				Exports of Australian Produce Oversea from New South Wales.			
	Undressed.		Other.	Total Value.	Undressed.		Other.	Total Value.
	Quantity.	Value.			Quantity.	Value.		
	sup. feet. (000)	£	£	£	sup. feet. (000)	£	£	£
1901	68,369	322,642	137,123	459,765	10,386	66,346	58,664	125,016
1906	84,772	444,563	81,850	526,413	29,322	325,805	9,361	335,166
1911	164,380	955,344	209,028	1,164,372	28,398	250,990	17,949	268,939
1915-16	119,232	814,102	74,305	888,407	15,099	144,486	10,965	155,451
1920-21	93,303	1,904,064	174,910	2,078,974	23,202	447,653	17,072	464,725
1921-22	96,848	1,254,616	160,219	1,414,835	20,301	349,898	5,059	354,957
1922-23	123,028	1,398,702	339,228	1,737,930	19,086	294,049	5,220	299,269
1923-24	156,859	2,008,540	385,089	2,393,629	26,958	437,029	6,898	443,927
1924-25	151,459	1,615,506	379,125	1,994,631	37,030	610,824	7,409	618,233
1925-26	194,393	1,964,596	463,610	2,428,206	23,486	390,439	6,689	397,128
1926-27	173,261	1,904,040	393,983	2,298,023	18,282	301,671	5,349	307,020

In addition there is a considerable interstate movement of timber by sea, of which complete records are not available. The quantity of timber recorded by the Sydney Harbour Trust as being imported at Sydney from other Australian States in 1926-27 was 15,698,000 super. feet.

*Forestry Licenses and Permits.*

Licenses and permits are granted for the purposes of obtaining timber and fuel, grazing, sawmilling, ringbarking, and for the occupation of land. The fees for licenses and permits are small, but considerable revenue is gained from royalties on timber, agistment, and occupation fees, etc.

The revenue collected by the State from timber licenses and from royalty on timber during various years since 1911 is shown in the following table:—

Year ended 30th June.	Sales, Rents, Fees, etc.	Royalty on Timber.	Total.	Year ended 30th June.	Sales, Rents, Fees, etc.	Royalty on Timber.	Total.
	£	£	£		£	£	£
1911*	11,153	79,165	90,318	1925	48,798	160,934	209,732
1916	8,701	59,406	68,107	1926	42,984	181,223	224,207
1921	76,141	114,601	190,742	1927	43,626	181,317	224,943

\* Year ended 31st December.

Included in the total for 1926-27 are sales of converted and confiscated material £12,224, and rents for occupation permits, forest leases, etc., £22,615.

The Public Accounts for the year 1926-27 showed that a net revenue of £221,033 accrued to the Consolidated Revenue from forestry, and that of this amount £108,777 was credited to forestry accounts under section 13 of the Forestry Act, 1916.

The practice of forestry in Europe and America has shown that greater expenditure by the Government means increased profits, and forest improvement in New South Wales, where timber grows more rapidly and to larger size, should yield even more favourable results.

Particulars of expenditure by the Forestry Department during the last five years are shown in the following table:—

Head of Expenditure.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.*
	£	£	£	£	£
Survey, Organisation, Afforestation, and Re-afforestation ... ..	65,249	66,454	80,155	107,732	188,301
Salaries, Travelling Expenses, etc. ...	61,925	65,888	67,022	67,231	106,640
Other ... ..	9,934	5,364	6,546	3,527	8,286
<b>Total ... ..</b>	<b>137,108</b>	<b>137,706</b>	<b>153,723</b>	<b>178,490</b>	<b>303,227</b>

\*Eighteen months.

#### *Persons Employed in Timber Industry.*

It has been estimated by the Forestry Department that 13,082 persons were employed in the timber industry during the year 1926-27, viz., 3,744 in felling and cutting; 2,766 in hauling timber to the mills, 3,874 in milling; and 2,698 in other occupations. These figures include persons partially employed, viz., 1,550 in felling and cutting and 1,079 in hauling timber.

## FISHERIES.

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THE waters along the coast of New South Wales contain numerous varieties of fish, but the fishing industry is being developed very slowly. The principal sources of supply of marine fish are the coastal lakes and estuaries, the sea beaches and ocean waters, while Murray cod is obtained in the inland rivers. Fishermen generally have confined their attention to the coastal lakes and estuaries, but in recent years an appreciable proportion of the market supplies have been obtained by deep-sea trawling.

The most extensive development may be expected in the ocean waters, where varieties of deep-sea fish such as great tunnies, Spanish mackerel bonito, mackerel, kingfish, tailer, salmon, and many other pelagic fishes travel in large shoals. There are also immense quantities of pilchards, sprats, and other "herring-kind," as well as sea garfish and others.

Crayfishing and the oyster industry also are capable of great development, and mussels could be farmed successfully in a way somewhat similar to oysters, and in many places where the oyster will not flourish. The expansion of the oyster industry depends to a certain extent upon a diffusion of the knowledge of successful oyster culture among oyster growers. Intense cultivation at Port Stephens has produced excellent results in recent years.

Whaling operations have been conducted intermittently, but it is considered that two shore stations with two steam whaling gunboats each could be maintained profitably on the coast of the State. The season begins in June and ends in November, though whales may be taken before and after that period.

### CONTROL OF THE FISHERIES.

Under the Fisheries Act, 1902, control of the fisheries of the State, previously administered by a Commission, was placed in the hands of a Board to supervise the industry, to carry out investigations likely to be of service, and to ensure observance of the regulations in regard to the dimensions of nets, closure of inland and tidal waters, net-fishing, and other such matters. Under an amending Act, in 1910, the Fisheries Board was dissolved and its powers vested in a Minister of the Crown, the Chief Secretary being charged with the administration of the Act.

### *Fishing Licenses.*

Persons catching fish for sale in tidal or inland waters must be licensed, also boats used for this purpose, the annual fee being 5s., which is reduced to half that amount if the license is issued after 30th June and before 1st December.

The number of licenses granted to fishermen during the year 1927 was 2,902, and licenses were issued in respect of 1,572 fishing boats.

### *Oyster Leases.*

For the purposes of oyster-culture, tidal Crown lands below an approximate high-water mark may be leased at yearly rentals, determined by the Minister. The areas are classified as average, special, or inferior lands.

The leases of average lands are for fifteen years, but may be renewed for a like period. An area upon which an aggregate rental of less than £5 per annum is payable may not be leased to any person unless he is already an oyster lessee.

Leases of special lands are granted for areas of special value after the land has been offered by auction or tender, and are subject to the same conditions as leases of average lands, but need not be confined to areas along the approximate high-water mark.

Leases of inferior lands are granted for a term not exceeding ten years, with the right of renewal for a further term of five years.

During the year 1927 applications for leases numbered 431, representing 93,037 yards of foreshore and 313 acres of off-shore leases. At the end of the year the existing leases numbered 5,123. The length of foreshores held was 1,284,430 yards, and there were deep-water leases to the extent of 3,043 acres.

#### PRODUCTION FROM FISHERIES.

The most important kinds of fish marketed are snapper, bream, blackfish, whiting, mullet, jewfish, flathead, garfish, and Murray cod—a freshwater fish; tailer, trevally, leather-jacket, and gurnard are readily saleable in the local markets.

*Fish.*—The quantity consigned to Sydney and Newcastle and Lake Illawarra markets during 1927 amounted to 18,496,892 lb., of which 219,788 lb. were condemned. In addition 419,860 lb. of fish were consigned from the Tweed River to Brisbane, and 1,935,610 lb. are recorded as having been sold in various fishing centres in coastal areas, but this latter figure is incomplete. The total production of fish, as recorded during 1927, was 20,852,362 lb.

The bulk of the supplies is obtained in the estuaries and lakes on the northern part of the coast-line. The quantities of fresh fish obtained from each of the principal fishing grounds of the State are indicated below:—

	1926.	1927.		1926.	1927.
	lb.	lb.		lb.	lb.
Clarence River ...	2,332,496	2,858,731	Botany Bay ...	320,819	214,295
Wallis Lake ...	1,309,265	1,480,329	Richmond River...	289,338	193,049
Port Stephens ...	765,432	548,729	Hawkesbury River	498,358	321,894
Lake Illawarra ...	401,102	249,137	Port Jackson ...	78,939	121,908
Tuggerah Lakes ...	1,131,950	469,520	Hastings River ..	158,900	220,975
Lake Macquarie ...	598,807	425,639	Macleay River ...	325,178	409,320
Camden Haven ...	632,604	633,049	St. George's Basin	218,974	31,581
Manning River ...	299,737	345,796	Wollongong ..	253,289	191,614

In addition to the quantities shown above, 8,096,420 lb., or over one-third of the total quantity marketed was obtained by deep-sea trawling. The actual production of fish was greater than the foregoing figures indicate, because a considerable quantity is sold in proximity to the fishing grounds without passing through the markets, and records of the fish caught by private persons are not obtainable.

*Crayfish.*—The number of marine crayfish (*Palinurus*) marketed during 1927 was 157,779. The number captured was very much greater, but many were lost by death before marketing. The principal source of supply was the northern crayfish grounds, from Newcastle to Port Macquarie. From Port Stephens and Wallis Lake over 60,264 were sent to market.

*Prawns.*—A quantity of approximately 1,083,324 lb. of marine prawns (*Penaeus*) was marketed during 1927, and about 15,978 lb. were condemned. These figures do not include prawns sold for bait.

*Crabs.*—About 2,614 dozen of crabs were marketed. They comprised several species of swimming crabs, notably the Blue (*Lupa*) and the Mangrove (*Scylla*).

*Oysters*.—During the year 1927 the oyster production of the State amounted to 30,303 bags, each of 3 bushel capacity, valued at £106,060. These consisted of Rock oyster (*Ostrea cucullata*). This output was principally the result of artificial cultivation.

#### *Oversea Trade in Fish.*

A very considerable proportion of the local requirements of fish are imported from countries outside Australia, the value of fish so imported during the year ended June, 1927, being £723,681, including 11,192,635 lb. of tinned fish valued at £551,775. The value of fish exported oversea was £12,577, including tinned fish to the value of £9,942.

#### *Value of Fisheries Production.*

The value of the production from fisheries of New South Wales, as recorded during the year ended 30th June, 1927, was approximately £614,000, including fresh fish, £452,000, oysters, crayfish, prawns, etc., £162,000.

The value of production is estimated as at the place of production and is exclusive of fish condemned, of fish sold in fishing and other centres and not recorded, or used for fertiliser and oil, and of the value of molluscs other than oysters.

The following table shows the value of production from fisheries since the year 1916-17:—

Year ended 30th June.	Value. (000 omitted.)	Year ended 30th June.	Value. (000 omitted.)
	£		£
1917	303	1923	491
1918	307	1924	520
1919	335	1925	540
1920	470	1926	583
1921	491	1927	614
1922	538		

#### FISH PRESERVING.

Many fishes specially suitable for treatment by canning, smoking, or salting are obtainable in the waters along the coast of New South Wales, but irregularity of supplies and climatic disadvantages have militated against the success of canning factories.

#### FISH CULTURE AND ACCLIMATISATION.

Acclimatisation of non-indigenous fishes, particularly trout, has met with success in New South Wales, and trout fishing constitutes an important attraction for tourists and sportsmen in many districts. Young fry are distributed annually from a trout hatchery at Prospect.

## RURAL SETTLEMENT.

### *Spread of Settlement.*

SOME knowledge of the history of settlement in New South Wales is necessary for a proper understanding of the present position in regard to rural settlement, and the following brief summary is designed to show how it has arisen.

Population spread very slowly during the first forty years which succeeded the foundation of the colony. Settlement was confined at first to coastal lands accessible from Sydney, and it was not until 1813 that a way was found across the Great Dividing Range to the fertile plains of the west. But even after that discovery, population was not sufficient for some years to promote a rapid spread of settlement, despite the growing flocks of sheep which required new pastures. Even by 1830 the area settled did not extend more than 200 miles in any direction, and the boundaries within which settlers were allowed to select land embraced only 22,083,000 acres. But the steady infiltration of population, which occurred after 1815, placed an increasing strain upon the capacity of the settled region to supply a ready livelihood, and with the arrival of assisted immigrants in increasing numbers after 1828, certain bold spirits occupied extensive lands with their sheep beyond the arbitrary legal boundaries, in defiance of authority. This practice was termed "squatting."

Such occupation was at first illegal for another reason, namely, that until 1831 the use of land could be obtained only by grant from the Governor on special conditions. Unsuccessful attempts were made to dispossess the "squatters" until 1832, when their right to remain was recognised, and grazing leases were granted at fixed rentals. At the same time an Imperial Act of 1831 provided for the sale of Crown lands in the Colony at a fixed price of 5s. per acre, with a nominal quit-rent. Thus the way was cleared for rural settlement, a more rapid flow of immigration began, and a boom in settlement occurred, with the attendant evils of land traffic. This boom did not end until the price of Crown land had been raised to 12s. per acre in 1839, and further to 20s. per acre in 1842 (where it remained until 1895). The system of free grants was terminated in 1840. By that year nearly 6,000,000 acres of land had been alienated, of which approximately one-third had been sold. In addition, extensive areas were occupied as grazing leases.

The system of selling land was replaced by that of leasing, and the spread of settlement became more rapid. The State was divided arbitrarily into three districts—settled, intermediate, and unsettled—which remained until 1884. Leases were granted upon tender for areas of 25 square miles in the intermediate districts and 50 square miles in the unsettled districts. The grant in the intermediate districts carried the right to purchase 1 square mile in every 25 square miles leased. Under this system, practically the whole of the State was speedily occupied in extensive "runs," for the possession of which competition, not without malpractices, was very keen.

Although a steady flow of immigrants was maintained, the population numbered only 178,668 in 1851, when the gold rushes commenced, bringing a rapid influx of eager fortune-hunters. By 1861 the gold fever was subsiding, and the number of inhabitants of the State had increased to 357,978. Men now began to seek anxiously for land on which to settle, and found it occupied in extensive runs held on lease, and not available for purchase, except by the holders, in limited areas. The remedy applied by Parliament was expressed in the famous principle "free selection before survey," introduced in 1861. Grave abuses arose in the bitter conflict which resulted between the competitors for land, and holdings were selected without classification, and regardless of public interest. But a real development of rural settlement now occurred, and, before the Act expired in 1884, the population had reached 904,980; the State was occupied in pastoral holdings of varying sizes, and had begun to assume importance as a principal source of the wool supply of the world. More than 35,000,000 acres were alienated, or in course of alienation—of which 28,000,000 acres were sold between 1861 and 1884—and practically the whole of the remaining area of the State suitable for occupation was leased definitely for varying periods.

#### *The Land Problem.*

The nature of the demand for land now changed. A decline in the prices realised for wool, the increase in wheat-growing for export, and the growth of the dairying industry and mixed farming to supply oversea markets with butter and mutton, after the application of refrigeration to sea cargoes, led to a new and more intense development in rural settlement. In view of the immense areas of lands alienated and leased a difficult problem arose to which the Legislature has since devoted a large amount of attention.

Practically the whole State was occupied, the great proportion of the land being in large holdings with more or less stable tenure, and the problem of development assumed the form of re-settlement.

The State was divided into three new districts—Eastern, Central, and Western—and into Land Board districts in 1884 for purposes of administration. In 1895 the principles of classification of lands, survey before selection, one man one selection, and *bona fide* selection were introduced. Special provision for financial assistance to settlers was made in 1899, and in 1903 the closer settlement policy was entered upon whereby the State repurchased suitable lands, subdivided them, and sold "living areas" to settlers on easy terms. The Murrumbidgee irrigation project was initiated in 1906, aiming to provide more than 5,000 farms.

Meanwhile, alienation of Crown lands continued. In 1912 a number of leasehold tenures were introduced, but, in 1916, the right to convert certain leases into freehold tenures was extended. By June, 1925, more than 84,000,000 acres of land in the Eastern and Central Divisions had passed out of control of the Crown, and extensive areas were leased for long terms. The experience of settlers in the Western Division has been such that very little of that immense area comprising 80,318,708 acres may be considered available for intensive settlement. The total area of the State, including the Federal Territory, Lord Howe Island, and the area covered by water is 198,638,080 acres. If allowance be made for the large reserves necessary for public purposes, the lands unfit for occupation, and the area occupied by water, towns, roads, and railways, a surprisingly small area of land within range of practical rural settlement now remains within the disposal of the Crown.



The available Crown lands are being opened for settlement, classified according to the purpose for which they are suitable, and the extensions of the railway system and the development of projects for conserving water for irrigation are tending to increase the capacity of certain parts of the State to maintain settlement. It is recognised, however, that future needs will have to be met mainly by the subdivision of private estates. Details relating to the tenure under which lands are now held, the area available for settlement, and the resumption by the Crown of private estates for closer settlement, are shown in the following chapter entitled "Land Legislation and Settlement."

#### *Use of term "Alienated Land."*

In collecting statistical returns relating to agricultural and pastoral holdings, the term "alienated land" is intended to relate to lands absolutely alienated, lands in course of alienation, homestead selections and homestead farms embraced within rural holdings one acre or more in extent. These tenures include practically the whole of the land alienated and virtually alienated, the only considerable omission being settlement purchases which, it would appear, are probably included by the collectors as "alienated land" together with conditional purchases embraced by the definition. The term "alienated land" used throughout this chapter refers to the area so returned by individual landholders, and it does not, therefore, correspond to lands absolutely alienated for which deeds of purchase have been issued. This area has been shown as land absolutely alienated in the chapter entitled "Land Legislation and Settlement," which follows.

#### RURAL HOLDINGS.

The land of New South Wales which is occupied in rural holdings consists either of alienated lands, lands in course of alienation, leased Crown lands, or various combinations of these tenures, while a considerable area remains as Crown reserves. At 30th June, 1927, the number of agricultural and pastoral holdings of 1 acre or more in extent was 78,380, including 1,307 unoccupied or not used for agricultural or pastoral purposes at that date, and 2,205 used only incidentally for such purposes. These holdings embraced a total area of 172,837,700 acres.

The area of land neither alienated nor leased from the Crown does not represent the area of unoccupied land available for settlement. It includes the land unfit for occupation of any kind—estimated to be approximately 5,000,000 acres in extent; land embraced in State forests and not otherwise occupied; unoccupied reserves for necessary public purposes, such as commons, travelling stock and water reserves; roadways; railway enclosures; and unoccupied land covered by water or too rugged or arid for occupation. Such lands are situated mainly in the coastal and tableland divisions, but smaller proportions are found in all divisions.

#### *Purposes for which Holdings are Used.*

The problem of rural development in New South Wales relates largely to the task of settling men permanently on the land as productive units of the population. In addition to human factors, this problem is complicated by the variations of seasons and of markets, which determine largely the profitableness of rural pursuits. An approximate classification of the main purposes for which rural holdings of 1 acre and upwards were used

is available for each year since 1908, and provides the following comparison which shows at intervals the distribution of rural settlement according to purposes:—

Main purpose for which holdings are used.	Number of Holdings.						
	1908.	1911-12.	1915-16.	1923-24.	1914-25.	1925-26.	1926-27.
Agriculture only ... ..	7,244	6,814	10,856	11,643	11,510	11,435	11,231
Dairying only ... ..	3,575	3,157	6,074	9,191	9,499	9,766	9,081
Grazing only ... ..	21,874	22,011	23,497	25,354	25,218	25,428	25,219
Agriculture and Dairying ... ..	8,377	8,258	5,641	5,561	5,919	5,624	6,523
Agriculture and Grazing ... ..	18,733	21,969	20,895	18,773	18,399	18,084	18,183
Dairying and Grazing ... ..	1,818	2,099	1,402	1,969	1,766	1,794	1,350
Agriculture, Dairying, and Grazing ... ..	3,312	4,362	1,537	1,756	1,990	1,734	1,892
Poultry, Pig, or Bee Farming	529	879	1,256	1,399	1,429	1,526	1,389
Total Holdings of 1 acre and upwards used mainly for Agricultural and Pastoral purposes ... ..	65,462	69,549	71,158	75,646	75,730	75,391	74,868

In addition, a considerable number of small holdings—usually less than 30 acres in extent—were used partly for agricultural and pastoral purposes, but mainly for residential and other purposes, or were unoccupied at the time of collecting the returns. They numbered 3,512 in 1926-27.

The above table does not indicate the actual number of settlers occupying the land—because some holdings are held conjointly, and a number of landholders own more than one holding.

The figures in the table representing the numbers of holdings used for agriculture only and grazing only may be taken without reservation. Dairy farming, however, is not so self-contained, and a number of holdings used primarily for dairy purposes, are also used secondarily for agriculture or grazing, or both, and the extent of this secondary use varies from year to year for seasonal and other reasons. The apparent fluctuations are, in this respect, more or less accidental, and do not necessarily indicate any definite trend. The total number of holdings used for dairying only or dairying combined with other pursuits remains fairly constant, the figures for the last three years being 19,174, 18,918 and 18,846. These remarks apply also to the tables showing the purposes for which holdings are mainly used in the different divisions in the State. The decrease in the number of holdings used for poultry, pig and bee farming is due partly to the adoption of a stricter definition of a poultry-farm, excluding a number of small holdings.

#### *Size of Holdings.*

Information regarding the size of rural holdings is available in two distinct classifications, one in accordance with the size of the alienated area only, excluding the Crown lands attached thereto, and the other in

accordance with the total area of alienated and Crown land contained in each holding. The former is tabulated triennially, the latter annually.

The following table shows in area series as at the 30th June, 1925, the freehold area of holdings and of the Crown lands attached, classified according to the size of the privately-owned land.

Area of Holding alienated.*	Number of Alienated Holdings.	Area Occupied.			Proportion in each area group.	
		Alienated†.*	Crown Lands Attached to Alienated.*	Total.	Holdings.	Alienated† Land.*
acres.		acres.	acres.	acres.	per cent.	per cent.
1— 50 ..	14,192	322,159	2,041,037	2,363,196	19·7	0·5
51— 100 ...	7,531	584,594	1,676,500	2,261,094	10·5	0·9
101— 500 ...	25,741	6,745,696	10,789,393	17,535,089	35·8	10·3
501— 1,000 ...	11,411	9,069,481	12,160,145	20,229,626	15·9	12·4
1,001— 3,000 ...	9,285	15,413,724	17,418,840	32,832,564	12·9	23·6
3,001— 5,000 ...	1,684	6,492,551	8,764,989	15,257,540	2·3	10·0
5,001— 10,000 ...	1,260	8,629,240	7,476,792	16,106,032	1·8	13·2
10,001— 20,000 ...	524	7,240,069	6,240,419	13,480,488	0·7	11·1
20,001— 50,000 ...	214	6,374,610	3,387,442	9,762,052	0·3	9·8
50,001—100,000 ...	38	2,666,791	433,374	3,100,165	0·1	4·1
Over 100,000 ...	21	2,670,497	1,043,769	3,714,266	...	4·1
Total*... ..	71,901	65,209,412	71,432,700	136,642,112	100·0	100·0

† Exclusive of 6,992 holdings, embracing 35,907,736 acres of Crown lands only. \* See explanation, page 682.

The maximum area allowed for a residential conditional purchase is 1,280 acres in the Eastern Land Division and 2,560 acres in the Central Land Division. The table shows, therefore, that the number of holdings in excess of a living area is very considerable and that they embrace a very large extent of land.

A classification of the holdings according to size, however, does not measure in a reliable manner the scope for increased settlement, owing to the wide variations between the productivity of the various districts. In order to ascertain how far the existence of large alienated holdings is impeding settlement, it would be necessary to consider the quality of the holdings concerned, the rainfall, situation in respect of market and transport facilities, and other matters which determine the productivity and profitable use of land.

The following table shows for each statistical division of the State the number and area of holdings in area series, based on the aggregate area of alienated and Crown land in each holding at 30th June, 1927. The boundary

between the Eastern and Central Land Divisions passes through the Western Slopes Division as shown on the map in the frontispiece of this Year Book :—

Size of Holding (Alienated and Crown Lands Combined).		Number and Area of Holdings in Divisions.					
		Coastal.	Tablelands.	Western Slopes.	Plains and Riverina.	Western Division.	Whole State.
Acres.							
Under 51	{ No. ...	8,557	2,524	1,970	1,571	302	14,924
	{ Acres	180,646	61,267	49,002	36,922	5,306	333,143
51- 100	{ No. ...	4,501	1,314	931	326	28	7,100
	{ Acres	352,274	99,474	69,719	23,836	2,177	547,480
101- 500	{ No. ...	13,771	4,350	3,920	1,751	70	23,862
	{ Acres	3,248,379	1,183,887	1,206,115	537,799	17,222	6,194,002
501- 1,000	{ No. ...	2,656	2,623	4,321	2,248	59	11,907
	{ Acres	1,843,292	1,916,651	3,133,127	1,622,021	40,083	8,555,174
1,001- 3,000	{ No. ...	1,837	3,557	4,307	3,127	75	12,903
	{ Acres	2,909,733	6,114,148	7,382,309	5,665,001	124,198	22,195,389
3,001- 5,000	{ No. ...	263	715	932	1,101	40	3,051
	{ Acres	1,013,516	2,723,130	3,512,082	4,350,766	163,292	11,762,736
5,001-10,000	{ No. ...	167	417	610	1,068	104	2,366
	{ Acres	1,128,974	2,898,921	4,144,105	7,175,816	812,392	16,160,708
10,001-20,000	{ No. ...	42	185	168	346	279	1,020
	{ Acres	576,036	2,522,827	2,278,723	4,825,824	3,904,245	14,107,655
20,001-50,000	{ No. ...	30	73	69	200	411	733
	{ Acres	918,051	1,996,764	1,889,055	6,061,907	12,824,870	23,660,647
Over 50,000	{ No. ...	7	9	7	77	364	464
	{ Acres	857,982	597,151	640,785	6,993,523	60,201,292	69,200,733
Total	{ No. ...	31,831	15,767	17,235	11,815	1,732	78,380
	{ Acres	13,028,883	20,114,220	24,305,022	37,293,420	78,096,177	172,837,722
Total Area of Division ... Acres		22,237,005*	26,480,600	28,164,000	41,419,000	80,312,000	198,612,000*

\* Excluding part of area of harbours and of Lord Howe Island.

Approximately 45,886, or 58.5 per cent. of the rural holdings of the State are less than 501 acres in extent, and occupy only 7,074,625 acres, or 4.1 per cent. of the total area used for agricultural and pastoral purposes. Of these, 26,829 are in the coastal districts, 8,188 in the Tablelands Division, 6,821 in the Western Slopes, 3,648 on the plains of the Eastern Division, and 400 in the Western Division. Eighty-four per cent. of the holdings in the Coastal Division are less than 501 acres in extent, but they embrace less than 30 per cent. of the area occupied by rural holdings in the division.

Holdings which exceed more than twice the maximum area prescribed for residential conditional purchases may be considered for purposes of discussion as large holdings. Their suitability for subdivision could be determined only after individual consideration. Holdings exceeding 3,000 acres in extent number 509 in the Coastal Division and embrace 4,494,559 acres, and in the Tableland Division 1,399, embracing 10,738,793 acres. On the Western Slopes there are 854 holdings exceeding 5,000 acres in area embracing a total of 8,952,668 acres of land, and on the plains of the Central land division (including the Riverina) 1,691 such holdings, embracing a total area of 25,057,075 acres. Thus, in the Eastern and Central land divisions holdings exceeding 3,000 acres which represent less than 6 per cent. of the total holdings containing 52 per cent. of the total area occupied. In these divisions the proportions of the holdings of under 500 acres, and of holdings of over 10,000 acres both show a tendency to decrease. Practically the whole of the land of the Western Division is occupied by 1,054 holdings, exceeding 10,000 acres in extent, embracing 76,930,407 acres; of this area 48,781,308 acres comprise holdings exceeding 100,000 acres in area.

*Number of Holdings and Average Area.*

In the past sixty-five years land legislation in New South Wales has been directed principally towards producing an increase in the number of land holdings, and, at the same time, efforts have been made to discourage the aggregation of large areas under individual owners; for, when settlers had spread throughout the State, the existence of large estates began to prove an obstacle to further development.

Since the first Crown Lands Act was passed in 1861 the Legislature has been frequently occupied with the problem of rural development, but only limited success has been achieved in promoting fresh settlement. Many varieties of tenure have been devised, but none has been effective in attracting population to the vast tracts of land in the interior. Large holdings over 5,000 acres in extent have increased, and far more land has been alienated than is necessary to maintain the number of settlers remaining upon it.

The whole story of rural settlement in recent years may be summed up as follows:—Between 1861 and 1920 the number of original selections made was approximately 131,730, and this number does not include such holdings as Suburban, Returned Soldiers' Special, Residential on Goldfields, and Irrigation Farms, which are generally small in extent. At the last-named date there were in existence 61,794 holdings containing over 30 acres of alienated land. Allowing for the number of holdings already in existence in 1861 and remaining in existence in 1920, and for the inclusion in the number of some original selections less than 30 acres in extent, it is clear that more than half of the individual selections made during the period have been disposed of and combined into large holdings either for the profit accruing from the sale, or through the financial or other disabilities of the original selectors.

Omitting holdings of less than 30 acres in extent, which are not important in relation to rural settlement, it is possible to trace from 1881 to 1925 the increase in the number of holdings in relation to the growth of population. This is shown in the following table:—

Year.	Holdings containing over 30 acres of Alienated* Land.			Mean Population.
	Number.	Area.	Average Area.	
		acres.	acres.	
1881	32,521	27,791,076	855	765,015
1891	38,706	41,046,249	1,060	1,142,025
1901	48,360	45,869,742	948	1,366,900
1911	57,089	51,943,846	910	1,665,265
1916	60,435	56,047,062	927	1,893,479
1921	61,505	61,003,468	992	2,108,369
1925	62,475	65,209,412	1,044	2,275,886

\* See explanation, page 682.

Many of the holdings enumerated above have leases attached to them but the areas shown relate to alienated land only. Where two or more holdings are owned by the same person they are enumerated separately.

The development of alienation has been slower since 1901 than previously. The relative growth of settlement, alienation, and population may be readily illustrated by reference to index-numbers for which, in each case, the year 1901 is chosen as base and called 100 :—

Year.	Index of Holdings containing over 30 acres of Alienated* Land.			Index of Mean Population.
	Number.	Area.	Average Area.	
1881	67	61	90	56
1891	80	90	112	84
1901	100	100	100	100
1911	118	113	96	122
1916	125	122	98	138
1921	127	133	105	154
1925	129	142	110	166

\* See explanation, page 652.

It is significant that the population has grown at a much faster rate throughout than the number of holdings containing alienated land. This fact is an enlightening commentary on the drift of population from rural to urban settlements.

The number of alienated holdings has increased at a slower rate than the area alienated, and the number of large holdings of alienated land has increased in a marked degree during the past thirty-five years. The increase, however, has not been uniform, and it assumed a new phase in 1912, after the imposition of the Federal Land Tax. The following table, which relates to individual holdings without regard to ownership, shows the number and area of the larger alienated holdings at intervals since 1891 :—

Year.	Number of Alienated* Holdings of—			Area of Alienated* Holdings of—		
	5,000 to 20,000 acres.	Over 20,000 acres.	Total, Over 5,000 acres.	5,000 to 20,000 acres.	Over 20,000 acres.	Total, Over 5,000 acres.
				acres.	acres.	acres.
1891	865	320	1,185	8,459,384	16,129,163	24,588,547
1901	938	357	1,295	9,286,972	17,203,765	26,490,737
1911	1,081	362	1,443	9,873,180	16,560,215	26,433,395
1921	1,558	301	1,859	13,935,997	12,949,858	26,885,855
1925	1,784	273	2,057	15,869,309	11,711,898	27,581,207

\* See explanation page 682.

The Federal Land Tax (particulars of which are published in the chapter of this Year Book relating to Public Finance) was first imposed in 1910 upon so much of the unimproved value of lands owned by residents of Australia as exceeded £5,000, and upon all lands owned by absentees. The value of land in New South Wales owned by absentees is negligible, and the assessed value of lands held on lease from the Crown is relatively of small account. The incidence of the tax, therefore, has fallen mainly upon large holdings of land absolutely alienated, or lands in course of alienation.

Up to 1911 the increase in the number of large alienated holdings had progressed fairly regularly, but in 1912 there was a decrease from 362 to 335 in the number of alienated holdings exceeding 20,000 acres in area, and an increase from 1,081 to 1,201 in the number between 5,000 acres and 20,000 acres in extent. This change did not produce any reduction in the total area of alienated land contained in these large holdings and, although

the number and area of alienated holdings containing more than 20,000 acres have continued to decline at an appreciable rate, the diminution has been offset by an increase since 1911 of 703 in the number, and 5,996,129 acres in the area of alienated holdings between 5,000 acres and 20,000 acres in extent. The total area of alienated land embraced in holdings exceeding 5,000 acres in area was almost stationary between 1901 and 1911, but between 1911 and 1925 it increased by nearly 1,148,000 acres.

*Tenure of Holdings.*

The tenure of land-holdings in New South Wales is principally of two classes—freehold and leasehold from the Crown. Only a small proportion of the total area occupied (approximately 2 per cent.) is rented from private owners, although the area held on lease from the Crown is very large. Tenancy, as understood in older countries is, therefore, of small extent, 94.9 per cent. of the total alienated area being occupied by its owners.

The following table shows the area occupied in each division of New South Wales, according to the class of tenure as at 30th June, 1927. Owing to rearrangement of the divisions on the basis of Local Government areas in 1922-23, divisional comparisons cannot be made effectively with figures published prior to that year.

Division.	Area of Alienated* Holdings.			Crown Lands occupied as separate holdings or attached to alienated holdings.	Total Area in Holdings.
	Occupied by Owner.	Private Rented.	Total.		
	acres.	acres.	acres.	acres.	acres.
Coastal ... ..	8,600,842	1,164,656	9,765,498	3,263,385	13,028,883
Tableland... ..	12,908,641	609,568	13,518,209	6,596,011	20,114,220
Western Slopes ... ..	18,915,345	707,657	19,623,002	4,682,020	24,305,022
Central Plains and Riverina ... ..	23,534,427	1,017,606	24,552,033	12,741,387	37,293,420
Western ... ..	1,518,709	39,872	1,558,581	76,537,596	78,096,177
New South Wales ... ..	65,477,964	3,539,359	69,017,323	103,820,399	172,837,722

\*See explanation page 682.

Of the total area occupied, 40 per cent. was classed as freehold, although a considerable proportion of the total was in course of purchase from the Crown, and 60 per cent. was leased from the Crown. Nearly 74 per cent. of the Crown lands so leased were in the Western Division, and utilised almost exclusively for depasturing stock.

Almost one-third of the land privately rented is situated in the Coastal Division, where it amounts to nearly 9 per cent. of the total area occupied in holdings. These farms are used chiefly for dairying, and the system of renting was subjected to adverse criticism in the report of the Select Committee of Inquiry into the Agricultural Industry in 1921.

The proportions of the total area of the respective divisions, occupied in holdings of various classes are shown in the following table:—

Division.	Area of Alienated* Holdings.			Crown Lands occupied as separate holdings or attached to alienated holdings.	Proportion of Total Area under Occupation.
	Occupied by Owner.	Private Rented.	Total.		
	per cent.	per cent.	per cent.	per cent.	per cent.
Coastal ... ..	38.68	5.24	43.92	14.67	58.59
Tableland .. ..	48.75	2.30	51.95	24.91	75.96
Western Slopes ... ..	67.16	2.51	69.67	16.63	86.30
Central Plains and Riverina ... ..	56.82	2.46	59.28	30.76	90.04
Western ... ..	1.89	0.05	1.94	95.30	97.24
New South Wales ... ..	32.97	1.78	34.75	52.27	87.02

\* See explanation page 682.

Slightly more than 87 per cent. of the total area contained within the boundaries of the State is occupied in holdings of 1 acre and upwards, used for agricultural or pastoral purposes. The highest proportion of alienation, 70 per cent. of the area of the division, has taken place in the Western Slopes, and the lowest, 1.9 per cent., in the Western Division. But taking the total area of holdings, the Western Division shows the largest proportion of its area—97.2 per cent.—under occupation. The proportions are high also in the Central Plains and Riverina, 90 per cent., and in the Western Slopes, 86.3 per cent.

If reference be made to the table on page 684 it will be seen that the proportion of lands used for agricultural and pastoral purposes in each division increases as the intensity of settlement decreases. At the same time it is apparent that the density of settlement bears an approximate relationship to physical configuration and average rainfall. While the greater intensity of settlement in the more easterly districts necessitates the allocation of larger proportions of land for public purposes, it is undeniable that a very considerable proportion of the remaining Crown land in the Eastern Division is so rugged or wooded as to be unfit or unprofitable for occupation. This is especially the case in the South Coast Division, which in parts is very mountainous, only 43 per cent. of the total area being occupied by rural holdings, as compared with 67 per cent. in the North Coast Division and 65 per cent. in the Hunter and Manning.

#### *Crown Land Holdings.*

Crown lands are held, as has been explained, either in conjunction with alienated land or as separate holdings. The total area held in conjunction with alienated lands has been shown already. Particulars of holdings consisting of Crown lands only at 30th June, 1925, were as follow:—

Division.	Number of Holdings.	Area held.	Average area of Holdings.
		acres.	acres.
Coastal ... ..	536	461,431	861
Tableland ... ..	1,129	1,351,719	1,197
Western Slopes ... ..	1,042	1,660,525	1,594
Central Plains and Riverina ..	3,330	5,568,770	1,672
Western ... ..	953	26,865,291	28,131
New South Wales ... ..	6,992	35,907,736	5,136

By reason of the definition of alienated land used in collecting agricultural and pastoral statistics particulars of holdings containing lands under the tenures of homestead farm or homestead selection are not included in the figures shown above.

The average area of the holdings is comparatively small in the Eastern and Central Land Divisions. In the Western Division, intense settlement has not yet been found practicable, and the area of holdings consisting of Crown lands only is very large.

#### VALUE OF ALIENATED RURAL LANDS.

The particulars which follow relate to the value, on a freehold basis, of lands absolutely alienated, in course of alienation or held as homestead farms or homestead selections and used for agricultural and pastoral purposes. Information as to the improved and unimproved capital values of such lands was first collected in 1920-21.

The unimproved capital value was defined as being the amount which the land might be expected to realise if sold under such reasonable conditions as a *bona fide* seller would require, assuming that the actual improvements



had not been made, and the improved capital value as the value of the land with all improvements and buildings thereon under similar conditions of sale. Where particulars of unimproved value were not available from owners, collectors were instructed to obtain them from the records of Shire Councils, and it is probable that local government assessments were returned as the unimproved value of the whole of the lands, except in the Western Division, where no shires exist.

Where valuations have been made by the Valuer-General it has been found that valuations formerly made for local government purposes were below actual values. In many cases the discrepancy was considerable, and in the aggregate the valuations of shires are probably under-estimated by more than 20 per cent. Since municipal lands are of comparatively small extent, and very few shires assess improved values, particulars of improved capital value were obtained from the owners. The unimproved and improved values as returned, therefore, are not comparable because they are apparently stated upon different bases and represent respectively the shire assessment of the unimproved value of the land and the owner's opinion of the value of the land and its improvements. The value of improvements cannot be deduced from them.

The following table shows in divisions of the State (on the basis of Local Government areas) the distribution of alienated and Crown lands occupied in holdings of one acre and upwards for agricultural and pastoral purposes, together with the total and average value of the alienated lands at 30th June, 1927.

Division.	Alienated* Land in Occupation in Holdings of 1 acre and over.					Area of Crown Land.
	Area.	Unimproved Capital Value of Land.		Improved Capital Value.		
		Total.	Average per acre.	Total.	Average per acre.	
	Acres.	£	£	£	£	Acres.
	000.	000.		000.		000.
<i>Coastal—</i>						
North Coast ...	3,272	12,190	3·7	34,310	10·5	1,378
Hunter and Manning ...	4,234	9,849	2·3	29,250	6·9	1,255
Metropolitan ...	316	3,041	9·6	6,878	21·7	2
South Coast ...	1,943	4,675	2·4	12,859	6·6	628
Total ...	9,765	29,755	3·0	83,297	8·5	3,263
<i>Tablelands—</i>						
Northern ...	3,876	5,383	1·4	14,321	3·7	2,647
Central ...	5,644	8,821	1·6	27,465	4·9	1,984
Southern ...	3,998	4,724	1·2	14,579	3·6	1,965
Total ...	13,518	18,928	1·4	56,365	4·2	6,596
<i>Western Slopes—</i>						
North ...	5,735	10,177	1·8	22,889	4·0	2,396
Central ...	5,611	8,303	1·5	26,396	4·7	1,123
South ...	8,277	14,991	1·8	48,466	5·9	1,163
Total ...	19,623	33,471	1·7	97,751	5·0	4,682
<i>Plains—</i>						
North-central ...	4,316	5,388	1·2	11,393	2·6	3,253
Central ...	6,919	6,990	1·0	15,582	2·3	6,708
Riverina ...	13,317	20,801	1·6	52,259	4·0	2,780
Total ...	24,552	33,179	1·4	79,634	3·2	12,741
<i>Western Division</i> ...	1,559	830	0·5	2,453	1·6	76,538
<i>Whole State</i> ...	69,017	116,163	1·7	319,500	4·6	103,820

\* See explanation, page 682.

Particulars of the rainfall, productivity, and population of each of these divisions are shown on page 693. The average value per acre is closely related to these factors. The alienated lands in the Western Division are situated mainly in its eastern confines, and the value thereof does not afford any indication of the value of the extensive Crown lands situated further west.

*Capital used in Rural Industries.*

The capital value of privately-owned farm property in New South Wales was approximately £404,650,000 at 30th June, 1927, made up as follows:—

		£
Alienated land and improvements thereto...	...	319,500,000
Capitalised value of private rights in leases held		
from Crown ... ..	...	13,000,000
Machinery and implements ... ..	...	15,998,000
Live stock ... ..	...	56,150,000

In addition, the value of Crown lands leased to landholders was estimated at approximately £51,000,000, after deducting £13,000,000, being the assessed value of private rights in such leases. The aggregate capital value of property used in rural industries was, therefore, approximately £455,650,000.

*Alienated Holdings in Value Series.*

The following is a statement of the unimproved value of land in alienated holdings in value series as at 30th June, 1925:—

Alienated Land,† Unimproved Value Series.	No. of Holdings.	Alienated† Area.	Value Unimproved.	Average Value Unim- proved, per acre.	Proportion per cent. of total.		
					Number.	Area.	Unim- proved value.
£		acres.	£	£ s.			
Under 500 ...	31,368	4,898,705	6,546,840	1 7	43·6	7·5	6·1
500 to 1,000 ...	15,023	6,713,431	10,801,520	1 12	20·9	10·3	10·0
1,000 „ 2,000 ...	13,989	10,342,519	19,401,070	1 18	19·5	15·9	18·0
2,000 „ 3,000 ...	4,851	6,211,725	11,569,060	1 17	6·8	9·5	10·8
3,000 „ 5,000 ...	3,250	6,930,552	12,154,250	1 15	4·5	10·6	11·3
5,000 „ 10,000...	2,042	8,466,132	13,776,790	1 13	2·8	13·0	12·8
10,000 „ 15,000 ...	573	4,294,885	6,872,300	1 12	·8	6·6	6·4
15,000 „ 20,000 ...	289	3,090,902	4,942,810	1 12	·4	4·7	4·6
20,000 and over	516	14,260,561	21,559,150	1 10	·7	21·9	20·0
<b>Total ...</b>	<b>71,901*</b>	<b>65,209,412</b>	<b>107,623,790</b>	<b>1 13</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* Excludes 6,992 holdings consisting of Crown lands only.

† See explanation, page 682.

A most striking feature of this statement is the very large number of holdings containing alienated land of an unimproved value of less than £500. They numbered 31,368, or 44 per cent. of the total, and 16,225, or more than one-half of them, were in the coastal districts.

Nearly 22 per cent. of the alienated land was contained in holdings of which the unimproved value exceeded £20,000. There were 3,420 holdings (4·7 per cent. of the total) containing alienated land valued at more than £5,000. They embraced in all 30,112,480 acres of alienated land, valued at £47,151,050, which was 44 per cent. of the total value for the State. It is noteworthy that the average value per acre of large estates was little less than that of smaller areas.

It should be noted, however, that no account is taken of the value of Crown leases attached to alienated holdings, and that where two or more holdings are owned by the same individual they are, unless in close proximity to each other, treated as separate holdings.

*Live Stock, and Improved Value in Area Series.*

The following statement shows the number of livestock and the improved capital value of alienated holdings in area series as at 30th June, 1925 :—

Area Series (Alienated Land). *	No. of Holdings.	Alienated Land in Holdings.*		Total Area of Holdings, including Crown Lands.	No. of Sheep at 30th June, 1925.	No. of Cattle at 30th June, 1925.
		Improved Capital Value.	Area.			
Acres.	No.	£	acres.	acres.	000.	000.
		000.	000.	000.		
0*... 30 ...	6,992*	...	...	35,908	4,221	151
1- 30 ...	9,426	7,565	126	517	55	40
31- 320 ...	30,526	51,781	4,430	13,624	1,635	876
321- 640 ...	12,453	35,145	5,960	15,754	3,005	432
641- 1,280 ...	9,671	40,930	8,899	19,747	5,568	358
1,281- 2,000 ...	3,713	24,518	5,910	12,555	3,982	176
2,001- 3,000 ...	2,371	22,087	5,811	13,024	4,218	144
3,001- 5,000 ...	1,684	23,746	6,492	15,258	4,911	156
5,001- 10,000 ...	1,260	31,072	8,629	16,106	6,600	189
10,001- 50,000 ...	738	40,922	13,615	23,243	9,937	243
50,001-100,000 ...	38	6,410	2,667	3,100	1,293	23
Over 100,000 ...	21	7,108	2,670	3,714	1,657	33
Total ...	78,893	291,284	65,209	172,550	47,082†	2,821†

\* See explanation, page 682.

† Excluding live stock not on rural holdings.

‡ Holdings consisting of Crown lands only.

Holdings with an alienated area of 3,000 acres or less carried 39 per cent. of the sheep and 72 per cent. of the cattle. They embraced 48 per cent. of the alienated land and 62 per cent. of the attached Crown lands, and their improved value was 63 per cent. of the total. Information was not available to show the acreage under crops in the various groups of holdings at 30th June, 1925, but the experience of earlier years indicates that about 80 per cent. of the area under wheat was on holdings with an alienated area not exceeding 3,000 acres.

#### CHARACTER OF SETTLEMENT.

The character of the rural settlement of New South Wales has been determined largely by economic factors, *e.g.*, the geographical features of the land, the distribution of rainfall, fertility of the soil, accessibility of markets, and local factors, such as water supply, timber growth, and means of communication. The distribution of industrial activity is principally into pastoral, agricultural, dairying, mining, and manufacturing localities, and along lines of traffic.

The pastoral industry, which caused the original spread of settlement over the State, is still maintained in practically every part of it, although it diminishes in importance from the sole industry in the west to a secondary position in the central and eastern land divisions, where agriculture and dairying are assuming greater importance. From its nature it requires extensive areas and little labour, and it promotes settlement of a scattered nature characterised by small towns, which become smaller and more scattered towards the western boundary, where only isolated sheep and cattle stations exist.

Superimposed on the pastoral foundation in the central division the main belt of agricultural settlement stretches from the northern to the southern boundary of the State between the Great Dividing Range and a line to the

west, which follows generally the line of 20-inch rainfall in the south, and the 25-inch line in the north. This extensive belt is roughly wedge-shaped, and diminishes from a breadth of about 200 miles in the extreme south to about 100 miles in the north. Practically the whole of the wheat crops of the State are produced there, but only a small portion of the suitable lands have been utilised for agriculture, and pastoral pursuits are still carried on extensively. Settlement in these central districts is more intense than in the west, and there are a number of flourishing towns with populations ranging from 2,000 to 10,000.

East of the Dividing Range, in the coastal district, dairying is the staple industry, but there is also a certain amount of miscellaneous agriculture in the more fertile portions, and some cattle-grazing in the more rugged and less accessible districts. Only a small quantity of wool is produced, and the production of wheat is negligible. Population in the coastal districts is denser than in any other region of the State, and the farms are usually small and intensively cultivated.

The following analysis of the State, according to natural divisions on the basis of Local Government areas, shows the rainfall, population, area, and production of each. A map showing these divisions is published as a frontispiece to this Year Book:—

Division.	Range of Average Annual Rainfall	Popu-lation at Census, 1921.	Total Area.	Production (1926-27).				
				Wool.	Wheat.	Butter.	Minerals.	Manu-factures.*
	inches.	000	acres.	lb.	bushels.	lb.	£	£
<i>Coastal—</i>		000	000	000.	000.	000.	000.	000.
North Coast ...	35-76	124	6,915	83	2	51,345	2	1,790
Hunter and Manning ...	22-60	245	8,395	6,772	27	24,307	6,490	5,851
Cumberland ...	29-50	1,060	959	73	1	679	1,822	53,276
South Coast ...	27-61	89	5,968	1,582	...	8,037		
Total ...	...	1,518	22,237	8,510	30	84,368	8,314	62,487
<i>Tablelands—</i>								
Northern ...	30-38	51	8,119	26,095	103	1,325	240	278
Central ...	23-55	131	10,716	40,820	2,653	1,675	1,304	2,113
Southern† ...	19-65	48	7,645	30,385	38	679	1	495
Total ...	...	230	26,480	97,300	2,794	3,679	1,545	2,886
<i>Western Slopes—</i>								
North ...	24-33	52	9,219	44,635	5,040	2,135	105	239
Central ...	17-28	52	7,723	42,597	9,385	804	1	338
South ...	16-40	96	11,222	56,002	12,335	3,765	36	802
Total ...	...	200	28,164	143,234	26,760	6,704	142	1,429
<i>Central Plains—</i>								
Northern ...	18-28	24	9,580	42,165	1,386	131	2	145
Central ...	15-19	20	14,811	59,033	1,818	143	13	118
Riverina ...	12-22	64	17,028	69,058	14,733	1,505	25	444
Total ...	...	108	41,419	170,256	17,937	1,779	40	707
<i>Western Division ...</i>	8-19	48	80,312	80,022	20	22	2,310	2,340
Whole State† ...	...	2,104	198,612‡	499,322	47,541	96,552	12,351	69,849

\* Value added in process of manufacture. † Including Federal Territory. ‡ Excluding area of harbours not included in local government areas.

Manufactories are not extensive outside the metropolitan and Newcastle districts, but dairy factories operate on a large scale along the coast. Smelting and metal works of considerable importance are established on the coal-fields of the South Coast and Central Tableland and on the silver-lead fields at Broken Hill in the Western Division.

The five principal topographical divisions are strips of territory running from the northern to the southern boundary in a south-westerly direction, embracing, respectively, the coastal belt, tablelands, western slopes, central western plains and Western Division or far western plains. Except for the western plains, each is divided into three portions—northern, central, and southern—which, with the inclusion of a special metropolitan district, makes fourteen subdivisions, each of which presents fairly uniform natural features and is affected by uniform physiographic factors. In the north the region of high average rainfall extends further inland than in the south, with the result that the isohyets run in a general north and south direction. The south-western extremity of the Riverina lies about 100 miles further from the coast than does the north-western extremity of the northern plain, and, as the average annual rainfall diminishes with increasing rapidity towards the west, the northern subdivisions shown above generally receive more rain than the central, and the central more than the southern subdivisions. Rather less than one-half of the total area of the State receives average rains exceeding 20 inches per year, and rather more than one-half receives an average of more than 15 inches per year. Where the rainfall is greatest conditions generally favour the dairying industry, the areas with moderate rainfall being more suitable for sheep and wheat. In the dry western areas wool-growing is the only important rural industry.

Not only the quantity, but the season and reliableness of the rainfall, and the amount of evaporation are important considerations in determining the productive possibilities of any region. In common with most countries, New South Wales suffers periodically in one part or another from the effects of intermittent rainfall, a disability which local conditions such as the abnormal evaporation and the absorbent nature of the soils of the interior tend to aggravate. This difficulty may be overcome ultimately by water-conservation and improvement in cultural methods, but at present it operates powerfully to the detriment of the western hinterland.

#### SETTLEMENT IN DIVISIONS.

Pluvial circumstances exert a decisive effect on the nature of the pursuits and the extent of settlement in the various rural districts of the State, and explain their industrial characteristics.

For the purpose of considering rural settlement, the State may be distributed into five statistical divisions, viz., Coast, Tableland, Western Slopes of the Great Dividing Range, Central Plains and Riverina, and the Western Division. The statistics for 1922-23 and subsequent years have been collected upon the basis of Local Government areas instead of counties, as formerly, and this necessitated considerable rearrangement of divisional boundaries.

The nature of the industries and settlement of each of the principal divisions of the State were discussed in the Official Year Book, 1922, at page 681 *et seq.* Statistics for 1926-27 are shown below:—

### Coastal Districts.

The following table presents a summary of the tenure and extent of occupied holdings in the four main divisions of the coastal belt as at 30th June, 1927:—

Division of Coast.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of Land occupied in Holdings of 1 acre and upwards for Agricultural and Pastoral Purposes.					Area of Alienated Land suitable for Cultivation.†
			Alienated‡.			Crown Lands.	Total.	
			Freehold.	Private Rented.	Total.			
	acres.	No.	acres.	acres.	acres.	acres.	acres.	acres.
North ... ..	000	11,693	000	000	000	000	000	000
Hunter-Manning ...	6,915	10,505	2,837	435	3,272	1,378	4,650	502
Cumberland ... ..	8,395	10,505	3,865	369	4,234	1,255	5,489	453
South ... ..	859	4,541	261	55	316	2	318	129
	5,968	5,092	1,638	305	1,943	629	2,572	316
<b>Total ... ..</b>	<b>22,237</b>	<b>31,831</b>	<b>8,601</b>	<b>1,164</b>	<b>9,765</b>	<b>3,264</b>	<b>13,029</b>	<b>1,400</b>

\* Further particulars of rainfall and evaporation are published on pages 12 to 19 of this Year Book.

† See explanation, page .

Apart from the small area in the county of Cumberland which surrounds the metropolis, the North Coast is by far the most closely-settled part of the Coastal Division. The average areas of holdings in the various divisions are:—North Coast, 398 acres; Hunter and Manning, 523 acres; and South Coast 505 acres. The proportion of the total area at each division occupied in holdings is 67 per cent. in the North Coast Division, 65 per cent. in that of Hunter and Manning, but only 43 per cent. on the South Coast. Of the total land in occupation about 66 per cent. is used by its owners, 25 per cent. is leased from the Crown, and 9 per cent. is rented privately.

Included in the coastal districts are 783 holdings, on which 1,093 share-farmers occupy 17,642 acres of cultivation and 249,766 acres as dairy farms.

Owing to the rugged nature of the country only a small proportion of the land is considered suitable for cultivation, and of this area less than one-quarter was cultivated in 1926-27.

The following analysis shows the main purposes for which these holdings were used in 1926-27:—

Principal Purpose for which Holdings were Used.*	Number of Holdings in Division.				
	North Coast.	Hunter and Manning.	Cumberland.	South Coast	Total.
Agriculture ... ..	712	1,862	2,074	390	5,038
Dairying ... ..	4,259	2,187	383	1,820	8,649
Grazing ... ..	2,134	2,816	456	1,586	6,992
Agriculture and dairying ... ..	3,230	1,778	113	346	5,467
Agriculture and grazing ... ..	261	397	76	212	946
Dairying and grazing ... ..	301	315	24	149	789
Agriculture, dairying, and grazing ... ..	269	231	32	52	554
Poultry ... ..	10	149	887	72	1,118
Poultry, Bees, Pigs, etc. ... ..	21	28	63	32	149
Unoccupied, or used mainly for other purposes ... ..	493	742	428	433	2,096
<b>Total ... ..</b>	<b>11,693</b>	<b>10,565</b>	<b>4,541</b>	<b>5,092</b>	<b>31,831</b>

\* See comments to table on page 683.

The coastal district contains 95 per cent. of the holdings used mainly for dairying in New South Wales, and the North Coast district contains 47 per cent. of the number. Dairying separately or in conjunction with other farming pursuits is the predominant industry, but a considerable proportion of the farms is used for cattle-raising.

The following table shows the number and extent of alienated holdings of various sizes in the coastal division, together with their total value and the area of Crown lands attached to them on 30th June, 1925 :—

Area of Holdings (Alienated Land).	Number of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown Land attached to Alienated Holdings.	Total.	Un- improved.	Improved.
Acres.		Acres.	Acres.	Acres.	£ 000.	£ 000.
0* ... ..	536	...	...	461,431	...	...
1- 30 ... ..	6,192	77,976	20,906	98,882	2,028	5,880
31- 320 ... ..	18,713	2,660,347	647,887	3,308,234	13,261	39,611
321- 640 ... ..	3,902	1,766,764	542,984	2,309,748	4,463	13,240
641- 1,280 ... ..	1,812	1,629,760	371,091	2,000,851	3,085	8,655
1,281- 2,900 ... ..	515	801,224	216,076	1,017,300	1,391	3,983
2,901- 3,000 ... ..	230	559,076	141,092	700,168	1,020	2,463
3,001- 5,000 ... ..	150	579,667	284,202	863,869	921	2,434
5,001-10,000 ... ..	96	637,452	191,073	828,525	959	2,595
10,001 and over ... ..	41	793,847	487,385	1,281,232	1,166	3,054
Total ... ..	32,187	9,506,113	2,902,696	12,870,240	23,294	81,915

\* Holdings consisting of Crown Lands only.

More than 90 per cent. of the alienated holdings do not exceed 640 acres in extent. They embrace 47 per cent. of the alienated land, with 4.2 per cent. of the attached Crown lands. Their aggregate improved value is 72 per cent. of the total.

#### Tablelands.

Although extensive plateaux exist in the tableland divisions, considerable areas are rugged and rock-strewn and not adaptable to agriculture. Hence grazing has remained the staple industry, although many farmers combine agriculture with grazing, and large areas are cultivated in suitable localities. The rainfall is ample throughout, and the headwaters of most of the principal rivers make this a well-watered region. Railway communications are good, but, on the whole, settlement is sparse, fewer flourishing towns exist than on the coast, and small settlements are rarer because lands suitable for intense farming are more scattered. Neither dairying nor agriculture has been developed, and pastoral pursuits alone are extensive.

The following table provides an analysis of the number and tenure of rural holdings in the three main divisions of the Tablelands as at 30th June, 1927 :—

Division of Tableland.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of Land occupied in Holdings of 1 acre and upwards for Agricultural and Pastoral Purposes.					Area of Alienated Land suitable for Culti- vation.*
			Alienated.*			Crown Lands.	Total.	
			Freehold.	Private Rented.	Total.			
	acres. 000	No.	acres. 000	acres. 000	acres. 000	acres. 000	acres. 000	acres. 000
Northern ...	8,119	3,931	3,750	126	3,876	2,646	6,522	390
Central ...	10,716	8,286	5,371	273	5,644	1,985	7,629	1,494
Southern ...	7,645	3,559	3,788	210	3,998	1,965	5,963	287
Total ...	26,480	15,767	12,909	609	13,518	6,596	20,114	2,171

\* See explanation, page 682.

While the proportion of land occupied in each division varies from 80 per cent. in the northern to 71 per cent. in the central, and 78 per cent. in the southern tablelands, rural settlement is densest in the central districts, which were the first to be occupied. More than one-half of the total area of the tableland division is alienated, and almost one-third of the area occupied is owned by the Crown. The system of private renting is much less extensive than in the coastal districts, only 4.5 per cent. of the area alienated, or 3 per cent. of the total area occupied, being held in this way. In addition, there were 530 share-farmers on 346 holdings, comprising 48,172 acres of cultivation and 7,396 acres of dairy farms. As in the coastal division the proportion of alienated land suitable for cultivation is very small, but less than 22 per cent. of such land was cultivated in 1926-27.

The main purposes for which holdings were used in each division of the tablelands during 1926-27 are shown in the following table :—

*Principal Purpose for which Holdings were used.	Number of Holdings.			
	Northern Tableland.	Central Tableland.	Southern Tableland.	Total.
Agriculture ... ..	265	1,425	79	1,769
Dairying ... ..	65	78	63	206
Grazing ... ..	2,148	2,899	2,569	7,616
Agriculture and Dairying ... ..	140	301	26	467
Agriculture and Grazing ... ..	884	2,652	603	4,139
Dairying and Grazing ... ..	115	125	80	320
Agriculture, Dairying, and Grazing ... ..	172	240	54	466
Poultry, Bees, Pigs, etc. ... ..	3	56	5	64
Unoccupied or used for other purposes ... ..	139	510	71	720
<b>Total ... ..</b>	<b>3,931</b>	<b>8,286</b>	<b>3,550</b>	<b>15,767</b>

\* See comments to table on page 683.

Grazing pursuits predominate throughout, but a considerable proportion of the holdings is used for agricultural purposes.

The following statement relating to the tableland division shows the number and extent of alienated holdings of various sizes, together with their total value and the area of Crown lands attached to them on 30th June, 1925 :—

Area of Holding Alienated.	Number of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown lands attached to Alienated Holdings.	Total.	Un-improved.	Improved.
Acres.		Acres.	Acres.	Acres.	£	£
0*	1,129*	...	...	1,351,719	000	000
1- 30 ... ..	1,615	23,482	80,358	103,840	236	917
31- 320 ... ..	6,358	934,741	1,054,761	1,989,502	1,955	6,167
321- 640 ... ..	2,654	1,247,312	910,846	2,158,158	1,876	5,315
641- 1,280 ... ..	2,146	1,973,622	1,032,243	3,005,865	2,625	7,365
1,281- 2,000 ... ..	876	1,389,194	492,008	1,881,202	1,788	5,159
2,001- 3,000 ... ..	535	1,309,951	493,273	1,808,224	1,668	4,495
3,001- 5,000 ... ..	412	1,585,751	642,379	2,228,130	1,909	5,525
5,001-10,000 ... ..	264	1,837,791	557,344	2,395,135	2,439	6,673
10,001 and over ... ..	159	2,626,967	509,733	3,136,700	3,478	9,393
<b>Total ... ..</b>	<b>16,148</b>	<b>12,928,811</b>	<b>5,777,945</b>	<b>20,058,475</b>	<b>17,914</b>	<b>51,019</b>

\* Holdings consisting of Crown lands only.



Nearly 85 per cent. of the alienated holdings do not exceed 1,280 acres in extent. They embrace only 32 per cent. of the total area alienated, and contained 53 per cent. of the Crown lands attached to alienated holdings. Their improved value is only 39 per cent. of the total.

### Western Slopes.

The divisions of the Western Slopes contain gently undulating lands with a westerly trend, watered by the upper courses of the inland rivers, and an adequate and regular rainfall. These fertile areas are eminently suitable for agriculture and are the most productive portions of the interior. As yet they are only sparsely settled, and very great development is possible.

The area, number, and tenure of rural holdings in the various districts of the Western Slopes as at 30th June, 1927, are shown below:—

Division of Slopes.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of Land occupied in Holdings of 1 acre and upwards for Agricultural and Pastoral purposes.					Area of Alienated Land suitable for Cultivation.*
			Alienated *			Crown Lands.	Total.	
			Freehold	Private Rented.	Total.			
	acres.	No.	acres.	acres.	acres.	acres.	acres.	acres.
North Western...	9,219	4,459	5,548	187	5,735	2,396	8,131	1,457
Central Western...	7,723	4,574	5,406	205	5,611	1,124	6,735	3,699
South Western ...	11,222	8,202	7,961	316	8,277	1,162	9,439	4,355
Total ...	28,164	17,235	18,915	708	19,623	4,682	24,305	9,511

\* See explanation, page 682.

In this division settlement is most dense on the South Western Slope, but the proportion of occupied land is greatest in the northern districts. The proportion of Crown lands occupied in the whole division is 17 per cent. of the total. The area of land rented from private owners represents only 3.6 per cent. of the total area alienated and 2.9 per cent. of the area occupied. The area of alienated land suitable for cultivation is considerable, constituting over 42 per cent. of the total area of such land in the State. Almost 50 per cent. of the alienated lands of the division are suitable for cultivation, and the proportion is as great as 66 per cent. in the Central Western Slope. Only 24 per cent. of the suitable land in alienated holdings in the Slopes Division was under crop in 1926-27.

The following statement shows the principal purposes for which rural holdings were used in the Western Slopes Division in 1926-27:—

*Principal Purpose for which Holdings were used.	Number of Holdings in Division.			
	North Western Slope.	Central Western Slope.	South Western Slope.	Total.
Agriculture ... ..	400	398	1,114	1,912
Dairying ... ..	18	16	112	146
Grazing ... ..	1,811	859	2,107	4,777
Agriculture and Dairying ... ..	181	45	175	401
Agriculture and Grazing ... ..	1,693	3,051	3,905	8,649
Dairying and Grazing ... ..	50	6	139	195
Agriculture, Dairying, and Grazing ... ..	169	90	401	660
Poultry, Bees, Pigs, etc. ... ..	24	4	18	46
Unoccupied or used for Other Purposes ... ..	113	105	231	449
Total ... ..	4,459	4,574	8,202	17,235

\* See comments to table on page 683.

Mixed farming—agricultural and grazing—is the principal rural activity, but grazing predominates on the North-western Slope, where the lands fit for agriculture are relatively of small extent. The number of holdings used principally for agricultural purposes is large, but dairying and small farming are not extensive.

The number and extent of alienated holdings of various sizes, together with their total value and the area of Crown lands attached to them, are shown in the following statement relating to the Western Slopes Division as at 30th June, 1925 :—

Area of Holding Alienated.	Number of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown lands attached to Alienated Holdings.	Total.	Un-improved.	Improved.
Acres.		acres.	acres.	acres.	£ 000	£ 000.
0* ...	1,042*	...	...	1,660,525	...	...
1- 30 ...	1,242	18,887	48,697	67,584	133	581
31- 320 ...	4,117	621,145	368,767	989,912	1,656	4,782
321- 640 ...	3,920	1,925,625	613,277	2,538,902	3,872	11,266
641- 1,280 ...	3,557	3,274,861	819,790	4,094,651	5,408	16,124
1,281- 2,000 ...	1,316	2,096,123	416,220	2,512,343	3,238	9,758
2,001- 3,000 ...	915	2,247,979	339,979	2,587,958	3,217	9,642
3,001- 5,000 ...	553	2,117,731	376,129	2,493,860	3,130	9,009
5,001-10,000 ...	434	3,000,701	481,621	3,482,322	4,825	13,336
10,001 and over ...	180	3,419,039	381,517	3,800,556	5,535	13,245
<b>Total ...</b>	<b>17,276</b>	<b>18,722,091</b>	<b>3,845,997</b>	<b>24,228,613</b>	<b>31,014</b>	<b>87,793</b>

\* Holdings consisting of Crown lands only.

Of the 16,234 alienated holdings only 1,167 exceed 3,000 acres in area, but they embrace 8,537,500 acres, or nearly 46 per cent., of the alienated land, and in addition have attached to them 1,239,000 acres, or 32 per cent. of the attached Crown lands.

#### *Plains and Riverina.*

The Plains of the Central Division, including the Riverina, constitute the eastern portion of a remarkable extent of almost level country, stretching from the last hills of the Western Slopes to the western boundary of the State, with an average width of 120 miles. They comprise the great sheep districts of the State and about 40 per cent. of the agricultural lands. Generally speaking, they are not well watered, the average rainfall is low, and its intermittency is a source of frequent loss. They are traversed by the western rivers in their lower courses, but they do not supply water to a very extensive area, as they are few and their flow is irregular. Railway facilities are not so good as in the more easterly districts, but they are being improved steadily, particularly in the Riverina. Communication and transport to outlying districts depend mostly on motor and horse-drawn conveyances. Artesian water underlies a considerable area on the north, and bores serve to supply permanent water in a number of localities. In the south, sub-artesian bores are of great practical utility.

The following table shows the number, tenure, and extent of holdings occupied for agricultural and pastoral purposes in the division on 30th June, 1927 :—

Plains of Central Division.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of Land occupied in Holdings of 1 acre and upwards for Agricultural and Pastoral Purposes.					Area of alienated Land suitable for Cultivation. *
			Alienated.*			Crown Lands.	Total.	
			Freehold.	Private rented.	Total.			
	acres.	No.	acres.	acres.	acres.	acres.	acres.	acres.
North ...	9,580	1,950	4,192	124	4,316	3,253	7,569	1,098
Central...	14,811	2,399	6,518	401	6,919	6,708	13,627	2,265
Riverina ...	17,028	7,466	12,824	493	13,317	2,780	16,097	6,104
Total ...	41,419	11,815	23,534	1,018	24,552	12,741	37,293	9,467

\* See explanation page 682.

The existence of a closely-settled but comparatively small area of irrigated lands in the Riverina partly accounts for the density of settlement in that division, there being 1,634 holdings in the Murrumbidgee Irrigation Area, covering an area of 206,694 acres, all of which are Crown lands. Sixty-six per cent. of the total area occupied has been alienated, but while the proportion alienated is 57 per cent. of the total area in the northern districts it is 83 per cent. in the Riverina, where the land is more productive.

The area held under the system of private renting is of small extent being less than 4 per cent. of the total area alienated. The area of Crown lands occupied is considerable in all divisions, and in the central districts it exceeded the area of occupied alienated lands until the present year.

Share-farming is not extensive in the north, but in the Riverina 438 holdings are occupied by 615 share-farmers, who had 190,488 acres in cultivation in 1926-27, in addition to 1,500 acres of dairy farms. Only 25 per cent. of the alienated land in the Northern Plains is considered suitable for agriculture, but the proportions in the Central Plains and Riverina are 34 and 46 per cent. respectively.

The following table shows the main purposes for which the holdings in the Central Plains Division were used in 1926-27 :—

Principal Purpose for which Holdings were used.*	Number of Holdings in Plains of Central Division.			
	North.	Central.	Riverina.	Total.
Agriculture ... ..	66	168	2,017	2,251
Dairying ... ..	4	8	58	70
Grazing ... ..	1,237	1,720	1,501	4,458
Agriculture and Dairying ... ..	5	...	183	188
Agriculture and Grazing ... ..	595	471	3,355	4,421
Dairying and Grazing ... ..	4	4	34	42
Agriculture, Dairying, and Grazing ... ..	5	1	176	182
Poultry, Bees, Pigs, etc. ... ..	1	1	...	2
Unoccupied or used for other purposes ..	33	26	142	201
Total ... ..	1,950	2,399	7,463	11,815

\* See comments to table on page 683.

While grazing, with a very little mixed-farming and agriculture, predominates in the northern districts, agriculture assumes increasing importance in the south, and, combined with grazing, it predominates in the Riverina. On the irrigated lands of the Murrumbidgee a considerable number of holdings are used for small farming, and this accounts for the greater part of the holdings used for agriculture and for dairying in the Riverina. Nevertheless, taking into account the areas shown in the previous table, the existence of agricultural pursuits is seen to have a very pronounced effect on the density of settlement.

The number, total area of alienated land and of Crown lands attached, and the value of alienated land in rural holdings on the plains of the Central Division (including the Riverina), as at 30th June, 1925, are shown in area series in the following table :—

Area of Holding Alienated.	No. of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown lands attached to Alienated Holdings.	Total.	Un-improved.	Improved.
Acres.		Acres.	Acres.	Acres.	£	£
0* ...	3,330*	...	...	5,568,770	...	...
1- 30 ...	307	4,662	25,922	30,584	23	145
31- 320 ...	1,100	184,531	425,459	609,990	401	1,095
321- 640 ...	1,868	963,006	659,727	1,622,733	1,883	5,150
641- 1,280 ...	2,072	1,941,792	1,650,004	3,591,796	3,169	8,578
1,281- 2,000 ...	968	1,559,743	785,468	2,345,211	2,195	5,469
2,001- 3,000 ...	662	1,622,767	757,968	2,380,735	2,208	5,327
3,001- 5,000 ...	524	2,029,402	664,320	2,693,722	2,713	6,496
5,001-10,000 ...	421	2,839,903	1,376,493	4,216,396	3,553	8,075
10,001 and over ...	378	11,158,824	2,962,109	14,120,933	13,375	27,868
Total ...	11,630	22,304,630	9,307,470	37,180,870	29,520	68,203

\* Holdings consisting of Crown lands only.

Approximately 76 per cent. of the alienated holdings contain less than 2,000 acres of alienated land embracing 21 per cent. of the total alienated area with 38 per cent. of the Crown lands attached. Their aggregate improved value represents 30 per cent. of the total improved value of alienated holdings.

#### *Western Division.*

It would appear that the plains of the Western Division will never be developed into a productive region maintaining a population commensurate with its area. One-third of the division receives less than 10 inches of rain per year and practically the whole of the remainder less than 15 inches. Though the soils are uniformly fertile, the lack of rain, permanent water and grasses, and the high rate of evaporation, ranging up to 90 inches per year, render it unproductive in a high degree. Except on a few small irrigated areas there is scarcely a sign of agriculture or dairying, and by reason of the small rainfall, the sheep-carrying capacity of the land is only about one-fifth as great as that of the plains further east; but the climate is well suited to the production of high-grade merino sheep. It is a lonely region, for the most part occupied in large holdings on a long lease tenure. It presents an immense field for scientific development, but its possibilities are problematical. Whether irrigation from the Murray and the vast lake reservoirs of the South Darling, or from the artesian water zone of the north, combined with

dry-farming methods will render any extensive areas adaptable to agriculture, or whether water and fodder conservation will render it capable of maintaining large numbers of sheep and suitable for closer settlement, remain questions which are not likely to be considered until the more attractive easterly regions have made very great advances in settlement. It is contended, however, that in the south there are large areas which only require railway facilities to render them profitable for agriculture. At present, excluding the mining districts, it is a vast region comprising two-fifths of the area of the State, producing less than one-sixth of the pastoral produce, and practically nothing besides, and inhabited by less than 20,000 persons (one person to 6 square miles) or one-hundredth part of the population of the State. Near the western boundary, however, is situated one of the richest silver-lead fields of the world, and in the large mining town of Broken Hill there is a population of 24,000 persons. In the eastern part of the division exist extensive copper deposits, which formerly maintained thriving settlements at Cobar, Canbelego, and Nymagee, but with the suspension of mining activities the population of these localities has decreased. For the rest, the division possesses only one town, Bourke, with a population exceeding 1,000, five exceeding 500, and about twenty smaller townships.

The following table shows the number and extent of holdings in the Western Division as at 30th June, 1927 :—

Area Series (alienated and Crown lands combined).	East of Darling.		West of Darling.	
	No. of Holdings.	Area of Holdings.	No. of Holdings.	Area of Holdings.
Acres.		Acres.		Acres.
1- 3,000 ... ..	392	103,851	142	85,735
3,001- 10,000 ... ..	79	510,637	65	465,547
10,001- 20,000 ... ..	164	2,380,575	115	1,523,670
20,001- 50,000 ... ..	242	7,495,068	169	5,329,802
50,001-100,000 ... ..	77	5,096,619	92	6,323,365
Over 100,000 ... ..	92	18,800,169	103	29,981,139
Total ... ..	1,046	34,386,919	686	43,709,258

Although the area west of the Darling constitutes more than one-half of the total area occupied, the number of holdings in all but the two largest groups is less than in the eastern sector. Over 62 per cent. of the total area is occupied by 195 holdings exceeding 100,000 acres in extent.

The total area of alienated land in the rural holdings in the Western Division is only 1,558,581 acres and of this 39,872 acres are privately rented. The total area of Crown lands in rural holdings is 76,537,596 acres. Of the total area of land occupied only 7,151 acres were under crop in 1926-27, although 159,981 acres of the alienated land were considered by the occupiers to be suitable for cultivation. The unimproved value of the alienated land was returned as £829,910, and the improved value as £2,453,110.

## VALUE OF MACHINERY USED IN RURAL INDUSTRIES.

A comparison of the value of agricultural, pastoral and dairying implements and machinery in use on rural holdings during various years since 1901 is shown in the following table, allowance being made for depreciation:—

Season.	Farming.	Dairying (excluding Machinery in Factories).	Pastoral.*	Total Value.
	£	£	£	£
1900-01	2,065,780	237,220	754,050	3,057,050
1905-06	2,557,260	365,440	1,120,990	4,043,690
1910-11	3,414,620	534,740	1,483,080	5,432,440
1915-16	5,362,030	570,950	2,015,050	7,948,030
1919-20	6,123,750	812,070	3,016,070	9,956,890
1920-21	7,120,380	910,260	3,141,030	11,171,670
1921-22	7,884,710	1,042,100	3,419,040	12,345,850
1922-23	8,536,170	1,124,960	3,816,250	13,477,380
1923-24	8,799,350	1,038,380	3,825,920	13,713,650
1924-25	9,427,730	1,119,290	4,106,820	14,653,840
1925-26	9,588,320	1,162,850	4,329,910	15,081,080
1926-27	9,837,190	1,232,290	4,928,300	15,997,780

\* Includes in many cases farming implements used on pastoral holdings.

The foregoing figures are exclusive of the value of travelling machinery, e.g., harvesters, chaffcutters, etc., for which the records show a value of £68,536 in 1926-27.

## AGRICULTURAL AND PASTORAL LABOUR.

Particulars of persons above the age of 14 years permanently engaged in farm work on a rural holding are collected annually. They are classified according to status, and the amount of the salaries and wages paid to employees in receipt of remuneration is ascertained. Returns have been obtained since 1922-23 concerning wages paid to temporary hands employed by landholders during harvesting and shearing operations and for other casual work.

The number of persons permanently engaged in farm work on rural holdings during the year ended 30th June, 1927, is shown below, together with the amount of wages paid to permanent and casual employees during the year:—

Capacity.	Males.	Females.	Total.
	No.	No.	No.
Owners, Lessees, and Share Farmers ... ..	67,660	1,444	69,104
Permanent employees receiving wages... ..	35,149	1,105	36,254
Relatives not receiving wages ... ..	17,111	11,696	28,807
Total ... ..	119,920	14,245	134,165
Wages paid (including value of board and lodging):—	£	£	£
Permanent employees ... ..	5,131,050	120,610	6,867,051
Casual employees ... ..	3,423,407	16,843	3,440,250

Of the relatives not receiving wages, 8,091 males and 10,518 females above the age of 14 years were employed in the coastal districts, where dairying is the principal farming activity. This accounts for nearly 90 per cent. of the number of females thus employed.

Returns received from farmers show that the total amount of wages paid to permanent employees during the year was £5,205,903, in addition to board and lodging, etc., valued at £1,661,148, or a total of £6,867,051, the average

remuneration, on the basis of these figures, being £192 per annum to males and £109 per annum to females. An examination of the individual returns, however, shows that the amount assessed as the value of the board and lodging is more or less of an estimate. The wages paid to casual employees amounted to £3,039,908 in addition to "keep," valued at £400,442.

The following table provides a comparison of the number of persons permanently engaged in rural industries, and of the amount of wages paid by landholders to permanent and casual employees:—

Year ended 30th June.	Persons engaged Permanently in Farm Work on Rural Holdings.†			Wages paid to Landholders' Employees.*†		
	Males.	Females.	Total.	Permanent.	Casual.	Total.
1922 ...	120,905	16,842	137,747	£ 6,580,606	£ †	£ †
1923 ...	120,890	16,423	137,322	6,296,632	2,246,413	8,543,045
1924 ...	120,352	15,270	135,622	6,179,490	2,471,742	8,651,232
1925 ...	123,225	16,255	139,480	6,630,447	2,998,632	9,629,079
1926 ...	120,994	16,288	137,282	6,691,455	3,216,234	9,907,689
1927 ...	119,920	14,245	134,165	6,867,051	3,440,250	10,307,301

\* Including value of keep. † Excluding persons engaged in domestic duties, etc.  
‡ Not available.

It would appear that the inclusion in some cases of contractors engaged in work on rural holdings and of the wages paid by them is partly responsible for the increasing amounts shown as paid to casual workers.

#### RURAL FINANCE.

The problem of promoting effective rural settlement in New South Wales has been associated closely with that of rural finance. While comparatively few settlers have possessed sufficient capital to purchase land outright from the Crown, there has been a general desire to acquire a freehold tenure, neither private nor State tenancy proving popular. Moreover, the proper development of rural holdings requires the investment of much capital for lengthy periods, and facilities for temporary financial accommodation, particularly during periods of drought.

The Land Act of 1861, aiming to encourage the settlement of an agricultural population beside the pastoral lessees, introduced "free selection before survey" and sales of Crown land by deposit and instalments with conditions as to residence, etc. By this means much more land was sold in the following twenty-three years than was sold at auction, and since 1889 alienation has been almost exclusively by conditional purchase. Beyond the introduction of this plan of selling Crown lands on terms, little was done to provide financial aid for settlers until the end of the last century, when the agricultural and dairying industries were developing, and droughts were impeding settlement.

In 1899 an Advances to Settlers Board was appointed by the Government to make loans to farmers in necessitous circumstances or embarrassed by droughts. Advances were limited to £200 for a term of ten years at 4 per cent. interest. The scope of the Act was widened in 1902 when the Board was empowered to make advances to farmers for any approved purpose up to £500, repayable within thirty years.

In 1907 the functions of the Board were taken over by the Commissioners of the Government Savings Bank, and the limit of individual advances was raised to £2,000. By 1921, when the Rural Bank was established to carry

on and extend the work, the outstanding advances amounted to £3,250,000; secured by mortgages from 7,000 borrowers. At 30th June, 1927, there were 8,933 long-term advances current for an amount of £5,783,776, and 7,402 overdraft loans for £4,746,220.

In 1901 a Closer Settlement policy was introduced by the Government with a view to acquiring and subdividing large estates and leases suitable for closer settlement. Operations under this scheme commenced actively in 1905, and by 30th June, 1927, an area of 3,861,679 acres had been acquired at a capital cost of £13,989,686, and allotted in 7,791 farms. In addition, at 30th June, 1927, about 2,100,000 acres comprised in large holdings within 15 miles of railway lines, contemplated or recently constructed, were under proclamation, limiting the value at which they might be resumed by the Government for purposes of closer settlement. In April, 1923, the Rural Bank inaugurated a scheme of advancing money for the purchase of farms created by subdivision.

Of similar character to the schemes of closer settlement was the entry by the Government upon a scheme of irrigation in connection with the Murrumbidgee River (in 1906) to provide ultimately about 5,000 farms. Here settlers are assisted by advances and by the provision of factories to handle their products. Another large irrigation scheme has been initiated in connection with the Murray River. The Government also undertakes to finance the construction of shallow bores, weirs, etc., when settlers are willing to manage them, and in some cases, to repay by instalments the capital cost.

The marketing difficulties of the war period necessitated a further extension of Government activity. The disposal of most of the primary products came within the purview of legislation, partly to assist settlers in their difficulties, and partly to secure control of supplies necessary for prosecuting the war. Such control, however, had ceased by 1921.

In 1915 certain schemes of limited scope were initiated by the Departments of Lands and Agriculture to assist farmers by loans to cultivate new areas and to relieve necessitous farmers. During the severe drought of 1919-20 a sum of £2,000,000 was made available by two special local loans to assist farmers whose ordinary commercial credit had been destroyed by the bad seasons. The advances were administered by the Rural Industries Board, instituted in December, 1919. Particulars of these operations are shown below.

In the Commonwealth Bank of Australia a rural credit department was established in October, 1925, to assist the marketing of the products of the rural industries. For this purpose advances for a period not exceeding one year may be made to banks, co-operative associations, etc., and bills secured on primary produce may be discounted on behalf of these institutions. Further particulars regarding the departments are shown on page 454 of this Year Book.

The Governments of the State and of the Commonwealth provide assistance to settlers to enable them to construct fencing to protect their holdings from the ravages of rabbits and wild dogs. Details are published in the chapter of this volume entitled "Pastoral Industry."

*Advances by Rural Industries Board.*

The Rural Industries Board was formed on the 1st December, 1919—

- (a) to take over, consolidate and collect all advances by the State for drought relief, seed wheat, and clearing land since 1915, and
- (b) to extend the scope of relief to necessitous farmers.



In 1923 the Board was dissolved and its functions were continued by the Rural Industries Branch of the Department of Agriculture.

A sum of £437,006 was advanced between 1915 and 1919 under schemes controlled by the Departments of Lands and Agriculture. Of this, £259,794 were repaid or otherwise adjusted, and debit balances amounting to about £177,000 were taken over by the Board at the aforementioned date, and the subsequent operations are set out in the following table:—

Year ending 30th June.	Adminis- tration Costs.	Advances.	Interest charged on ad- vances.	Repayments.		Bad Debts written off.	Balances due (ap- prox.)	No. of Debtors.	Areas sown by assisted farmers.
				Principal.	Interest.				
1 Dec., 1919, to 30 June, 1922	£ 62,630	£ 2,152,390*	£ 105,666	£ 1,817,792	£ 92,848	.....	£ 347,416	.....	Acres. .....
1923	13,200	159,443	24,639	80,517	12,239	4,812	433,930	.....	.....
1924	12,375	237,414	32,015	118,673	16,859	1,634	566,193	.....	.....
1925	12,337	121,120	28,444	192,134	98,166	4,392	481,065	3,478	200,000
1926	12,495	151,788	22,222	242,020	18,565	14,533	379,957	3,465	322,000
1927	12,608	85,939	14,662	165,869	17,975	2,285	294,449	2,579	134,000
1928	13,251	428,350	9,251	41,027	7,117	10,758	673,148	4,300	1,235,000
	138,896	3,336,464	236,899	2,658,032	203,769	38,414	...	.....	.....

\* Including balances taken over from other Departments (£177,000) and Cash Sales from stocks to persons other than necessitous farmers (£277,000.)

Originally operations were restricted to assisting wheat-growers, but, in 1920, assistance was afforded also to dairy farmers and small graziers. More recently the scope of operations has been extended to include farmers of considerable variety whose circumstances prevented them from obtaining assistance through usual commercial channels; thus on a relatively small scale assistance has been granted to orchardists, tobacco growers, rice growers, farmers suffering loss from floods, fire and grasshopper pests, pig farmers who sustained the loss of their herds as the result of an outbreak of swine fever, etc., etc.

Most of the advances, however, are made to wheat-farmers, and the assistance granted usually takes the form of orders issued upon suppliers of the commodities required, *i.e.*, fodder, seed wheat, fertiliser, tractor fuel, household supplies, and so on. Payment is made direct to suppliers who render their accounts to the Branch accompanied by the farmer's acknowledgment of receipt of the goods. Cash advances are made only in exceptional circumstances.

Until recent years advances were made in cash at the rate of 5s. per acre on newly fallowed land. The object of this form of advance was to encourage better farming methods, and consequently operations were not confined to necessitous farmers only. The advantages of fallowing are now fully recognised throughout the State, and the desired results having been achieved, fallowing assistance is now granted only to necessitous farmers on the lines of general assistance.

Interest has been charged on advances at the rate of 6 per cent., the rate being increased to 7 per cent. on overdue accounts, but since the 1st July, 1925, the additional charge of 1 per cent. has been discontinued.

Security taken for the advances mainly comprises Crop Liens and Promissory Notes, as in the majority of cases farmers receiving assistance lack the means of furnishing more tangible security which would enable them to obtain accommodation from ordinary financial institutions. Having regard to the somewhat hazardous nature of security taken the number of bad debts incurred has been relatively small.

*Advances by the Rural Bank.*

Under authority of the Government Savings Bank (Rural Bank) Act, 1920, steps were taken early in 1921 to establish a rural bank in New South Wales. The new bank was placed under the direction of the Commissioners of the Government Savings Bank, who continue on an extended basis the operations transacted previously by the Advances to Settlers Department.

The primary object of the bank is to afford greater financial assistance to primary producers than is usually obtainable from other institutions, and thus to promote rural settlement and development.

The Commissioners are empowered to make advances upon mortgage of land in fee-simple, and of land held under conditional purchase or lease, settlement purchase or lease, and homestead grant or selection. The advances are made to repay existing encumbrances, to purchase land, to effect improvements, to utilise resources, or to build homes. By this means material assistance is afforded to both prospective and established settlers.

Funds are obtainable from deposits at current account, fixed deposits, and the issue of deposit stock, rural bank debentures, and inscribed stock. Interest is allowed on fixed deposits at current bank rates, and current accounts are subject to trading bank conditions.

Loans are made only to persons engaged in primary production, or in closely-allied pursuits. The loans are of three kinds—(a) Overdrafts on current account with interest at the rate of  $6\frac{1}{2}$  per cent.; (b) instalment loans, repayable by equal half-yearly instalments of interest at  $6\frac{1}{4}$  per cent. and principal extending over thirty-one years; and (c) fixed loans for limited terms. The security required may be land, either freehold or held under any Crown tenure, stock, plant, crops, wool, etc.

The Commissioners are empowered to make advances to assist the subdivision of large estates. For this purpose advances up to 80 per cent. of the Commissioners' valuation of the security or £3,000, may be made on lands which have a freehold or certificated conditional purchase title. In order to facilitate negotiations for sale, the Commissioners may issue a certificate to either the vendor or the purchaser, setting forth the amount they are prepared to advance upon a sound title in any such farm. The Act prescribes that a fixed or amortization loan to any individual may not exceed £2,000.

One hundred and seventy-nine branches of the Bank have been opened throughout the State.

At 30th June, 1928, the amount of deposits with the Rural Bank was £2,046,057 at current account and £5,653,484 at fixed deposit, while outstanding advances amounted to £12,053,232.

The following table shows the transactions in long term and fixed loans by the Advances to Settlers Department or the Rural Bank in various years since 1911 :—

Year ended 30th June.	Advances Made.			Repayments.		Balances Repayable.		
	Number.	Total Amount.	Average.	Number.	Total Amount.	Number.	Total Amount.	Average.
1911*	838	£ 331,693	£ 395	743	£ 185,420	3,754	£ 1,074,359	£ 286
1913*	1,386	771,272	556	414	116,476	5,094	2,051,132	403
1915	860	387,715	451	436	171,617	5,860	2,514,078	429
1921	1,365	813,525	596	577	293,540	7,242	3,423,871	473
1924	1,081	888,479	822	500	315,049	9,766	5,526,744	566
1925	603	587,503	974	620	392,568	9,749	5,721,684	587
1926	265	444,065	1,676	762	503,881	9,252	5,661,368	612
1927	332	598,879	1,804	651	476,471	8,933	5,783,776	648
1928	305	437,195	1,430	562	461,561	8,676	5,759,410	664

\* 31st December.

In addition, short-term loans in the nature of overdraft are provided by the Rural Bank to settlers or persons carrying on industries immediately associated with rural pursuits. Particulars of these are shown below:—

Year ended 30th June.	Advances made during year.		Advances current at end of year.	
	No.	Amount.	No.	Amount.
		£		£
1922 ...	1,383	980,375	1,364	728,584
1923 ...	1,565	794,499	2,743	1,381,113
1924 ...	1,827	1,081,335	4,205	2,144,333
1925 ...	1,710	1,196,280	5,291	2,830,915
1926 ...	1,746	1,342,692	6,277	3,618,597
1927 ...	2,115	1,996,925	7,402	4,746,220
1928 ...	2,192	2,231,790	8,527	6,098,405

The net profit of the Bank for the year 1927-28 was £68,172, which was added to the reserve fund, making it £417,097.

#### *Other Advances to Settlers.*

Particulars of the number and amount of registered loans made on the security of live-stock, wool, and growing crops are published on page 494 of this Year Book.

## LAND LEGISLATION AND SETTLEMENT.

### AREA OF NEW SOUTH WALES.

THE area of New South Wales, including Lord Howe Island (5 square miles) and the Federal Capital Territory (about 940 square miles), as stated on a previous page in this Year Book, is estimated at 310,372 square miles, or 198,638,080 acres, being a little over two and a half times the combined area of Great Britain and Ireland. Excluding the surface covered by rivers and lakes, etc. (2,969,080 acres), the land area within the boundaries of the State is 195,669,000 acres, or about 305,733 square miles. The formal transfer on 1st January, 1911, of 583,660 acres at Yass-Canberra, and of 17,920 acres at Jervis Bay in 1915, to the Commonwealth Government as Federal Capital Territory, reduced the land surface of the State to 195,067,420 acres.

### LAND ADMINISTRATION.

At the foundation of the Colony in 1788, the whole of the lands of the State vested in the British Crown.

The administration of public lands passed entirely under local control by virtue of the Constitution Act on the establishment of responsible government in 1856. Since that year the administration has been directed by a Secretary for Lands, who is a member of the State Parliament and of Cabinet. A Department of Lands was created and a permanent Under-Secretary appointed, with defined powers subordinate to those of the Minister. This system of administration may be described as political control through a permanent salaried staff.

Control of the lands of the Western Division is vested in the Western Land Board, consisting of three commissioners. There are ten ordinary Land Board Districts.

The Eastern and Central Divisions are subdivided into ninety-one Land Districts, in each of which is stationed a Crown Land Agent, whose duty it is to receive applications and furnish information regarding Crown lands. Groups of these districts are arranged in larger areas, under the control of thirteen local Land Boards. There are also special Land Districts for the Yanco and Coomealla Irrigation areas. These Boards, sitting as open courts, hear and determine, in the first instance, many minor matters as provided by the Act and Regulations.

### *Land and Valuation Court.\**

A Land and Valuation Court, whose awards and judgments have the same force as those of the Supreme Court, was constituted in 1921 in continuance of the Land Appeal Court. To this Court are referred appeals, references, and a number of other matters under the Crown Lands Acts, the Pastures Protection Act, the Closer Settlement Acts, the Water Act, the Public Roads Act, and certain other Acts.

### *Territorial Divisions.*

The State is divided, for administrative purposes, into three territorial divisions, Eastern, Central, and Western, the boundary lines running approximately north and south, as shown on the map in the frontispiece. The conditions governing alienation and occupation of Crown Lands differ in each of the three divisions of the State.

The Eastern Division has an area of 60,661,946 acres (exclusive of an area of 601,580 acres of Commonwealth territory), and includes a broad belt of land between the sea-coast and a line nearly parallel to it, thus

\* Further particulars of Local Land Boards, and of the Land and Valuation Court, are published on page 232 of this Year Book.

embracing the coastal districts of the State, as well as the tablelands. In this division is excellent agricultural land, and it includes all the original centres of settlement most accessible to the markets of the State.

The Central Division embraces an area of 57,055,846 acres, extending from north to south between the western limit of the Eastern Division and a line drawn along the Macintyre and Darling Rivers, Marra Creek, the Bogan River, across to the River Lachlan, along that river to Balranald, and thence to the junction of the Edward River with the Murray. The area thus defined contains the eastern part of the upper basin of the Darling River in the northern part of the State, and the basins of the Lachlan, the Murrumbidgee, and other affluents of the Murray in the southern portions. The land in this division is still devoted mainly to pastoral pursuits, but about 3,000,000 acres are cultivated for wheat in a normal season.

The Western Division is situated between the western limit of the Central Division and the South Australian border. It contains an area of 80,318,708 acres, watered by the Darling River and its tributaries, and is mainly devoted to pastoral pursuits. Water conservation and irrigation, and railway and other means of communication may ultimately make agriculture possible in parts of this large area, and at the present time special attention is being directed to this matter. However, legislation in regard to the occupation of the lands of the district is based upon the assumption that for many years to come there will be little inducement for agricultural settlement.

#### DISPOSAL OF LANDS OF NEW SOUTH WALES.

The following table provides a brief summary of the manner in which the lands of the State were held as at 30th June, 1927, distinguishing lands in the Western Division from the remainder of the State :—

Manner of Disposal.	Area.		
	Eastern and Central Divisions.	Western Division.	Whole State.
(1) Absolutely alienated, dedicated†, &c. (less area resumed for resettlement) ... ..	63,295,043‡	2,031,282‡	42,776,557§
(2) In course of alienation ... ..			22,799,360
(3) Virtually alienated ( <i>i.e.</i> , held under perpetual, conditional, and conditional purchase leases) ... ..	17,556,718	97,665	17,654,383
(4) Under Crown and settlement leases alienable wholly or in part ... ..	8,594,757	.....	8,594,757
(5) Under improvement, scrub, inferior lands and prickly-pear leases with limited rights of alienation ... ..	2,370,945	20,448	2,391,393
Total area under foregoing tenures ... ..	91,817,463‡	2,149,395‡	94,216,450§
(6) Under other long leases with no right of alienation unless with approval of Minister   ... ..	1,339,175	75,810,170	77,149,345
(7) Under short lease and temporary tenures (annual lease, permissive occupancy and occupation license) ... ..	7,635,392	657,719	8,293,111
(8) Under forestry leases, &c., wholly within dedicated State forests ... ..	1,932,010	.....	1,932,010
(9) Under mining leases and permits ... ..	268,275	8,777	277,052
(10) Reserves, dedicated State forests not under pastoral occupation and other lands neither alienated nor leased ... ..	14,725,477§	1,692,647‡	16,168,532‡
Total Area ... ..	117,717,792	80,318,708	198,036,500

† Exclusive of 5,277,739 acres of dedicated State forest in Eastern and Central Divisions, and 51,159 acres in Western Division, considerable parts of which are covered by leases for pastoral purposes and included under appropriate headings below.

‡ Exclusive of lands dedicated for public and religious purposes, *viz.*, 249,592 acres for the whole State, the divisions of which cannot be stated.

§ Inclusive of foregoing lands dedicated for public and religious purposes.

|| Comprising special, section 18, mining, snow lands, residential, irrigation leases at Hay and Curlewaa and Western Lands leases.

Particulars of the areas under, and the conditions attaching to, each of these tenures are given on later pages.

In considering the matter of lands remaining within the disposal of the State for new settlement, it is important to note that the Eastern and Central land divisions embrace practically the whole of the lands in the State which receive an average annual rainfall of 15 inches or more, and that the rainfall

in the Western Division ranges from that average down to 8 inches in the extreme north-west. This circumstance places important limitations upon the utility of land in the Western Division, practically none of which is utilised for agricultural purposes. It is sparsely occupied, being held in large pastoral holdings lightly stocked, and over 63 per cent. of its total area is held in 195 holdings each exceeding 100,000 acres in extent. (See page 702).

The total area of land embraced within freeholds, dedications, purchases by deferred payments, and leases alienable wholly or in part at 30th June, 1927, was 94,216,380 acres and, of this area, nearly 92,000,000 acres were in the Eastern and Central land divisions. By reason of the indefinite nature of the conditions governing the conversion of leases to freehold tenures, it is not possible to ascertain accurately how much of the lands embraced in this area will not revert to the disposal of the Crown, but, assuming that one-half of the areas remaining under Crown, settlement, scrub and improvement leases fulfil conditions requisite for conversion into tenures leading to freehold, it is estimated that the area of former Crown lands in the Eastern and Central Divisions placed definitely beyond State control is in the vicinity of 85,000,000 acres and probably it is appreciably more. Of the remaining area of about 32,000,000 acres in the Eastern and Central Divisions, about 8,000,000 acres are held under long lease, with no rights of conversion, and numbers of these revert to the Crown for disposal year by year; approximately 7,500,000 acres are held under short lease and temporary tenures, and the balance is comprised within reserves of various kinds—commons, roads, dedicated State forests not under lease administered by the Department of Lands, unalienated town lands, and lands neither alienated nor leased, including inferior Crown lands not held under any tenure.

In the Western Division the area placed permanently beyond State control is approximately only 2,260,000 acres, but more than 73,000,000 acres out of a total area of 80,000,000 acres are held under long-lease tenures, practically all of which expire in 1943. The area under short lease and temporary tenures is approximately 2,400,000 acres, and there remain approximately 1,500,000 acres of unoccupied lands of low grade and about 900,000 acres of unalienated town lands, commonages, beds of rivers, etc.

It has been estimated that the area of land in the State unfit for occupation of any sort does not exceed 5,000,000 acres.

*Alienation Prior to 1861.*

From the early days of settlement until the year 1861 the Crown disposed of land, under prescribed conditions, by grants and by sales, so alienating, by the end of 1861, an aggregate area of 7,146,579 acres, made up as follows:—

	Acres.
1. By grants, and sales by private tender to close of 1831	3,906,327
2. By grants in virtue of promises of early Governors made prior to 1831, from 1832-40 inclusive	171,071
3. By sales at auction, at 5s., 7s. 6d., and 10s. per acre, from 1832-38 inclusive	1,450,508
4. By sales at auction, at 12s. and upwards per acre, at Governor's discretion, from 1839-41 inclusive	371,447
5. By sales at auction, at 20s. per acre, from 1842-46 inclusive	20,250
6. By sales at auction and in respect of pre-emptive rights, from 1847-61 inclusive	1,219,375
7. By grants for public purposes, grants in virtue of promises of Governors made prior to the year 1831, and grants in exchange for lands resumed from 1841-61 inclusive	7,601

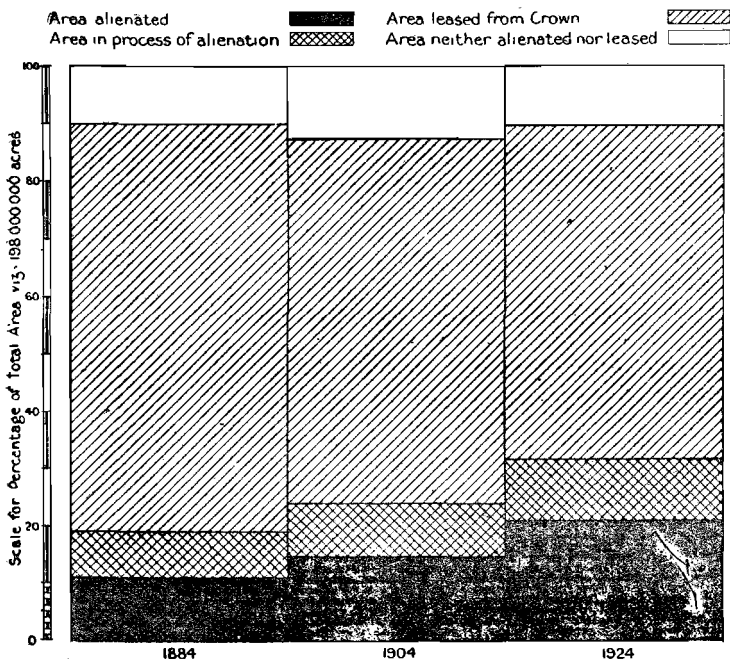
Total area absolutely alienated as to 31st December, 1861 ... 7,146,579

In the year 1861 the first Crown Lands Act was passed, and from that date alienation was controlled by the laws of the State Government.

## Progress of Alienation.

The following graph shows the progress of alienation at 20-yearly intervals since 1884.

## LAND TENURE - 1884, 1904 &amp; 1924



The differently shaded portions of the Graph represent the percentage of the total area of New South Wales which was alienated, in process of alienation under systems of deferred payments, and held under lease from the Crown

A brief account of the spread of settlement appears on page of this Year Book. Details are shown hereunder of the areas of freehold land resumed for re-settlement and of the Crown lands remaining alienated, after deducting the areas resumed for re-settlement, at intervals since 1881 :—

As at 30th June.	Area of freehold resumed for re-settlement.	Area remaining absolutely alienated.	As at 30th June.	Area of freehold resumed for re-settlement.	Area remaining absolutely alienated.	As at 30th June.	Area of freehold resumed for re-settlement.	Area remaining absolutely alienated.
	acres.	acres.		acres.	acres.		acres.	acres.
1861*	...	7,146,579	1906	36,719	31,362,302	1922	2,169,416	40,133,518
1871*	...	8,630,604	1911	605,641	36,234,256	1923	2,273,460	40,698,834
1881*	...	19,615,299	1916	1,089,079	37,783,666	1924	2,302,050	41,283,395
1891*	...	23,682,516	1919	1,399,425	38,797,742	1925	2,496,081	41,860,222
1896*	...	24,698,195	1920	1,523,038	39,306,710	1926	2,602,668	42,323,857
1901*	...	26,407,376	1921	1,857,216	39,679,986	1927	2,603,533	42,779,522

\* As at 31st December.

The area shown above as remaining alienated represents lands absolutely alienated and is exclusive of lands under perpetual lease which were formerly included in similar computations as being virtually alienated.

The Federal Territory at Canberra, containing 173,451 acres of alienated land, was transferred, to the Commonwealth on 1st January, 1911. This area has, therefore, been excluded from the figures shown for 1911 and subsequent years. The principal method of alienation is by conditional purchase, which was introduced in 1861. Lands sold by this means are not included as alienated until

all payments have been made and deeds have been issued. For this reason the influence of the introduction of conditional purchases does not appear appreciable in the table until 1881. It is also understood that there is an appreciable area of land upon which all payments have been made and all conditions for alienation fulfilled, but, as deeds have not been issued, this area is included under conditional purchase in course of alienation.

The following table shows the areas of land alienated in New South Wales by each of the principal methods up to 30th June, 1927, and the area re-acquired for purposes of irrigation and closer settlement:—

	Area.	Acres.
Granted and sold by private tender and public auction prior to 1862 ... ..		7,146,579
Sold by auction, after auction, and under deferred payment sales since 1862 ... ..		11,588,161
Sold by Improvement and Special Purchases ... ..		2,849,209
Sold by Conditional Purchase since 1862 (deeds issued)... ..		22,732,825
Granted under Volunteer Land Regulations of 1867 ... ..		172,198
Dedicated for public and religious purposes since 1862 ... ..		249,592
Sold under Closer Settlement Acts (acquired and Crown Lands) ... ..		16,595
Suburban Holding Purchase ... ..		2,776
Soldiers' Group Purchases ... ..		1,425
Returned Soldiers' Special Purchases (deeds issued) ... ..		724
Week-end Lease Purchases (deeds issued) ... ..		397
Town Lands Lease Purchases (deeds issued) ... ..		21
Sold by all other forms of sale ... ..		525,553
<b>Total</b> ... ..		<b>45,286,055*</b>
<b>Less—</b>	<b>Acres.</b>	
Freehold land purchased for Closer Settlement	2,120,382	
Freehold land purchased for Irrigation Settlements ... ..	212,700	
Lands alienated in Federal Capital Territory prior to its transfer to the Commonwealth	173,451	
	<hr/>	2,506,533

Land absolutely alienated as at 30th June, 1927 ... .. 42,779,522

As has already been pointed out, there was, in addition, a considerable area of land under conditional purchase which awaited only the formality of the issue of deeds to make their alienation complete. This area is included in the following statement showing the areas in course of alienation by each of the principal methods as at 30th June, 1927:—

Area in course of Alienation.	Acres.
By Conditional Purchase ... ..	19,635,068
Under Closer Settlement Acts ... ..	2,742,708
As Group Settlement Purchases ... ..	400,569
As Suburban Holdings approved for purchase ... ..	11,933
As Returned Soldiers' Special Holdings approved for purchase ... ..	8,045
As Week-end Leases approved for purchase ... ..	39
Irrigation Lands Purchases... ..	1,371
As Town Lands Leases approved for purchase ... ..	7
<b>Total area in course of alienation at 30th June, 1927</b>	<hr/> <b>22,799,740</b>

\* Inclusive of area alienated within Federal Territory prior to 1911.



The area of land shown above under the heading of settlement purchases relates to lands made available under the closer settlement policy inaugurated in 1904, which provided for the re-purchase of freehold lands and the resumption of certain leases, with compensation. These, with certain adjacent Crown lands, were made available for purchase on easy terms in home maintenance areas for settlers of small means. In 1916-17 the policy of providing land for returned soldiers was introduced, and led to a considerable expansion of closer settlement operations.

*Area Leased at 30th June, 1927.*

The total area of Crown lands leased in New South Wales as at 30th June 1927, was 116,434,084 acres inclusive of 37,840,981 acres under the Crown Lands Acts, 76,384,041 acres under the Western Lands Acts, 1,932,010 acres under the Forestry Act, and 277,052 acres under the Mining Act. The area under each tenure is shown below :—

Lease.	Area.*	Lease.	Area.*
<b>Perpetual Leases—</b>	<b>Acres.</b>	<b>Other Long Term Leases—</b>	
Homestead Farm ... ..	4,007,554	Special Lease* ... ..	757,328
Homestead Selections and Grants* ... ..	1,009,674	18th Section Lease ... ..	211,660
Suburban Holdings ... ..	54,865	Snow Lands Lease ... ..	177,746
Returned Soldiers' Special Holdings ... ..	18,546	Residential Lease ... ..	10,021
Week-end Leases ... ..	393	Church and School Land Lease ... ..	11
Town Lands Leases ... ..	119	Western Lands Leases—	
Irrigation Farms (Murrumbidgee) ... ..	136,419	New... ..	24,537,232
Town Blocks (Murrumbidgee) ... ..	205	Formerly under Crown Lands Act ... ..	51,272,917
<b>Total ... ..</b>	<b>5,227,775</b>	Irrigation Lands*† ... ..	209,235
		<b>Total ... ..</b>	<b>77,176,150</b>
<b>Alienable Leases—</b>		<b>Short Term Leases—</b>	
Conditional Lease* ... ..	12,336,340	Annual Lease* ... ..	1,376,768
Conditional Purchase Lease... ..	205,720	Occupation License*... ..	2,916,778
<b>Total ... ..</b>	<b>12,542,060</b>	Preferential Occupation License* ... ..	503,476
<b>Leases alienable wholly or in part—</b>		Permissive Occupancy* ... ..	3,493,882
Settlement Lease ... ..	3,334,386	Irrigation Lands*† ... ..	2,183
Crown Lease ... ..	5,260,371	<b>Total ... ..</b>	<b>8,293,087</b>
<b>Total ... ..</b>	<b>8,594,757</b>		
<b>Leases with limited right of alienation—</b>		<b>Leased by Forestry Department—</b>	
Improvement Lease* ... ..	1,606,767	Forestry Leases and Occupation Permits ... ..	1,932,010
Scrub Lease ... ..	718,748	<b>Leased by Mines Department—</b>	
Inferior Lands Lease ... ..	45,902	Mining Lease and Permit* ... ..	277,052
Prickly-pear Lease ... ..	19,776		
<b>Total ... ..</b>	<b>2,391,193</b>	<b>Grand Total ... ..</b>	<b>116,434,084</b>

\* Includes the following tenures in Western Division: 1,107 acres of homestead selections and grants, 96,158 acres of conditional lease, 20,448 acres of improvement lease, 21 acres of special lease, 41,837 acres of irrigation lands, 25,652 acres of annual lease, 46,937 acres of occupation license, 573,892 acres of permissive occupancies, and 3,777 acres of mining leases, besides the whole of the areas shown as Western Lands leases.  
† Temporary tenure in irrigation areas pending development. ‡ As at 30th June, 1926.

Certain of the perpetual leases, such as homestead farm, homestead selection and grant and irrigation farms, carry statutory rights of purchase, while practically the whole of the conditional leases and conditional purchase

leases are convertible in this way. Settlement leases and Crown leases also may be converted into conditional purchases, but the area so converted in any individual case, together with other freehold, alienable, or leased lands with more than five years to run held by the same individual, may not exceed a home maintenance area as determined by the Local Land Board. Where there is such an excess area of lease it is converted into a conditional lease without any right of further conversion, and the area of unconvertible conditional leases so created is included in the total shown in the table.

Improvement and scrub leases are granted in respect of lands which require improvement before being made available for original holdings. Usually they are held in conjunction with other lands or in large areas, and the holder is given the right to apply for the conversion of sufficient to complete a home maintenance area into an alienable tenure during the last year of the currency of the lease. The holder also has the right to sell his lease, and considerable areas are transferred to persons eligible to convert. As a consequence, considerable areas of improvement and scrub leases do not revert to the disposal of the State.

Special leases may be purchased by their holders with the approval of the Minister, and so may the residential lease. All the leases under the Western Lands Act are situated in the Western Division, and an area of approximately 73,000,000 acres will revert in 1943, subject to certain powers of withdrawal and extension of leases exercised by the Commissioners.

The short-term leases enumerated represent Crown lands reserved for various purposes, as well as lands available for settlement, but not yet taken up. The forestry leases and occupation permits include only grazing leases which are wholly within State forests, and administered by the Forestry Department.

#### RESERVES.

The total area of reserved lands in the State as at 30th June, 1927, was 18,027,637 acres. Reserves are not necessarily unoccupied, considerable areas being held under annual, special, scrub, or forestry leases or on occupation license or permissive occupancy. Such are included under appropriate headings in the list of leasehold tenures shown above.

The following is a classification of reserves according to the principal purpose for which reserved:—

Class of Reserves.	Acres.
Travelling Stock ... ..	5,315,613
Water ... ..	683,093
Mining ... ..	1,180,533
Forest ... ..	2,579,974
Temporary Commons ... ..	394,675
Railway ... ..	53,996
Recreation and Parks ... ..	247,315
Pending Classification and Survey... ..	3,795,621
From Conditional Purchase, within Gold-fields ... ..	733,304
From Sale or Lease other than Improvement Lease ... ..	324,146
From Sale or Lease other than 18th Section Lease ... ..	109,684
Camping ... ..	333,143
Other ... ..	2,276,540
Total ... ..	18,027,637

The statement printed above is intended to give only an approximate idea of the relative extent of reserves of various kinds, and should not be taken as a measure of their absolute magnitude, because large areas are reserved for more than one purpose. For instance, the area principally reserved for forests is stated at only 2,579,974 acres, while the actual area of dedicated forest lands as at 30th June, 1927, was 5,328,889 acres, and in addition 1,595,637 acres were under timber reserve, making a total of 6,924,526 acres. Of the area dedicated, 1,858,742 acres of leases, situated entirely within State forests, were let to graziers by the Forestry Department, 73,268 acres of State Forests under tenures of the Crown Lands Act were administered by the Forestry Department, and 105,762 acres, comprising portions of leases not wholly within State forests, were administered by the Department of Lands.

Of the total area of reserves, 12,782,665 acres, or 71 per cent., were situated in the Eastern and Central Divisions of the State.

An annual revision of the reserved lands is made with the object of withdrawing from reserve any area the continued reservation of which is not required in the public interest.

#### AREA AVAILABLE FOR SETTLEMENT.

The area of land within the disposal of the Crown without the necessity of resumptions and consequent compensation is not definitely ascertainable, since clauses providing for revocation or withdrawal have been inserted in a number of lease contracts, and considerable areas leased for long periods revert to the Crown periodically by the effluxion of time. Particulars of those areas are not available.

Apart from these, however, certain lands under reserve, in addition to the lands comprised in the following short leases, may be considered to have been within the disposal of the Crown at 30th June, 1927 :—

Under Crown Lands Acts—		Area.
		Acres.
Occupation license (including 46,957 acres in Western Division) ... ..		2,916,778
Preferential occupation license ... ..		503,476
Annual lease (including 36,870 acres in Western Division)		1,376,768
Permissive occupancy (incl. 573,892 acres in Western Division) ... ..		3,493,882
Under Western Lands Act—		
Occupation licenses ... ..		813,614
Preferential occupation license ... ..		88,266
Total ... ..		9,192,784

With a view to classifying and bringing forward those areas which are suitable for settlement, systematic inspections of Crown lands are made in each district.

The following areas were available for the classes of holdings specified at 30th June, 1927 :—

Original Holdings for—	For Ordinary	For Returned	Total.
	Settlement.	Soldiers.	Acres.
	Acres.	Acres.	Acres.
Crown Lease ... ..	1,434,563	3,200	1,437,763
Homestead Farm ... ..	50,334	56	50,390
Conditional Purchase (original) ... ..	3,944,800	...	3,944,800
Suburban Holding ... ..	2,891	...	2,891
Settlement Purchases ... ..	15,057	...	15,057
Other Forms of Lease ... ..	69,308	17	69,325
Additional Holdings (all classes) ... ..	621,621	428	622,049
Total ... ..	6,138,574	3,701	6,142,275

The area of 3,944,800 acres, shown above as available for original conditional purchases, consists mostly of unclassified Crown lands of a rough and inferior nature. A considerable proportion of the lands comprised in this area has been available for years, but has remained unselected.

EASTERN AND CENTRAL LAND DIVISIONS.

METHODS OF ACQUISITION AND OCCUPATION.

The acquisition and tenure of land in the Eastern and Central Land Divisions are controlled principally by the Crown Lands Act (consolidated in 1913) and its amendments, together with regulations thereunder. In addition, the Closer Settlement Acts, Returned Soldiers' Settlement Acts, and the Forestry, Mining, Irrigation, and Prickly Pear Destruction Acts regulate certain tenures for specific purposes.

By these acts a great variety of tenures—more than thirty in number—have been created to suit the various circumstances of the lands and settlers of New South Wales and the changing character of rural settlement.

The principal means by which Crown lands in the Eastern and Central Divisions and lands in the Western Division remaining under the Crown Lands Act may be acquired, and the tenures under which they may be held, may be classified as follows:—

Non-Residential Tenures.	Tenures involving Residential Conditions
Methods of Absolute Alienation.	
Auction sale.	Conditional purchase.
After-auction purchase.	Settlement purchase.
Special non-competitive sales.	Returned soldiers' special holding. §
Conditional purchase (40 to 320 acres)	Improvement purchase on goldfields.
Exchange.	Soldiers' Group Purchase.
Leases Alienable wholly or in Part.	
Improvement lease.	Conditional lease.
Scrub lease.	Settlement lease.
Inferior lands lease.	Crown lease.
Special lease. §	Homestead farm. †
Special conditional purchase lease (up to 320 acres).	Homestead selection and grant. †
Annual lease.	Conditional purchase lease.
Town lands lease. †	Suburban holding. †
Week-end lease. †	Residential lease on goldfields. §
Prickly-pear lease.	Homestead lease. †
	Irrigation Farm lease.
	Non-irrigable lease.
	Town Lands lease (Irrigation Area);
Leases not Alienable.	
Occupation license.	Pastoral lease.*
Permissive occupancy.	Lease to outgoing pastoral lessees (section 18).
Occupation permit (forest lands).	
Forestry lease.	
Snow lease.	
Mineral and auriferous lease.	
Church and school lands lease. §	

\* No holdings. † Holdings in Western Division only. ‡ Perpetual. § With consent of Minister.

The rights of alienation attached to the various classes of leases shown above differ widely, and are usually subject to the qualification that the area to be alienated, together with all other lands held (other than non-convertible leases within five years of expiry), shall not exceed a home maintenance area. Conditional purchase leases and conditional leases are almost entirely alienable, while homestead farms, homestead selections and grants, Crown and settlement leases are subject to restriction in regard to home maintenance area. Improvement leases, scrub leases, and inferior lands leases are alienable only when about to expire and are subject to reservation, the home maintenance limitation and other restrictions inserted in individual leases.

## METHODS OF PURCHASE.

*Conditional Purchase.*

This method of alienation was introduced by the Crown Lands Act of 1861, and has become the most extensively used of all. Briefly, it is a system of Crown land sales by deposit and annual instalment, and operations under other forms of sale are now of small importance. All the principal leasehold tenures may be converted, under certain conditions, wholly or in part into conditional purchases, which may be considered the basal tenure of land settlement in New South Wales.

The outstanding feature of the tenure is the limitation placed upon the area of land which may be held by a conditional purchaser during the currency of his purchase. Lands available for conditional purchase comprise all Crown lands in the Eastern and Central land divisions other than those reserved from sale, leased for a term of years, within the boundaries of towns or other populated areas, or set apart for other classes of holdings. The area to be purchased under residential conditions may not be less than 40 acres, and must not exceed 1,280 acres in the Eastern land division, and 2,560 acres in the Central land division, or must not exceed 320 acres in either division when the buyer does not undertake to reside on the holding. Special areas without residential conditions, ranging up to 320 acres in the Eastern land division, and up to 640 acres in the Central land division, may also be made available.

Any conditional purchaser may take up the maximum area at once, if it is available, or may make a series of additional purchases as land becomes available. To facilitate this, a special tenure (conditional lease) has been created whereby a conditional purchaser may take up land not exceeding three times the area of his conditional purchase, and this may be converted into conditional purchase. The combined area so acquired may exceed the prescribed divisional limit only to make up a home maintenance area as determined in individual cases by the Local Land Board. Holders of freehold lands of at least 40 acres are permitted also to acquire lands as additional conditional purchases and conditional leases, provided the total area of each holding so increased does not exceed the divisional maximum nor a home maintenance area.

Applicants for lands under this tenure must have attained the age of 16 years if males, and 18 years if females, or 21 years in either case if the holding is non-residential. Alien applicants must have resided in New South Wales for at least twelve months, and must become naturalised within five years of acquiring the purchase.

The price of the land for a residential purchase is £1 per acre, unless otherwise notified, in addition to the value of improvements (if any) assessed by the Local Land Board. A deposit of 5 per cent. of the purchase money must be paid in addition to survey fee and stamp duty. The first annual instalment is due at the end of three years from the date of application and, at the holder's option, may be at the rate of 9d. or 1s. for each £ of the price of the land. Such payment comprises repayment of principal, with interest at the rate of  $2\frac{1}{2}$  per cent. per annum. The term of purchase, according to the rate of instalment paid, is forty-one or twenty-eight years. Payment for improvements may be made in fifteen equal annual instalments, including interest at the rate of 4 per cent.

The conditions to be observed by purchasers include *bona fide* residence upon the holding for five years after confirmation unless modified by the Local Land Board; fencing or other improvements, as prescribed, to the value of at least 30 per cent. of the price of the land (but not exceeding

£384) effected within three years, and to the value of 50 per cent. of the price of the land (but not exceeding £640) effected within five years of confirmation; and the payment of all instalments and prescribed charges.

The price of land taken up as a non-residential purchase is double that of a residential purchase, and the term of payment is twenty-seven years. Fencing to the value of £1 per acre, or other improvements to the value of £1 10s. per acre, must be effected within five years.

All applications connected with the purchases are considered by the Local Land Board, and certificates are issued to the holder by the chairman upon survey and confirmation, and a further certificate when all conditions, other than payment of balance of purchase money or survey fees have been fulfilled. After all conditions have been fulfilled a Crown grant is issued to the holder.

Under certain conditions a residential conditional purchase may be converted into a homestead farm, and a non-residential purchase into a residential purchase or a homestead farm.

Transfer may be made after the certificate has been issued, but purchases applied for after 31st January, 1909, may be transferred only with the consent of the Minister for Lands.

A conditional lease of not less than 40 acres may be obtained only by the holder of a conditional purchase, subject to the various conditions set out above in respect of conditional purchases. The term of lease is forty years, but may be extended to sixty years upon application during the last five years of the term with the right to convert an area of not less than 40 acres to additional conditional purchase at any time after confirmation. The rent is payable annually at rates appraised by the Land Board, subject to reappraisal at the end of each period of fifteen years. (Further particulars as to conditional leases are given on a later page.)

*Number and Area of Conditional Purchases and Conditional Leases.*

Transactions in respect of original and additional conditional purchases from 1862 to 30th June, 1927, were as follow:—

Year ended 30th June.	Completed Conditional Purchases—Deeds issued during year.		Uncompleted Conditional Purchases in existence.		Conditional Leases. Gazetted or Confirmed during year.	
	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.
1862-1914 ... ..	121,749	15,960,930	91,935	17,837,702	30,675	15,688,322
1915 ... ..	2,354	304,012	90,904	18,035,210	391	319,362
1916 ... ..	2,462	307,016	80,670	18,315,095	315	259,802
1917 ... ..	2,881	357,828	88,493	18,693,429	133	122,137
1918 ... ..	2,861	388,338	87,651	19,225,738	171	184,093
1919 ... ..	3,698	550,779	86,203	19,435,807	269	263,791
1920 ... ..	5,397	686,385	82,938	19,365,856	321	221,153
1921 ... ..	4,792	664,522	78,971	18,672,521	351	188,478
1922 ... ..	4,882	741,263	75,532	18,436,627	370	201,866
1923 ... ..	4,113	667,073	72,888	18,199,432	224	132,444
1924 ... ..	3,374	596,124	71,202	18,122,045	231	233,123
1925 ... ..	3,325	590,221	69,470	18,156,194	166	179,241
1926 ... ..	2,816	460,217	69,866	19,263,629	93	46,817
1927 ... ..	2,887	449,117	69,046	19,635,068	68	47,267
<b>Total (as at 30th June, 1927)</b>	<b>167,591</b>	<b>22,732,825</b>	<b>69,046</b>	<b>19,635,068</b>	<b>20,757</b>	<b>12,239,732*</b>

\* Leases in existence.

The particulars of applications for conditional purchases shown above are exclusive of applications to convert the tenures into conditional purchases, whereas the figures relating to completed and uncompleted conditional purchases include large areas converted from other tenures. The total area alienated and in course of alienation by conditional purchase as at 30th June, 1927, was 42,367,893 acres, and, in addition, there were 12,239,782 acres of associated conditional leases which were almost wholly convertible into conditional purchases. The area of uncompleted conditional purchases shown above includes a number upon which payments have been completed, although deeds have not yet been issued.

The area of conditional purchases converted to other tenures has been deducted from the above totals.

The number of conditional purchase selections shown is several times greater than the total number of rural holdings in the State, and does not, of course, represent individual holdings. It represents the number of individual blocks, both original and additional, taken up as conditional purchases and it includes those which have been sold after deeds have been issued and incorporated with other holdings.

#### *Auction Sales and After-auction Purchases.*

Crown lands are submitted for auction sale under two systems, Under the ordinary system the balance of purchase money is payable, without interest, within three months of the day of sale, while, under the deferred payment system, the balance is payable by instalments, with 5 per cent. interest, distributed over a period not exceeding ten years. In either case, not less than 10 per cent. of the purchase money must be deposited at the time of sale.

Auction sales were limited by law in 1884 to 200,000 acres in any one year, but the area sold by auction and after-auction purchases, although formerly extensive, has amounted to only 39,348 acres in the last ten years. Town lands may be sold in blocks not exceeding half an acre, at an upset price of not less than £8 per acre; and suburban lands must not exceed 20 acres in one block, the minimum upset price being £2 10s. per acre. Country lands may be submitted in areas not exceeding 640 acres, the upset price being not less than 15s. per acre. The value of improvements on the land may be added to the upset price.

Town or suburban land or portions of country land of less than 40 acres each, which have been passed at auction, may be bought with the Minister's consent, at the upset price. A deposit of 25 per cent. of such upset price is payable at the time of application, the balance being payable on the terms fixed for the auction sale.

Alienation by this method is now very restricted. Only 595 acres were sold by auction during 1926-27 in 465 lots, realising £100,969. In addition, 255 acres were sold as after-auction purchases in 308 lots, realising £6,992.

#### *Improvement Purchases.*

Holder of miners' rights or of business licenses on a gold-field, being in authorised occupation by residence on land containing improvements, may purchase such land without competition. Improvements must include a residence or place of business, and be of the value of £8 per acre on town land, and of £2 10s. per acre on any other land. Alienation by this means has never been extensive. During 1926-7 the area sold was 28 acres in 35 lots for a total sum of £762.

*Special Non-Competitive Sales.*

These comprise land reclamations, rescissions of reservations, unnecessary roads, public land to which no way of access is available, or which is insufficient in area for conditional sale, etc., also residential leases, and the area of Newcastle pasturage reserves for which the purchase money has been paid in full. The amount realised by special sales in 1926-27 was £13,751 in respect of 2,150 acres of land.

The owner in fee-simple of land having frontage to the sea, or to any tidal water or lake, who desires to reclaim and purchase any adjoining land lying below high-water mark, may apply to the Minister for Lands to do so, except in the case of Port Jackson, the control of which is vested in the Sydney Harbour Trust. Reclamations which might interrupt or interfere with navigation are not authorised.

*Area Alienated by Crown Land Sales.*

Particulars of areas disposed of under the three preceding headings, in quinquennial periods, since 1900, are as follow:—

Year ended 30th June.	Auction Sales.	After-auction Sales.	Improvement Purchases.	Special Sales.	Total.
	acres.	acres.	acres.	acres.	acres.
1900-04* ..	261,328	10,004	942	3,782	276,056
1905-09 ...	80,430	15,801	181	5,817	102,229
1910-14 ..	16,768	6,994	269	9,976	34,007
1915-19 ..	20,527	2,709	241	9,743	33,220
1920 ...	5,661	1,037	28	1,642	8,368
1921 ...	296	360	22	2,036	2,714
1922 ...	241	545	51	2,118	2,955
1923 ...	1,007	563	22	2,674	4,266
1924 ...	2,135	458	20	2,322	4,935
1925 ...	3,362	483	39	1,410	5,294
1926 ...	822	440	36	2,302	3,600
1927 ...	595	255	28	2,151	3,029

\* Calendar years.

*Exchange of Land between the Crown and Private Owners.*

Before the granting of fixity of tenure in connection with pastoral leases, the lessees had made it a practice to secure portions of their runs by conditional purchases and purchases in fee-simple. The practice was disadvantageous to the public estate, because Crown lands were left in detached blocks severed by lessees' freehold properties; and the lessees realised that it would be convenient to them to gather their freeholds together in one or more consolidated blocks by surrender of the private lands in exchange for Crown lands elsewhere.

Under the provisions of the Crown Lands Consolidation Act, 1913, the Governor, with the consent of the owner, may exchange any Crown lands for any other lands of which a grant in fee-simple has been issued.

The Governor may accept, in exchange for Crown lands, lands in respect of which a balance of purchase money remains unpaid, if upon payment of such balance the right to a grant in fee-simple becomes absolute. In any such case a grant of Crown lands in exchange will not be issued until the balance of purchase money has been duly paid.

Under this head 49 applications, embracing 41,962 acres, were granted in 1926-27, and 19 were either refused or withdrawn.



*Settlement Purchase and Irrigation Farm Purchase.*

Particulars of these methods of acquiring land are shown on later pages in relation to Closer Settlement and Irrigation Settlement.

## ALIENABLE LEASES.

The principal kinds of leases which may be converted under specified conditions to freehold tenures wholly or in part are the conditional lease, Crown lease, settlement lease, improvement lease, homestead farm, homestead selection and homestead grant, annual lease, special lease, scrub lease, inferior lands lease, conditional purchase lease, irrigation farm lease, non-irrigible lease, prickly-pear lease, and homestead lease. Other leases of this class are suburban holding, residential lease, week-end lease, and leases of town lands.

*Conditional Leases.*

Certain particulars regarding these leases have been shown on a previous page in connection with conditional purchases. The tenure was introduced by the Act of 1884. A conditional lease may be obtained by any holder of a conditional purchase (other than non-residential), or a conditional purchase within a special area in the Eastern Division. Lands available for conditional purchase are also available for conditional lease, with the exception of lands in the Western Division, and of lands within a special area or a reserve. Applications must be accompanied by a provisional rent of 2d. per acre and a survey fee, except where otherwise provided. The lease was formerly for a period of forty years, but it was provided in 1924 that, upon application during the last five years of its currency, a lease might be extended for a period of twenty years. To 30th June, 1925, such extensions were granted in 209 cases embracing 82,698 acres. In 1925-26 extensions were granted in 860 cases embracing 841,599 acres.

The rent is determined by the Land Board, and is payable yearly in advance. Any conditional lease, with the exception of a small number of inconvertible conditional leases created by conversion from other tenures, may be converted at any time during its currency into a conditional purchase, and an Act passed in 1927 enabled conditional leases to be transferred and held separately from the original holding with which they were granted.

Applications for 118 leases were lodged during 1926-27, and 68 representing 47,267 acres, were confirmed.

Conditional leases, to the number of 880, embracing 488,409 acres, were converted into conditional purchases during 1926-27, and conditional leases containing an area of 9,709 acres, were created by conversion. Gazetted conditional leases in existence at 30th June, 1927, numbered 20,757, embracing 12,239,782 acres, at an annual rental of £191,913.

*Crown Leases.*

Crown leases were constituted under the Crown Lands Amendment Act, 1912, and lands are specially set apart by notification in the *Government Gazette* as available for Crown lease. Crown lands available for conditional purchase (unless otherwise specified in the *Gazette*) are also available for Crown lease. Land may be set apart for Crown lease to be acquired only as additional holdings.

The term of lease is forty-five years, and the annual rent  $1\frac{1}{4}$  per cent. of the capital value, as determined every fifteen years. The rent payable for the first year may be remitted if, in addition to the improvements required as a condition of the lease, an equal sum be spent by the lessee in improving the land. Upon the expiration of a Crown lease the last holder thereof

possesses tenant rights in all improvements other than Crown improvements. The lessee is required to reside on the land for five years, commencing within six months of the confirmation of the lease. Under the conditions attached to the lease when granted in 1912 the lessee was empowered during the last five years of the lease, unless debarred by notification setting the land apart, to apply to convert into a homestead farm so much of the land as would not exceed a home-maintenance area. But by the Act of 1917 where a Crown lease is not covered by reservation of any kind, so much of it as, with other freehold or convertible leases held by the lessee, does not exceed a home maintenance area may be converted into a conditional purchase, with or without a conditional lease. Since the passing of this Act 620,135 acres of Crown lease have been converted into conditional purchase and conditional purchase lease. The lease may be protected against sale for debt in certain circumstances. Any person qualified to apply for a homestead farm may apply for a Crown lease.

Operations under this class of lease have been as follow:—

Year ended 30th June.	Applications Confirmed.		Leases current at 30th June.		
	No.	Area.	No.	Area.	Rent.
		acres,		acres.	£
1912-1914 ...	825	915,215	1,189	1,605,041	16,468
1915 ...	598	487,155	1,600	1,563,684	16,114
1916 ...	501	780,373	1,760	1,896,765	21,561
1917 ...	445	441,313	2,033	2,134,446	24,845
1918 ...	291	285,248	2,337	2,449,587	28,292
1919 ...	313	341,324	2,565	2,694,879	31,303
1920 ...	419	593,554	2,841	3,092,904	34,521
1921 ...	548	671,247	3,186	3,664,798	38,512
1922 ...	604	700,419	3,384	4,128,533	38,860
1923 ...	308	550,254	3,613	4,519,500	41,871
1924 ...	277	406,721	3,731	4,764,214	42,464
1925 ...	274	367,031	3,819	4,874,737	45,085
1926 ...	257	369,256	3,933	5,171,229	44,440
1927 ...	192	246,187	3,923	5,260,371	45,384

Since 1916-17 the figures shown above have included a number of Crown leases made available specially for returned soldiers. Particulars of these are shown on page 815.

This tenure was extensively applied immediately from its inception, and it practically superseded the settlement lease under which operations were extensive until 1912. Most of the Crown lands made available each year are set apart under this tenure and that of the homestead farm, also introduced in 1912. The total area of Crown leases confirmed during the thirteen years the tenure has been in existence was 7,155,237 acres, which has been reduced by forfeitures, conversions, etc., so that the area remaining under Crown lease at 30th June, 1927, was 5,260,371 acres.

#### *Settlement Leases.*

This tenure was created in 1895. Until 1912 it was used extensively in making land available for settlement, but since the introduction of the Crown lease in that year fresh operations under it have been inconsiderable. Under its conditions farms gazetted as available for settlement lease can be obtained on application accompanied by a deposit of six months' rent and one-tenth of survey fee. The duration of the lease is forty years, and the leaseholder is required to reside on the lease for the first five years of its currency. Rent is payable at the rate specified upon gazettal, subject to the lessee's right to apply for appraisement within five years and to re-appraisement at the end of each fifteen years of the currency of the lease.

From its inception very considerable areas of land were taken up under this lease, and by 30th June, 1913, the total area of settlement leases confirmed to applicants was 8,793,663 acres. An amendment of the Crown Lands Act gave holders of settlement leases the right to convert such part of their leases as, with freehold or convertible lands already held, does not exceed a home maintenance area into a conditional purchase with an associated conditional purchase, but where the total holding of freehold land so created would exceed a home maintenance area the excess is granted as conditional lease without rights of conversion.

Between 1909 and 30th June, 1927, a total area of 5,054,985 acres of settlement leases were converted under these conditions into other tenures, and 50,890 acres, chiefly of special leases, had been converted into settlement leases. Since 1913 only 92,551 acres of new settlement leases have been confirmed, while large areas have reverted to the Crown by forfeiture, etc. At 30th June, 1927, there remained under this tenure 1,254 leases, comprising 3,334,386 acres, at an annual rental of £47,000.

The transactions in respect of settlement leases during 1926-27 were as follow :—Applications for original settlement leases, nil; for additional leases, 5; 3 leases, with a total area of 3,416 acres, were confirmed; and 2, of 253 acres, were created by conversion of special leases into settlement leases.

#### *Improvement Leases.*

This tenure was introduced in 1895 and, by the end of 1903, an area of 9,716,006 acres of improvement leases had been let, although the area actually current was much smaller. After that year the areas taken up annually showed a considerable falling off and, up to 30th June, 1927, the total area of improvement leases which had been let was 11,551,099 acres, of which only 1,606,767 acres remained current. The maximum area of improvement leases current at any time was 6,884,330 acres in 1910, the subsequent decrease having been brought about mainly by the withdrawal of leases for settlement in terms of individual leases and a number of other causes, such as forfeiture, expiry, resumption, and the transfer of improvement leases wholly within State forests to the control of the Forestry Commission and their conversion into forestry leases.

An improvement lease may consist of any land in the Eastern or Central Divisions considered unsuitable for closer settlement until improved. It may be obtained only by auction or tender, but prior to 1920 certain leases were granted at fixed rentals under improvement conditions. The rent is payable annually, and the lease is for a period of twenty-eight years, with an area not exceeding 20,480 acres. Upon the expiration of the lease the last holder is deemed to have tenant-right in improvements. During the last year of the lease the lessee may apply for a homestead grant of an area not in excess of a home-maintenance area, including the area on which his dwelling-house is erected. This provision has become operative since 1921, and a total area of 483,412 acres have been converted in this way. The Advisory Board, constituted under the Closer Settlement Act, 1907, may inspect any land comprised in an improvement lease, and if it finds such land suitable for closer settlement the Minister may resume the lease, the lessee being compensated. To 30th June, 1927, a total area of 342,821 acres had been withdrawn in this way, £126,794 being paid as compensation to lessees.

During 1926-27, one improvement lease of 1,260 acres was granted at an annual rental of £6. Thirty one improvement leases, with a total area of 125,518 acres, were converted into homestead selections. At 30th June, 1927, there remained current 387 improvement leases and leases under improvement conditions, with an area of 1,606,767 acres, and rental £13,398.

*Homestead Farms.*

This tenure was created in 1912. The title of a homestead farm is a lease in perpetuity. Annual rent is charged at the rate of 2½ per cent. of the capital value, but for the first five years the holder, in lieu of payment of rent, may expend an equal amount on improvements of a permanent character, which (except boundary fencing) are in addition to those which are required otherwise by the conditions of the lease. The capital value of the holding is subject to reappraisal after the first twenty-five years and subsequently at intervals of twenty years.

Crown lands available for conditional purchases (unless otherwise notified in the *Gazette*) are available also for homestead farms. Land may be set apart for additional homestead farms, but is available only to applicants whose total holding, if successful, would not substantially exceed a home-maintenance area. Any Crown lands may be set apart for disposal as homestead farms before survey. There is no definite limit placed on the area of a homestead farm, but it is generally notified as available in home-maintenance areas.

A condition of five years' residence is attached to every homestead farm, but in special cases residence in a town or village, or anywhere within reasonable working distance, may be allowed. Residence may be permitted on a holding of a member of the same family, or on another of the selector's holdings within reasonable working distance. Suspensions or remissions may be granted for such periods as determined by the Land Board. In certain cases a wife may carry out residence on her husband's holding, or, conversely, a husband may carry out residence on his wife's holding.

A perpetual lease grant is issued after the expiration of five years from confirmation of the application, if the holder has complied with all the conditions.

Applications received for homestead farms and those dealt with since 1912, are as follow:—

Year ended 30th June.	Applications Confirmed.		Created by Conversion from other tenures.		Reversal of forfeiture and increased area.		Less— Forfeited, decrease in area, and conversions into other tenures.		Homestead Farms in existence at end of year.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
1912-14	760	452,756	28	17,378	...	...	32	19,635	756	450,499
1915	437	327,098	11	4,550	1	210	50	33,439	1,155	748,918
1916	348	252,166	6	3,848	...	...	57	35,479	1,452	969,453
1917	167	115,259	2	1,209	2	486	75	49,722	1,548	1,036,685
1918	158	89,020	...	...	4	2,783	82	46,866	1,628	1,081,622
1919	339	383,833	3	1,602	4	2,379	107	58,824	1,867	1,410,612
1920	491	507,417	5	3,211	1	857	76	32,988	2,288	1,889,109
1921	449	437,713	1	151	2	1,056	69	31,181	2,671	2,296,848
1922	375	378,180	8	9,505	...	238	93	62,464	2,961	2,622,307
1923	338	460,502	12	10,690	7	7,537	90	88,131	3,228	3,012,905
1924	269	371,816	4	2,862	9	8,449	105	86,891	3,405	3,309,141
1925	352	524,632	12	31,729	9	21,506	118	114,161	3,660	3,772,847
1926	237	307,259	10	25,209	16	19,560	122	98,453	3,683	3,965,944
1927	121	140,412	11	32,357	2	3,521	112	134,680	3,705	4,007,554

Since 1916-17 homestead farms have been made available specially for returned soldiers. These are included in the above table.

The total area of homestead farms confirmed to 30th June, 1927, was 4,748,053 acres and, after adjustments of area by reason of conversion, forfeiture, etc., there remained in existence 4,007,554 acres under this tenure.

The holder of a conditional purchase, or conditional purchase and conditional lease, or homestead selection, or homestead grant, or conditional purchase lease, under certain conditions, may convert such holding into a homestead farm. The area of homestead farms so created to 30th June, 1927, was 158,616 acres. Under certain conditions a homestead farm may be converted into a conditional purchase lease or into a conditional purchase, with or without a conditional lease, or since February, 1927 into Crown leases. 216,522 acres of homestead farms have been converted into other tenures. A homestead farm, which is a conversion of a settlement purchase under provision now repealed, may be reconverted into a settlement purchase. Two homestead farms of 449 acres and 722 acres respectively have been so converted.

#### *Homestead Selections and Homestead Grants.*

The appropriation of areas for homestead selection was a prominent feature of the Act of 1895, the land chosen for subdivision being generally agricultural land, and the maximum area of holdings limited to 1,280 acres. The tenure is lease in perpetuity with rent at the rate of  $1\frac{1}{4}$  per cent. per annum for the first five years or until the issue of the homestead grant, when it is raised to  $2\frac{1}{2}$  per cent. or to  $3\frac{1}{2}$  per cent. of the appraised value if residence is performed by deputy. Certain residential and improvement conditions were imposed, and on compliance with these for a term of five years a homestead grant is issued.

Since 1912 practically no lands have been made available for original homestead selections, such tenure having been replaced by that of homestead farm. Applications dealt with after 1912, are either in connection with areas previously set apart for homestead selection, or as additional areas, principally the latter. A large number of persons have, however, selected under this form of holding, as will be seen from the following statement which shows the applications and confirmations in regard to homestead selections and homestead grants issued up to 30th June, 1927.

Year ended 30th June.	Homestead Selections. Confirmed.		Homestead Grants issued.		Homestead Selections and Grants in existence.	
	No.	acres.	No.	acres.	No.	acres.
1895 to 1914 ... ..	7,947	2,763,683	4,917	1,934,388	3,868	1,396,911
1915 ... ..	18	7,233	198	59,919	3,788	1,365,715
1916 ... ..	17	7,559	161	48,479	3,694	1,317,124
1917 ... ..	5	1,337	212	54,791	3,585	1,256,033
1918 ... ..	10	5,535	189	49,306	3,295	1,055,910
1919 ... ..	23	19,232	172	30,807	3,091	985,918
1920 ... ..	8	9,690	55	20,502	2,936	912,573
1921 ... ..	21	7,819	25	9,004	2,863	895,334
1922 ... ..	9	7,507	33	17,896	2,803	895,298
1923 ... ..	15	9,124	33	11,973	2,779	915,480
1924 ... ..	14	10,017	35	21,896	2,752	951,599
1925 ... ..	5	2,922	29	17,854	2,152	785,550
1926 ... ..	8	5,223	37	26,554	2,149	939,519
1927 ... ..	10	14,523	33	35,324	2,131	1,009,674

On account of adjustments for conversions to and from other tenures forfeitures, etc., the number and area of homestead selections and grants in existence have been greatly reduced.

Operations under this tenure were at first very extensive, but they gradually diminished, and in 1911-12, the year before the homestead farm was introduced, only 94,641 acres of homestead selections were confirmed. The Crown Lands Amendment Act of 1908 authorised the conversion of homestead selections and grants into conditional purchases and conditional leases. Extensive advantage has been taken of this provision, and to 30th June, 1927, an area of 2,006,193 acres of homestead selections and grants had been so converted. This accounts for the difference between the area of homestead selections confirmed (2,871,614 acres) and the area remaining in existence (1,009,674) the difference having been reduced latterly by the extensive conversions of improvement leases into homestead selections. Under the Crown Lands (Amendment) Act of 1912, a homestead selection or grant may be converted into a homestead farm, but there have been only nineteen cases of conversion of this kind, covering 82,042 acres.

#### *Leases of Scrub and Inferior Lands.*

These tenures were introduced in 1889 in order to provide for the effective occupation and improvement of lands not suited for ordinary pastoral occupation.

Scrub leases and inferior lands leases may be obtained by auction, or by tender, and scrub leases may be obtained also by application. There is no definite limitation as to area, and in the case of a scrub lease obtained by application the rent is appraised by the Local Land Board. The initial rent of an inferior lands lease prevails throughout the whole term; but the term of a scrub lease may be divided into periods, the rent for each period being determined by reappraisal. The term of each class of lease normally does not exceed twenty-one years, but may be extended to twenty-eight years. The holder of a scrub lease must take such steps as the Land Board may direct for the purpose of destroying the scrub, and keeping the land clear afterwards. Upon the recommendation of the Closer Settlement Advisory Board the Minister may resume any scrub lease considered suitable for closer settlement and compensate the lessee. To 30th June, 1927, an area of 207,450 acres had been so resumed, and £70,731 had been paid as compensation to lessees. During the last year of either class of lease, application may be made for a homestead grant of an area not in excess of a home-maintenance area, but where the lease does not substantially exceed a home-maintenance area it may be so converted at any time during its currency. The first leases were granted in 1890, and the first conversions of scrub leases occurred in 1920-21, since when 88,041 acres have been converted into homestead grants. In addition considerable areas of scrub leases wholly within State forests have been transferred to the control of the Forestry Department and largely converted into forestry leases.

The area of inferior lands leases has never been extensive, and the area under scrub leases reached its maximum of 2,273,123 acres in 1912, then diminished steadily.

At 30th June, 1927, there were in existence 146 scrub leases, with an area of 718,748 acres, and rental of £3,388; and 16 inferior land leases, embracing 45,902 acres, at a rental of £200.

#### *Annual Leases.*

Unoccupied lands, not reserved from lease, may be obtained for pastoral purposes as annual leases on application, or they may be offered by auction or tender. No conditions of residence or improvement are attached to

annual leases, which do not convey security of tenure, the land being alienable by conditional purchase, auction sale, etc. The area in any one lease is restricted to 1,920 acres. In certain circumstances an annual lease may be converted into a lease under improvement conditions for a term not exceeding ten years.

The area under annual lease fluctuates from year to year, but is diminishing steadily. It amounted to 8,687,837 acres in 1903 and 2,953,296 in 1920. The number of annual leases current at 30th June, 1927, was 3,590; embracing 1,376,768 acres, with an annual rent of £11,486, inclusive of 25 annual leases, comprising 25,052 acres in the Western Division.

#### *Special Leases.*

Special leases not exceeding an area of 320 acres are issued to meet cases where land is required for some industrial or business purpose, and between 1917 and 1924 areas up to 1,920 acres were made available for agriculture or grazing. A special lease may be obtained by application, auction, or otherwise, but the term of the lease may not exceed twenty-eight years. Conditions as to the rent, residence, improvements, etc., in each case are determined by the Minister.

The Crown Lands Act, passed in 1908, provides for the conversion of a special lease by a qualified leaseholder, with the consent of the Minister, into a conditional purchase lease, an original or additional conditional purchase, an original or additional homestead selection, an original or additional settlement lease, a conditional lease, or homestead farm. Under this provision 929,857 acres of special leases have been converted into various new tenures.

The number of special leases granted during 1926-27 was 757, with a total area of 92,480 acres, and 457 leases, representing 72,320 acres, were converted into other tenures. After allowance has been made for leases which had terminated, were forfeited, surrendered, etc., and those which expired by effluxion of time, 7,213 leases, with an area of 757,328 acres and rental of £45,381, were current at 30th June, 1927.

#### *Conditional Purchase Leases.*

This form of tenure was created in 1905; but, as in the case of homestead selections and settlement leases, it is obsolete for the purpose of selection, as lands are not now made available under it. The area held under conditional purchase lease reached a maximum of 677,961 acres in 1911, and since then it has decreased steadily.

The term of the lease was originally forty years, but in 1924 it was increased to fifty years with rent at  $2\frac{1}{2}$  per cent. per annum of the capital value, which is to be re-appraised at the end of the first twenty-five years. No fixed limit was placed on areas made available, but conditions as to residence, cultivation, etc., were prescribed. Conversion to the tenures of conditional purchase and homestead farms are permitted, the total area so converted being 486,368 acres.

A special conditional purchase lease may be granted without obligation of residence in respect of areas not exceeding 320 acres on condition that improvements to the value of 10s. or more per acre, as determined by the Minister, are effected within three years of application.

The annual operations under this tenure are now very small. The leases holding good at 30th June, 1927, numbered 281, with an area of 205,720 acres; the annual rent amounting to £6,141.

*Prickly Pear Leases.*

Under the Prickly Pear Destruction Act, 1901, certain common or Crown lands infested with prickly pear may be offered for lease by auction or tender, and may be let for a term not exceeding twenty-one years, subject to prescribed conditions as to improvements, rent, &c. At 30th June, 1927, the number of prickly pear leases was 35, and the area so leased was 19,776 acres, at a total annual rental of £227. Under certain conditions a prickly pear lease may be converted to a homestead selection, and three leases of 1,073 acres have been so converted.

*Homestead Leases.*

The last leases under this tenure terminated during 1923-24.

*Suburban Holdings.*

The tenure of suburban holding was introduced in 1912. It is a lease in perpetuity with fixed conditions as to residence and perpetual payment of rent. Under certain conditions the leaseholder may be permitted to purchase his holding. Any suburban Crown lands, or Crown lands within population boundaries, or within the Newcastle pasturage reserve, or any other Crown land, may be set apart for disposal by way of suburban holding.

The area of a suburban holding is determined by the Minister for Lands. The rent—minimum, 5s. per annum—is calculated at the rate of 2½ per cent. of the capital value, to be appraised for each period of twenty years. Males under 16 years and females under 18 years are disqualified from applying. A married woman may apply in certain cases, provided her husband has not acquired a suburban holding. After the expiration of five years from date of confirmation, and subject to fulfilment of all conditions, a perpetual lease grant is issued. The right to purchase suburban holdings was conferred in 1917.

No rent is chargeable on holdings in course of purchase, the principal with interest at the rate of 2½ per cent. per annum on the balance being paid by annual instalments extending over a period of ten years.

The number of confirmations and purchases of suburban holdings since the introduction of the tenure were as under:—

Year ended 30th June.	Confirmations.		Suburban Holdings in existence at the end of year.*		Annual Rent.	Suburban Holdings— Purchases approved to the end of the year.		
	No.	Area.	No.	Area.		No.	Area.	Price.
1912-1914	964	23,230	902	22,114	2,473	...	...	...
1915 ...	477	9,299	1,311	30,717	3,495	...	...	...
1916 ...	400	6,775	1,535	34,110	4,043	...	...	...
1917 ...	230	2,937	1,662	36,631	4,246	...	...	...
1918 ...	186	3,318	1,804	38,354	4,381	11	289	915
1919 ...	183	3,226	1,809	39,170	4,670	136	2,057	12,035
1920 ...	181	4,073	1,826	40,198	4,401	259	4,252	23,207
1921 ...	282	6,764	1,995	45,475	4,830	333	5,169	30,446
1922 ...	415	9,121	2,260	51,071	5,470	397	6,382	35,535
1923 ...	272	5,130	2,389	55,025	5,818	468	7,253	40,566
1924 ...	153	3,617	2,373	56,376	5,766	559	8,908	49,514
1925 ...	47	641	2,370	53,994	5,734	662	10,739	57,258
1926 ...	33	419	2,191	52,998	5,466	740	11,069	66,157
1927 ...	81	1,547	2,252	54,865	5,387	792	11,933	71,042

\* Exclusive of purchases approved.

To 30th June, 1927, deeds of purchase had been issued in respect of 243 suburban holdings, embracing 2,776 acres; these are excluded from the above table.



*Residential Leases.*

The holder of a "miner's right" within a gold or mineral field may obtain a residential lease. A provisional rent of 1s. per acre is charged, the maximum area allowed is 20 acres, and the longest term of the lease, twenty-eight years; the annual rent is appraised by the Land Board. The principal conditions of the lease are residence during its currency, and the erection within twelve months of necessary buildings and fences. Tenant-right in improvements is conferred upon the lessee. The holder of any residential lease may, after five years, acquire the land by improvement purchase with the consent of the Minister as described on a previous page.

There were 717 leases, embracing 10,021 acres at a rental of £1,368, current at 30th June, 1927.

*Week-end Leases.*

This tenure, created by the Crown Lands Amendment Act, 1916, is a lease in perpetuity of an area not exceeding 60 acres, subject to payment of rent at the rate of 2½ per cent. of the capital value, to the effecting of substantial improvements worth £1 per acre within five years from confirmation, and to the performance of such special conditions as may be notified. Residence is not necessary. The minimum rent is £1. Any adult (except a married woman not judicially separated from her husband) may apply, but persons who already hold land within areas defined in a notification setting apart the land for week-end leases are generally disqualified.

Week-end leases, on approval by the Minister, may be purchased, and payment must be made within three months from date of demand, or within such further period as the Minister may allow.

Transfers may be made at any time with the Minister's consent, but must be to a qualified person, except in cases of devolution under a will or intestacy. The consideration for a transfer must not exceed the capital value of the improvements on the land.

During the year ended 30th June, 1927, confirmation was made in four cases with an area of 5 acres at an annual rental of £4. At 30th June, 1927, the leases current numbered 138, of an area of 393 acres, and annual rental £151. In addition, 57 leases of 397 acres had been made freehold, and approval to purchase had been granted in the case of 10 leases of 39 acres.

*Leases of Town Lands.*

Crown lands within the boundaries of any town may be leased by public auction or by tender. The lease is perpetual, and the area included must not exceed half an acre. The amount bid at auction or offered by tender (not being less than the upset value) is the capital value on which the annual rent at the rate of 2½ per cent. is based for the first period of twenty years. The capital value for each subsequent twenty years' period is determined by the Land Board.

The lease may contain such covenants and provisions as may be gazetted prior to sale or tender. Residence is not necessary. No person is allowed to hold more than one lease, unless with the permission of the Minister on recommendation by the Land Board. The holder of a town lease may be allowed to purchase.

In the year 1926-27 three after-auction tenders were accepted for an area of 1 acre. Deeds of purchase have been issued for 61 lots embracing 21 acres, and approval to purchase granted in 24 cases for an area of 7 acres. On 30th June, 1927, there were 329 leases, containing 119 acres, the annual rental being £296.

### INALIENABLE LEASES.

The term "inalienable leases" is here used to signify that the statutory conditions attached to the leases so classified do not permit the leaseholder to purchase any part of his lease nor to convert into another leasehold tenure involving the right of purchase.

On the foundation of the Colony all lands vested in the Crown, and for many years permits to occupy unsold Crown lands were issued on various conditions.

The principal inalienable tenures now in existence are described below.

#### *18th Section and Pastoral Leases.*

Under the Crown Lands Amendment Act of 1903, the registered holder of any pastoral lease, preferential occupation license, or occupation license, could apply for a lease, for not more than twenty-eight years, of an area not exceeding one-third of the total area of the land comprised within the lease or license, subject to such rent, conditions or improvements, and withdrawal for settlement as may have been determined. These are known as 18th Section Leases, having been granted under the Land Act of 1903, which has been repealed. The area of land held under this tenure has decreased rapidly since 1914, when the area so held exceeded a million acres.

At 30th June, 1927, these leases, also known as "Leases to Outgoing Pastoral Lessees," numbered 61, with an area of 211,660 acres, and rental of £2,094. There were no pastoral leases in existence on 30th June, 1927, in the Western Division which had not been brought under the provisions of the Western Lands Act. Upon the recommendation of the Closer Settlement Advisory Board the Minister may resume for closer settlement any 18th Section lease; and to 30th June, 1927, an area of 14,424 acres had been so resumed and £3,274 paid as compensation to lessees.

#### *Forestry Leases and Occupation Permits.*

Unoccupied Crown Lands and leases situated entirely within dedicated forests are controlled exclusively by the Forestry Commission, which has power to lease or otherwise permit their use for pastoral or other approved purposes.

Forestry leases limited to twenty years have been granted for grazing purposes, and occupation permits usually on an annual tenancy, but sometimes for a period of fourteen years, have been granted for grazing, bee-farming, and forest saw-mills. For grazing purposes the rent is usually fixed in relation to the grazing capacity of the land.

The area of forestry leases and occupation permits wholly within State forests, at 30th June, 1926, was 2,032,428 acres under the Forestry Acts, besides 85,529 acres under the Crown Lands Acts administered by the Forestry Department; in addition, there were portions of other leases not wholly within State forests administered by the Department of Lands. Particulars of these are not at present available.

#### *Snow Leases.*

Vacant Crown lands on the Southern Highlands, which for a portion of each year are usually covered with snow, and are thereby unfit for continuous use or occupation, may be leased by auction or tender as snow leases. Not more than one snow lease may be held by the same person. The maximum area of any snow lease is 10,240 acres. The term of the lease is seven years, but may be extended for three years.

At 30th June, 1927, there were 29 leases current, embracing 177,746 acres; and rent, £2,129. This tenure was introduced in 1889, and the area of snow leases reached a maximum in 1927.

*Mineral and Auriferous Leases.*

Under the Mining Act, the Minister for Mines is empowered to grant certain rights for the operations of miners on any lands within the State. These are known as mineral and auriferous leases and generally they take precedence over other forms of tenure. The area so held has steadily increased since 1914, when it was 199,060 acres. At 30th June, 1927, there were 277,052 acres held as mineral and auriferous leases, exclusive of leases to mine on private lands. The area leased in this way is not included in the areas covered by other land tenures. Permits to mine under roads and reserves covered an area of 428 acres.

*Church and School Lands Leases.*

The history of Church and School lands leases, showing the present status of leaseholders, was published on page 859 of the Year Book for 1921.

The total area of Church and School lands held under lease at 30th June, 1927, in the Eastern Division, was 11 acres, at a rental of £330 per annum, the subdivision being as follows:—

	No.	Area. acres.	Rent. £
Agricultural ... ..	1	1	1
Ninety-nine Year ... ..	37	10	326
Water Races ... ..	1	10 miles (about)	3
Total ... ..	39	11	330

*Occupation Licenses.*

Occupation licenses may be of two kinds (a) preferential occupation licenses, consisting of the area within an expired pastoral lease, and (b) ordinary occupation licenses, which relate to the parts of the holdings formerly known as resumed areas. They may be acquired by auction or tender. Occupation licenses extend from January to December, being renewable annually at a rent determined by the Land Board.

An occupation license entitles the holder to occupy Crown lands so granted for grazing purposes, but it does not exempt such lands from sale or lease of any other kind. The licensee, however, is granted tenant rights in any improvements made to his holding with the written consent of the Crown.

The area under occupation license (Crown Lands Act) was represented at 30th June, 1927, by 519 ordinary licenses for 2,916,778 acres, rental £5,533; and 225 preferential licenses, representing 503,476 acres, and rent £4,623. The area occupied in this way was formerly very extensive, being nearly 10,000,000 acres in 1904.

*Permissive Occupancy.*

Permissive occupancy is a form of tenancy at will from the Crown, at a fixed rental for a short period, terminable at any time by a written demand for possession from the Secretary for Lands or by written notice from the tenant. The occupant has tenant rights in improvements effected by him.

The number of permissive occupancies in existence at 30th June, 1927, was 6,650 comprising 2,919,990 acres, with a rental of £15,937. The area held under this tenure has increased gradually during the last twenty years.

CONVERSION OF TENURES.

In describing the various methods of acquisition and occupation, details have been given of provisions of the Crown Lands Act which confer on certain holders of Crown lands the right of conversion into more desirable tenures. These may be summarised briefly thus :—

A conditional lease or a conditional purchase lease may be converted, at the option of the holder, into a conditional purchase. A homestead farm, a homestead selection, a settlement lease, or a Crown lease may be converted into a conditional purchase with (if desired) an associated conditional lease, subject to the proviso as to a home maintenance area described below. A homestead farm or homestead selection may, in certain circumstances, be converted into a conditional purchase lease and a conditional purchase lease may be converted into a homestead farm. During the last five years of its currency a Crown lease may, with the approval of the Minister, be converted into a homestead farm, while up to 1,280 acres of a settlement lease may (after five years) be converted into a homestead grant. A special lease, unless debarred, may be converted, at the discretion of the Minister, into a conditional purchase lease, conditional purchase, conditional lease, homestead selection, settlement lease, or homestead farm. Under various conditions an improvement lease, scrub lease or prickly pear lease not otherwise reserved may be converted into a homestead selection not exceeding in extent a home maintenance area. Since February 1927 it has been possible in certain circumstances to convert a homestead farm into a Crown lease.

In the case of a homestead farm, homestead selection, Crown lease or settlement lease the area that may be converted into freehold, together with the area held by the applicant under any other tenure (other than a lease having less than five years to run without the right to purchase the freehold), must not exceed a home maintenance area as determined by the Local Land Board.

The following statement shows the number and area of holdings in respect of which conversions were confirmed during the year 1926-27 :—

Tenure of Holding Converted.	New Tenure Confirmed.												Total Confirmations.	
	Conditional Purchase.		Con- ditional Purchase and Associated Con- ditional Lease.		Con- ditional, and Con- ditional Purchase, Leases.		Home- stead Selection.		Settle- ment Lease.		Home- stead Farm.			
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.		acres.		acres.		acres.
Conditional Purchase ..	..	..	..	..	..	..	..	..	..	..	1	1,280	1	1,280
Conditional Leases ..	880	488,409	..	..	..	..	..	..	..	..	..	..	880	488,409
Conditional Purchase Leases ..	9	2,221	..	..	..	..	..	..	..	..	..	..	9	2,221
Homestead Selections or Grants ..	58	35,992	4	10,168	..	..	..	..	..	..	7	29,729	69	75,889
Settlement Leases ..	31	67,236	38	95,021	..	..	..	..	..	..	..	..	69	162,307
Non-residential Con- ditional Purchases ..	2	251	..	..	..	..	..	..	..	..	..	..	2	251
Special Leases ..	417	56,266	1	264	26	12,798	8	1,391	2	253	3	1,948	457	72,320
Prickly-pear Leases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scrub Leases ..	..	..	..	..	..	..	2	4,403	..	..	..	..	2	4,403
Improvement Leases ..	..	..	..	..	..	..	31	125,518	..	..	..	..	31	125,518
Crown Leases ..	87	30,446	37	85,264	..	..	..	..	..	..	..	..	124	115,710
Homestead Farms ..	42	53,174	15	18,965	..	..	..	..	..	..	..	..	57	72,139
Total ..	1,526	734,045	95	209,682	26	12,798	41	131,312	2	253	11	32,357	1,701	1,120,447

Particulars of the number and area of new tenures obtained by conversion during each of the past ten years are shown below :—

Year ended 30th June.	New Tenure Confirmed.												Total Confirmations.	
	Conditional Purchase.*		Conditional Purchase and Associated Conditional Lease.†		Conditional and Conditional Purchase Lease.		Homestead Selection.		Settlement Lease.		Homestead Farm.			
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
1917	1,492	636,809	43	162,842	25	5,831	12	2,641	12	3,408	2	1,209	1,586	872,740
1918	1,890	863,461	87	213,849	12	4,272	6	2,272	...	...	...	...	1,985	1,083,854
1919	1,952	711,042	64	157,021	32	20,213	1	6,100	1	283	3	1,602	2,053	896,267
1920	1,659	511,315	96	217,835	30	6,099	7	3,178	3	380	5	3,211	1,800	732,018
1921	1,598	501,861	78	174,756	34	11,074	23	36,986	3	2,594	1	151	1,737	727,722
1922	1,702	455,018	56	122,923	30	8,297	29	39,371	23	18,239	8	9,505	1,449†	†653,861
1923	1,201	343,649	43	115,421	24	8,339	27	46,973	15	4,268	12	10,620	1,323†	†550,092
1924	1,230	433,722	68	169,333	33	10,787	22	55,783	4	5,923	4	2,862	1,396	683,465
1925	1,332	514,312	86	278,421	38	12,550	26	40,632	5	1,211	12	31,729	1,499	878,855
1926	1,359	562,934	70	193,852	30	13,419	6	29,893	4	1,171	10	25,209	1,533	1,016,338
1927	1,526	734,945	95	209,682	26	12,798	41	181,312	2	253	11	32,357	1,701	1,120,447

\* Including non-residential conditional purchases. † Including 1 homestead farm converted to a settlement purchase of 449 acres in 1922, and 1 of 722 acres in 1923.

The above table includes particulars of leases converted under the original conditions on which they were granted as well as of leases granted under the special conversion privileges allowed by the Acts of 1909 and 1916. For instance, the right to convert conditional leases and conditional purchase leases into conditional purchases was granted when they were first introduced, as also was the right to convert scrub and improvement leases under certain conditions into homestead selections. On the other hand, the Crown Lands Amendment Act of 1908 conferred on holders the right to convert homestead selections, settlement leases and non-residential conditional purchases into conditional purchases, while special leases were made convertible into any of a number of tenures with the consent of the Minister.

In 1916 Crown leases and homestead farms which had been created as leases in 1912 were made convertible into conditional purchases.

#### WESTERN LAND DIVISION.

The lands of the Western Division, comprising 80,318,708 acres, or two-fifths of the area of the State, are for the most part sparsely settled, and occupation is somewhat precarious on account of the low and uncertain rainfall.

The administration of these lands is regulated by the Western Lands Act, 1901, and is controlled by three Commissioners, constituting the Western Land Board of New South Wales, who, sitting in open Court, exercise all the powers conferred upon Local Land Boards by the Crown Lands Acts.

Subject to existing rights and extension of tenure granted under certain conditions, all forms of alienation (other than by auction) and lease prescribed by the Crown Lands Acts, ceased to operate within the Western Lands Division from 1st January, 1902.

The registered holder of a homestead selection or grant, pastoral, homestead, settlement, residential, special, artesian well, improvement, scrub, or inferior lands lease or occupation license of land in the Western Division, may apply to bring his lease or license under the provisions of the Western Lands Acts of 1901 and 1905; in cases where application has not been made, such lease or license is treated as if the Acts had not been passed.

Crown lands within this division are not available for lease until so notified in the *Gazette*, but leases for special purposes may be granted upon certain conditions, and holders of areas which are considered too small to maintain a home or to make a livelihood may obtain an additional area under certain conditions as a lease. Lands are gazetted as open for lease at a stated rental under specified conditions with respect to residence, transfer, mortgage, and sub-letting.

All leases issued or brought under the provisions of the Western Lands Acts of 1901 and 1905, except special leases, will expire on 30th June, 1943. Conditional leases, which number 81 and embrace 109,439 acres, however, may be converted into conditional purchase before expiry. In cases where a withdrawal is made for the purpose of sale by auction or to provide small holdings, the lease of the remainder may, as compensation, be extended for a term not exceeding six years.

The rent on all leases brought under the provisions of the Act is determined by the Commissioners for the unexpired portion. The minimum rent or license fee is 2s. 6d. per square mile or part thereof; the maximum is 7d. per sheep on the carrying capacity determined by the Commissioners.

Holdings under the Western Lands Acts as at 30th June, 1927, were classified as follow :—

Class of Holding.	Leases issued.	Area.	Annual Rental.
New Leases issued under Western Lands Act :—	No.	acres.	£
Special Leases... ..	345	762,922	2,165
Section 32, Western Lands Act Leases (additional)	292	2,805,053	2,975
Part VII, " " " " " "	699	20,880,986	18,698
Preferential Occupation Licenses ... ..	14	88,266	121
Leases under Crown Lands Act brought under Western Lands Act :—			
Pastoral Leases ... ..	275	30,809,999	£0,470
Subdivision Leases ... ..	115	6,762,950	9,856
Homestead Leases ... ..	1,112	10,308,266	27,847
Improvement Leases ... ..	112	1,898,784	1,214
Scrub Leases ... ..	3	17,431	31
Inferior Lands Leases ... ..	2	163,144	35
Settlement Leases ... ..	8	40,050	150
Artesian Well Leases ... ..	31	316,723	501
Special Leases (Conversion)... ..	42	8,891	174
Occupation Licenses ... ..	65	813,614	396
Homestead Selections and Homestead Grants ...	34	24,765	156
Conditional Leases ... ..	79	108,300	533
Total... ..	3,228	75,810,149	115,222

In addition there were 2,031,282 acres of land alienated, or in course of alienation; 573,892 acres under temporary tenures with annual rentals amounting to £431; 816,465 acres of unoccupied land of low grade; 884,951 acres of unalienated town lands, beds of rivers, commonages, etc., and 201,961 acres of land still under the Crown Lands Act, yielding annual rentals amounting to £1,115.

PRICKLY PEAR LANDS.

Public attention was first called in Parliament to the growth of prickly pear as a pest in 1882, and in 1885 it was stated that an area of 5,000 acres had become infested in the Upper Hunter district. In 1886 a Prickly Pear Destruction Act was passed, and with some modification in 1901 this remained the law relating to the pest until 1924. The law, however, was not put

into operation extensively, and the spread of the pest continued practically unchecked. In 1911 it was estimated that 2,000,000 acres of land were infested with pear, and at the end of 1924 the area so infested was stated to be 7,600,000 acres, the greater part of which, however, was lightly infested.

At this juncture the law was completely revised and the Prickly Pear Act, 1924, was designed to provide means for preventing the further spread of the pest and for eradicating it where possible. This Act (as amended in 1925) related to all lands infested with prickly pear and provided for the appointment of a Commissioner to administer its provisions. It was made an obligation for owners and occupiers of all lands within the State to keep uninfested land entirely free from prickly pear, and all owners and occupiers of freehold or leased lands already infested are required to make an annual return to the Commissioner showing the area of their holdings upon which prickly pear is growing, together with information as to the steps being taken to deal with it.

The Commissioner may delimit prickly pear zones and classify the land within such zones into four grades, according to whether it is free from prickly pear, lightly infested, heavily infested or very heavily infested, and may issue instructions to land holders requiring them to take steps to clear their lands. Failure to comply with such a direction may be met by penalty, and, in addition, the Commissioner may have the land cleared at the expense of the owner. Upon the recommendation of the Commissioner, the Minister may give assistance to any owner in clearing his land in the form of an advance repayable over a term not exceeding twenty years; and by agreement with the holder, the terms and conditions of leases of any infested lands leased from the Crown may be varied in any manner approved by the Governor. Crown lands already infested may be leased under the Prickly Pear Act, under special conditions.

Where any private land is classified as very heavily infested, *i.e.*, as land of less value than the cost of freeing it from pear, the owner may divest himself thereof by surrendering it to the Crown, and in such case he is required to fence off the surrendered portion and to maintain free of pear a strip of land 10 feet wide within and around such surrendered portion. Crown lands classified as very heavily infested may be granted by the Minister to any person who has freed them from pear.

The Act establishes a Prickly Pear Destruction Fund by providing for five years from 1st January, 1925, an annual appropriation of £30,000 from Consolidated Revenue. This fund is under control of the Minister, to be applied by him for the administration of the Act. The Minister is empowered to make grants from this fund for the purpose of assisting councils, pastures protection boards, and the trustees of cemeteries, commons, or reserves to meet their obligations under the Act.

During the year ended 30th June, 1927, the total expenditure was £30,698, including £17,616 for poisons. At the end of the year there was a credit balance of £50,412.

#### CLOSER SETTLEMENT.

The circumstances leading to the adoption of what is known as the "Closer Settlement Policy" are described on page 681. Further reference to the subject may be found in previous Year Books.

The Closer Settlement Acts provide that the Minister for Lands, with the sanction of the Governor and the approval of Parliament, may purchase private estates at a price approved by Parliament. But any alienated estate whose unimproved value exceeds £20,000 may be compulsorily resumed for closer settlement.

Land comprised in any improvement or scrub lease, or section 18 lease, may be resumed or purchased under agreement for closer settlement upon the recommendation of the Closer Settlement Advisory Board. To 30th June, 1927, an area of 564,695 acres comprised in 64 long-term leases had been re-acquired in this way at a cost of £200,799, and had been disposed of in 605 farms consisting of homestead farms and Crown leases under the Crown Lands Consolidation Act.

Within six months after the passing of an Act sanctioning the construction of a line of railway, the governor may notify a list of estates within 15 miles of the railway line; within six months of this notification the Governor may notify his intention to consider the advisableness of acquiring for purposes of closer settlement land so notified, the property of one owner, and exceeding £10,000 in value. The area of land under notification at 30th June, 1927, was 2,098,781 acres, embraced in 137 estates.

At any time after a proclamation of intention to consider the advisableness of acquiring an estate, if an agreement be made that the land shall be subdivided for closer settlement by the owner, the power of resumption may be suspended for a term not exceeding two years. Any sale or lease made under such agreement, and any subsequent sale, lease, or transfer made within five years of the original sale or lease, must be submitted to the Minister, and if it be found that the owner has failed to fulfil the conditions, the suspension of the power of resumption shall cease.

The total area acquired under the ordinary provisions of the Closer Settlement Acts, was 1,166,641 acres, at an aggregate purchase price of £4,619,709. This area originally consisting of sixty-one estates, was divided into 2,492 farms. Operations under the ordinary provisions of the Closer Settlement Acts have practically ceased and are now confined mainly to promotion proposals. *i.e.*, cases where owners agree to sell estates under closer settlement conditions. Particulars of the provisions of the earlier Closer Settlement Acts and details of the operations thereunder are given in previous Year Books.

#### *Closer Settlement Promotion.*

The provisions of the Closer Settlement Acts of 1918 and 1919, which replace the Closer Settlement Promotion Act, 1910 (repealed), enable three or more persons, or one or more discharged soldiers, each of whom is qualified to hold a settlement purchase, to negotiate with an owner of private lands, and under certain conditions to enter into agreements with him to purchase a specified area on a freehold basis, for a price to be set out in each agreement. Any one or more discharged soldiers or sailors may also enter into agreements to purchase on a present title basis from the holder a conditional purchase; a conditional purchase lease; a conditional purchase and conditional lease, including an inconvertible conditional lease; a homestead selection; a homestead farm; a settlement lease; a Crown lease, or any part of one or more of such holdings, or an improvement or scrub lease, not substantially more than sufficient for the maintenance of a home.

Upon approval by the Minister, the vendor, in the case of private land, surrenders the area to the Crown, and the purchaser acquires it as a settlement purchase. In the case of land acquired on present title basis, the vendor transfers it to the purchaser. The vendor is paid by the Crown, either in cash or in Closer Settlement Debentures, and the freehold value of the land, inclusive of improvements thereon, purchased for any one person must not exceed £3,000, except in special cases where the improvements warrant it, when the freehold value may be up to £3,500; if the land is found suitable for grazing only, the freehold value may be up to £4,000.



Each farm is worked independently, the co-operation of the applicants ceasing with the allotment of an area. Each applicant has to pay a deposit of  $6\frac{1}{2}$  per cent. of the Crown valuation of the farm granted to him, except discharged soldiers or sailors, who are not required to pay any deposit. Repayments of the balance of the purchase money to the Crown are subject to the regulations in force at the date of commencement of title. At present the regulations provide for repayment at the rate of  $6\frac{1}{2}$  per cent, per annum of the capital value of the farm, where the purchase money is paid in cash; this includes interest at the rate of  $5\frac{1}{2}$  per cent. on the outstanding balance, the whole indebtedness being discharged in thirty-two years, where the initial deposit is paid. If the land is paid for by debentures, the deposit and annual instalments to be paid by applicants are  $1\frac{1}{2}$  per cent. in advance of the rate of interest paid by the Crown in connection with the debentures, and the interest to be paid on the unpaid balance of purchase money is  $\frac{1}{2}$  per cent. in advance of the rate of interest paid by the Crown as aforesaid.

Postponement of the payment of instalments and of interest for a period may be sanctioned in special circumstances, and holders of farms may obtain advances from the Rural Bank Commissioners on account of improvements effected.

The total number of promotion proposals under the Closer Settlement Acts allotted and finally dealt with for which payment had been made by the Government Savings Bank and from the Closer Settlement Fund as at 30th June, 1927, were 3,773 farms, representing 1,807,570 acres, in respect of which a sum of £8,368,475 had been advanced; of this number 1,149 farms, embracing an area of 471,104 acres at a cost of £2,439,230, were paid for by the Government Savings Bank, and payment was made from the Closer Settlement Fund in respect of the balance.

In all (exclusive of irrigation projects) 1,854 estates and leases had been acquired by the Government for purposes of closer settlement of civilians and returned soldiers. These estates embraced 3,861,679 acres, for which the purchase price was £13,989,686, and there were added 104,326 acres of adjacent Crown lands. The total number of farms made available was 7,791.

#### *Summary of Closer Settlement Operations.*

The following table provides a summary of the various closer settlement operations, including lands acquired and administered under the Closer Settlement and Returned Soldiers' Settlement Acts, lands acquired by executive authority and by virtue of section 197 of the Crown Lands Act, and administered by the Department of Lands, but omitting long-term leases acquired under Closer Settlement Act, 1912, and disposed of under the Crown Lands Act.

Mode of Acquisition.	Estates Acquired	Area.		Price paid for Acquired Land.	Farm blocks made available.		
		Acquired.	Adjacent Crown Lands.		No.	Area.	Value.
	No.	Acres.	Acres.	£		Acres.	£
Direct Purchase* ... ..	27	271,898	173	523,456	505	239,712	725,853
Crown Lands Act (s. 197) †	24	53,855	374	277,217	‡ 418	‡ 52,614	‡ 531,735
Closer Settlement Act— Promotion Provisions ...	1,678	1,807,570	...	8,368,475	3,773	1,837,570	8,368,475
Ordinary Provisions ...	61	1,166,641	103,779	4,619,709	2,492	1,239,752	4,677,535
Total ... ..	1,790	3,296,984	104,326	13,788,887	7,116	3,339,645	14,333,598

\*Including 19,646 acres of improvement lease, and 160,023 of scrub lease acquired at nominal value.

† Including one estate of 21,309 acres, surrendered at nominal value for returned soldiers.

‡ Including certain estate: partly acquired by direct purchase.

The number of estates acquired under the promotion provisions of the Closer Settlement Act is comparatively large, because 953 individual holdings, besides holdings containing only a few farms, were acquired mainly for soldier settlers. In some cases two or more farm blocks have been amalgamated and made available as one farm.

So far as can be ascertained, the lands covered by the above table were disposed of as follows at 30th June, 1927 :—

Manner of Disposal.	Farms Occupied.		
	No.	Area.	Capital Value.
Settlement Purchases—In existence * ... ..	5,540	2,742,708	11,808,223
Alienated (deeds issued) ... ..	43	16,595	§
Converted into Homestead Farms ... ..	43	23,543	102,929
Soldiers' Group Purchases Confirmed** ... ..	821	400,569	1,803,158
Provisionally Allotted ... ..	258	13,000‡	§
under Cultural System† ... ..	132	6,400‡	§
Seven Estates disposed of under Crown Lands and Returned Soldiers' Settlement Acts ... ..	46	186,151	§
Total disposed of and in occupation ... ..	6,883	3,388,966‡	§

\* Including settlement purchases occupied by returned soldiers, and including a small area temporarily under permissive occupancy. † Orchard blocks in course of development. ‡ Partly estimated. § Not available. \*\* As revised to meet legal requirements.

The foregoing particulars of farms made available and farms occupied represent provisional totals only and are subject to amendment upon completion of investigations now in progress.

In addition to the lands shown in the foregoing tables, 64 improvement, scrub, and 18th section leases were resumed by the Crown upon the recommendation of the Closer Settlement Advisory Board. These embraced an area of 564,695 acres, for which a sum of £200,799 was paid as compensation, and they were subdivided into 605 farms and allotted as Crown leases and homestead farms under the Crown Lands Act.

The balance of purchase money in respect of the above farms under the Closer Settlement Acts, omitting group soldier settlements, as at 30th November, 1922, including deferred and postponed instalments and adjusting interest, amounted to £10,233,173, and it was estimated that the balance of assets over liabilities was £889,705. Arrears of instalments at the same date were £349,043, and at 30th June, 1927, £791,081 in respect of 2,757 farms.

#### *Other Closer Settlement Operations.*

The Rural Bank in April, 1923, issued particulars of a scheme of advances to facilitate subdivision of private estates, and the first Rural Bank loan of £1,000,000 at 5½ per cent. was raised locally for the purpose.

The Bank is prepared, after inspection, to issue certificates as to the amount it is willing to advance to purchasers of land under subdivisional plans approved by the Land Settlement Board and the Bank. Interest is charged at the rate of 6¼ per cent., and the maximum advance is £3,000, or two-thirds of the Bank's valuation of the property, whichever is the less. In the case of properties not fully improved the advance may be as great as 80 per cent. of the Bank's valuation, subject to specified improvements being carried out at the purchaser's expense.

By 30th June, 1927, Rural Bank certificates had been issued in connection with the proposed subdivision of 171 estates into 853 farms, containing in all 679,924 acres, valued at £2,883,455. The amount of loans covered by the certificates was £2,035,760. In all 280 estates comprising 1,321,383 acres had been inspected or recommended for inspection. Altogether 624 farms covering 501,972 acres, had been selected under the scheme. Applications for advances of £1,427,390 on 602 forms have been made and payments amounting to £1,185,165 have been completed for 499 farms.

Besides these, the owners of large estates within 15 miles of the railways being constructed in New South Wales by the Victorian Government, were approached by the Land Settlement Board, with the result that settlement was actually effected in respect of 363 mixed farms comprising 505,642 acres and 47 grazing farms embracing 210,277 acres.

#### SETTLEMENT OF RETURNED SOLDIERS.

To 30th June, 1927, farms had been allotted to 9,245 returned soldiers, and there remained 6,133 returned soldier settlers on an area of 8,558,779 acres including 4,304,044 acres in the Western Division. These totals exclude 657 soldier settlers on private lands to whom advances only were made. The total expenditure was £17,912,662. The headings of expenditure were :—

	£
Resumption of holdings for settlement ... ..	7,931,895
Advances to settlers ... ..	6,850,060
Public Works ... ..	3,130,707
<b>Total ... ..</b>	<b>17,912,662</b>

Under the Returned Soldiers' Settlement Acts, special provision is made for the settlement of discharged soldiers on Crown lands, including the Murrumbidgee Irrigation Areas, and on lands acquired under the Closer Settlement Acts and otherwise.

Land has been made available principally under the following tenures :—

1. Homestead Farm.—Lease in perpetuity.
2. Crown Lease.—Lease for 45 years.
3. Returned Soldiers' Special Holding.—Purchase or lease.
4. Suburban Holding.—Lease in perpetuity.
5. Irrigation Farm.—Purchase or lease in perpetuity.
6. Group purchase.
7. Settlement purchase.

Provision also exists in the Closer Settlement Acts under which one or more discharged soldiers may purchase privately-owned land upon terms approved by the Minister for Lands, the Crown providing the whole of the purchase money. Transactions of this nature are permitted only in cases in which additional settlement is provided. The Minister has discretionary power to refuse any such proposal.

The maximum value of land and improvements which may be so purchased by any individual is £3,000; in special cases, however, this may be increased to £3,500 or £4,000 for purely grazing areas.

An advance not exceeding £625 may be made available for each soldier settler, but it must be used only for the general improvement of the land, purchase of implements, stock, seed, and other necessaries, or in the erection of buildings. The total amount advanced by the Department of Lands under the Returned Soldiers' Settlement Act to 30th June, 1927, was £3,077,469, and of this sum £1,033,808 had been repaid, while interest amounting to £356,210 had been paid.

Terms of repayment are usually as follows:—

House and other Permanent Improvements.—By payments over twenty-five years, interest only being charged during first five years.

Stock and Implements.—Six years, interest only being charged during first year.

Seeds, Plants, etc.—One year.

From April, 1923, a scheme of consolidating advances was introduced, and the terms upon which loans were granted were liberalised, being usually extended to twenty-five years on the security of a mortgage over the holding.

Interest as fixed under the Acts may not exceed  $3\frac{1}{2}$  per cent. for the first year and 4 per cent. for the second year, and it increases progressively by not more than  $\frac{1}{2}$  per cent. for each subsequent year, the maximum rate at present being  $6\frac{1}{2}$  per cent.

Subject to such conditions as to security and terms of repayment as the Commission may think fit to impose, soldier settlers on the Murrumbidgee and Cirlwaa Irrigation Areas may obtain an advance, or have payment of rent and water rates suspended. The expenditure by the Irrigation Commission on returned soldiers' settlement during 1925–26 was £149,349, making a total of £4,053,127 to 30th June, 1926. Repayments and collections to the same date amounted to £368,066.

The following table affords a summary of the number, area, and cost of private estates acquired for soldiers' settlement to 30th June, 1927:—

Class of Acquisition.	Estates.	Area.	Purchase Money.	Farms made available.
	No.	acres.	£	No.
Promotion Provisions Closer Settlement Acts* ...	1,447	1,198,502	5,365,783	2,388
Group Settlement—Closer Settlement Acts ...	25	381,505	1,753,941	756
Section 197, Crown Lands Act† ...	23	46,203	254,208	403
Direct Purchase under authority of Executive Council‡ ... ..	27	271,898	523,456	505
Total ... ..	1,522	1,898,108	7,897,388	4,052

\* Includes 953 single farms. † Includes one estate surrendered at nominal value, practically as a gift.

‡ Includes 179,674 acres long term leases at nominal value.

#### IRRIGATION AREAS.

The principal irrigation scheme is on the Murrumbidgee River. It covers an area of 359,000 acres, of which 301,000 acres were formerly freehold and leasehold land. On 30th June, 1928, irrigated farms of a total area of 122,421 acres were held in 1,873 farms, including permissive occupancies, and, in addition, 70,666 acres were leased as irrigable and dry areas pending development. In addition there were 19,669 acres of irrigable and non-irrigable land held as factory and business sites and industrial blocks; and 254 acres held as town land leases, or purchases. The total area occupied by settlement was thus 213,010 acres.

The disposal of Crown lands within irrigation areas is regulated by the Crown Lands Consolidation Act, 1913, and the Irrigation Act, 1912-1926. These areas are administered by the Water Conservation and Irrigation Commission.

Land is, from time to time, made available for disposal by way of purchase in fee simple (freehold) or lease. The purchase money or annual rental as the case may be, is fixed by proclamation in the *Government Gazette* notifying the land as available for application.

The purchase money, after payment of deposit (£5), may be paid by half-yearly consecutive instalments including principal and interest at the prescribed rate, which at present is  $6\frac{1}{2}$  per cent. per annum. The number of instalments in the case of an irrigation farm purchase may be seventy-three, and in a non-irrigable purchase the number is determined by the *Gazette* proclamation. In the case of a town land purchase the purchase money is payable under the terms and conditions notified in the *Gazette*, but the time allowed for payment must not exceed five years.

In the case of leases the annual return for the first twenty-five years of the lease is fixed by the *Gazette* proclamation and thereafter is assessed as for periods of twenty years at the fair market annual rental value of the lease irrespective of any improvements thereon as may be agreed upon by the Commission and the lessee. Failing such agreement the rental is determined by the Land and Valuation Court. Where a lease is transferred or otherwise dealt with within the first 15 years thereof, the annual rental for the unexpired portion of the current period may be re-assessed as above.

Improvements of a certain value are required to be effected on the land within a period fixed by the Commission.

Any male person not less than 16 years of age, or female not less than 18 years, if not subject to certain statutory disqualifications, is eligible to apply for or acquire land on the Irrigation Areas, and two or more such persons may apply for and hold the land jointly.

A married woman, not living apart from her husband under an order of judicial separation, is disqualified from applying for land, except that, with the consent of the Minister, she may acquire a lease or purchase by way of transfer, out of her own moneys. She may, however, continue to hold a lease or purchase which she held before her marriage and hold a lease or purchase which may devolve on her by will or intestacy of a deceased person.

The term of residence must commence within six months after the granting of the application for the land, but this condition does not apply generally to a town land lease or town land purchase, a non-irrigable lease, or a non-irrigable purchase. This condition may also be suspended on such terms as the Commission may sanction and, with the consent of the Commission, may be performed by a tenant, employee, or agent of the holder or by one or more of joint holders.

A holder will be relieved of the performance of the residential condition when the Commission certifies that the necessary improvements have been effected to its satisfaction.

The holder of a perpetual lease, the conditions of which have, in the opinion of the Commission, been complied with, may, subject to certain provisions (particulars of which will be supplied upon application), convert such lease into a purchase.

Upon the payment of all moneys due and compliance with the conditions of any purchase or perpetual lease, the holder is entitled to a grant in the prescribed form.

Holdings may be transferred with the consent of the Commission.

Irrigation settlements have been established also at Hay and at Curlwaa, near Wentworth. These were, in 1913, placed under the control of the Water Conservation and Irrigation Commission. The tenure under which farms are held in these two areas is leasehold, ranging from three to thirty years' duration, and the policy adopted by the Commissioners has been to extend the tenures, subject to such conditions and reappraisal of rent as they may decide.

The Hay Irrigation Area consists of an area of 4,500 acres; and at 30th June, 1928, 1,027 acres were held by sixty-five settlers in 107 irrigation blocks, ranging from 3 up to 34 acres all, with the exception of one holding which is freehold, with a leasehold tenure of thirty years, while 2,884 acres were leased as fifty-two non-irrigated blocks for short terms up to five years. The Curlwaa Area comprises 10,550 acres; and at 30th June, 1928, an area of 2,017 acres was under occupation with a leasehold tenure of thirty years. In addition, 6,842 acres were leased for short terms.

The following table shows the number and area of farms in occupation on each of the irrigation areas at 30th June in each of the seven years to 1928 :—

Year ended 30th June.	Murrumbidgee.				Hay.		Curlwaa.	
	Farms.		Town Blocks.		Farms.		Farms.	
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
1922	1,781	108,240	732	175	70	3,737	120	9,531†
1923	2,064	119,610	839	204	65*	3,733†	123	9,531†
1924	2,061	116,000	879	222	71	3,911†	124	9,529†
1925	1,991A	112,480	835	208	71	3,911†	119	9,428†
1926	1,965A	111,758	844	202	70*	3,914†	116	9,194†
1927	1,931A	117,385	883	247	63	3,911†	135	9,512†
1928	1,873A	122,421	911‡	254	65	3,911†	121	8,850†

\* Reduction in number of lessees is due to group settlers transferring to individuals.

† Balance of area not occupied as farms, comprises roads, channels, and other reserves, including permissive occupancy.

‡ Including three Town Lands blocks with an area of 1 rood in the Coomealla Irrigation area.

A Reduction in number of farms is due to forfeitures, surrenders, &c.

In addition there was on Coomealla Irrigation Area 1 farm of 25 acres at 30th June, 1925, 6 of 119 acres at 30th June, 1926, 80 of 1,362 acres at 30th June, 1927, and 102 of 1,728 acres at 30th June, 1928.

At 30th June, 1928, an area of 1,875 acres was in course of alienation as irrigation farm purchases, besides 33 acres as town land purchases and 7 acres as irrigable and non-irrigable purchases.

Further information concerning the irrigation schemes of the State will be found in chapter "Water Conservation and Irrigation" of this Year Book.

#### LAND RESUMPTIONS AND APPROPRIATIONS.

Alienated land required by the State may be obtained by resumption, purchase, exchange, surrender, or gift. Resumptions are made under the Public Works, Lands for Public Purposes Acquisition, and Local Governments Acts, and except when made for purposes of Public Instruction or Railways they are treated by the Valuer-General. Resumptions for Federal purposes are made under the Commonwealth Lands Acquisition Act, 1906-16, Lands Acquisition (Defence) Act, 1918, and War Service Homes Act, 1918-20. Any Crown lands may be appropriated for public purposes.

The following statement shows the area of resumptions and appropriations and of the principal purchases which were made during the past five years. Purchases of land for hospitals and other semi-public purposes are not included.

Year ended 30th June.	Resumptions and Purchases.			Crown Lands Appropriated.			Gifts.			Total.		
	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.
1922	4,346	1	9	2,236	0	26	9	3	17	6,592	1	12
1923	28,354	1	12	10,648	2	15	13	0	17	39,016	0	4
1924	1,538	0	23	477	0	31	10	0	11	2,025	1	25
1925	2,640	3	20	3,062	2	10	7	2	0	5,710	3	30
1926	2,182	2	21	983	1	2	9	0	3	3,174	3	26
1927	8,122	0	24	605	1	15	6	3	32	8,934	1	31

The purposes of resumptions, appropriations, and purchases during 1926-27 were :—

	Area.					Area.		
	a.	r.	p.			a.	r.	p.
Artesian Bore ... ..	46	3	26	Rifle Range ... ..	222	2	24	
Breakwater ... ..	116	2	27	Savings Bank ... ..	1	3	24	
Bridge ... ..	36	1	33	Sewerage... ..	67	1	11	
Defence ... ..	931	0	25	Shire and Municipal Roads, Streets, &c.	180	0	24	
Electricity Supply ... ..	18	0	25	Shire Quarry or Gravel Reserve.	5	0	0	
Hospital ... ..	3	0	32	Storm Water Channels and Drainage.	11	1	25	
Irrigation... ..	0	2	30	Water Storage and River Dam.	5,098	0	24	
Police Stations ... ..	1	3	12	Water Supply ... ..	696	2	16	
Postal ... ..	5	0	29					
Public School Sites ... ..	296	0	31	<b>Total</b> ... ..	<b>8,934</b>	<b>1</b>	<b>31</b>	
Railway and Tramways... ..	1,159	1	1					
Recreation Grounds, &c.	35	2	12					

Land resumptions, purchases, and gifts in quinquennial groups from the year 1905 inclusive, were as follow :—

Year.	Resumptions, Appropriations, and Purchases.			Gifts.			Total.		
	a.	r.	p.	a.	r.	p.	a.	r.	p.
1905-09	105,848	3	8	439	1	27	106,288	0	35
1910-14	282,008	3	17	117	0	10	282,125	3	27
1915-19	64,194	0	35	81	0	35	64,275	1	30
1920-24	84,046	1	6	91	1	32	84,137	2	38
1925	5,703	1	29	7	2	0	5,710	3	29
1926	3,165	3	23	9	0	3	3,174	3	26
1927	8,927	1	39	6	3	32	8,934	1	31

The total area of land dealt with in this way between 1890 and June, 1924, was approximately 557,000 acres, including about 279,500 acres for water conservation and irrigation projects, 52,000 acres for defence, 48,000 acres for railways and tramways, 31,000 acres for town water supplies, and 89,000 acres for closer settlement.

#### REVENUE FROM PUBLIC LANDS.

The revenue received from public lands during the years ended 30th June, 1925 to 1927, is shown on page 413 of the Year Book.

## FOOD AND PRICES.

### FOOD SUPPLY AND DISTRIBUTION.

New South Wales produces ample supplies of the food commodities which enter most largely into daily consumption, such as meat, bread, milk and butter. Local production of many other foods is augmented by importation from neighbouring States, and with the exception of tinned fish, the only items which are imported in large quantities from oversea countries are tropical products, e.g., tea, sago, etc. Until recently rice also was obtained solely by importation, but it is grown now on the Murrumbidgee Irrigation area, and it has been established that it may be produced there in sufficient quantities to supply the whole of Australia.

Legislation, which gives the governing authorities power to supervise the conditions under which food is produced and distributed and to ensure a reasonable standard of quality, is contained in various enactments, the principal being the Pure Food Act of 1908, the Dairies Supervision and the Dairy Industry Acts, the Local Government Act, and measures relating to the slaughtering of stock for food.

The administration of the food laws in incorporated areas is primarily the duty of the Board of Health, but the function may be left to the municipal and shire councils. If a council fails to fulfil the duty satisfactorily, the Board itself may exercise its powers in respect of these matters, or may take steps to compel the council to act.

The Board of Health drafts regulations under the Pure Food Act to prescribe standards for the composition, purity, and quality of foods and drugs, upon the recommendations of an Advisory Committee, consisting of the president of the Board, medical men, and chemists, merchants, and others conversant with trade requirements. With a view to securing uniformity throughout Australia, the regulations have been standardised so far as the divergence of the laws of the various States will permit.

Under the Pure Food Act the sale or exhibition for sale of food which is adulterated or described falsely is prohibited, and packages must be labelled with the true description and weight of the contents and the name of the maker or vendor.

The Commonwealth Department of Trade and Customs exercises supervision in regard to the composition and labelling of food and of drugs imported into Australia.

The Weights and Measures Act affords protection to the public from dishonesty in regard to the measurement of food in the course of distribution. It prescribes that traders' weighing and measuring appliances must be kept to a specified degree of accuracy and be submitted periodically to the Weights and Measures Office for verification, and that purchasers must receive full weight and measure.

The standard weights and measures of the United Kingdom have been adopted. It is a general rule that articles sold by weight must be sold by avoirdupois weight. The exceptions are as follows:—Precious metals, by troy weight; precious stones, by metric carat; drugs, retail, by apothecaries' weight. Sales by retail must be according to net weight or measure, and the practice of selling certain vegetables—e.g., green peas in the pod—and other commodities by measure of capacity has been prohibited by regulation. The net weight or measure must be stamped on packages in which commodities are offered for sale.



Special provision has been made to prevent fraud in respect of the weighing of coal and firewood. In the metropolitan and Parramatta police districts, and in other districts as proclaimed, coal and firewood must be sold by weight, though quantities exceeding 5 cwt. may be sold otherwise, with the written consent of the purchaser. Persons delivering coal or firewood are required under the regulations to carry weighing instruments, and, if requested by the purchaser, to check the weight of the goods delivered.

Weights and Measures Offices have been established in Sydney, Newcastle, Goulburn, Orange and Wagga, and in these districts the law is administered by permanent officers. In other localities the duties of inspection are undertaken generally by the police.

The weight of bread is regulated under the provisions of the Bread Act of 1901. The standard loaves weigh 1 lb., 2 lb., and 4 lb. Operations under the Act are subject to limitation, as the result of legal decisions that the existing law does not authorise the inspection of bread in the course of delivery, and that an inspector may enter a bakehouse between the hours of sunrise and sunset only.

Gas supplied by gas companies for cooking, heating and lighting is subject to regulation in terms of the Gas Act, 1912, and its amendments. Standards are prescribed in respect of power, purity and pressure, and the prices are regulated in relation to the dividends paid to shareholders. Standard prices are fixed for gas supplied to private consumers by meter, and they may be varied, after inquiry into changes in costs of production and distribution. If the standard price is charged the standard dividend may be paid; if it is exceeded there must be a corresponding reduction in dividend; and if a price lower than the standard price is charged a dividend proportionately higher than the standard dividend may be paid. Meters issued for use by a gas company must be tested and stamped by a Government examiner.

The Farm Produce Agents Act, 1926, makes legal provision for the regulation of the practices of agents selling farm produce on commission. Agents must be licensed, and are required to furnish to the Registrar a bond for £500 from an insurance company or some such security as prescribed. Agents may not purchase produce consigned to them for sale unless the owner gives his consent in writing, and they may not charge commission on such transactions. The destruction of produce to raise the price of similar produce is prohibited, also the practice of forestalling, that is, buying produce in a market and selling it there wholesale at an enhanced price.

In the matter of distribution of food supplies, the local governing authorities in the incorporated areas of New South Wales are authorised to establish public markets and to regulate the hawking and peddling of food commodities within the area of their jurisdiction.

The Municipal Council of Sydney has established large markets in the city for vegetables, farm produce, fish, and poultry, the area and cost being as follows:—

Market.	Floor Space.	Cost of Market.	Market.	Floor Space.	Cost of Market.
Vegetable ...	sq. ft. 95,560	£ 127,000	Fish ... ..	sq. ft. 47,517	£ 49,000
Produce ... ..	45,300	48,300	Poultry ... ..	12,200	27,500
Fruit ... ..	143,000	119,500			

Cold storage works have been constructed with chilling and freezing rooms for the storage of fruit, dairy and farm produce, mutton and rabbits, and their cost was £99,000. The total storage capacity is 252,687 cubic feet. Provision is made to supply power for an ice-making plant, also for an addition of cooling space as may become necessary.

Outside the city area the local governing bodies have made little use of their powers in relation to the establishment of markets.

A conference of producers and consumers convened by the Minister for Lands, met at Bathurst in September, 1926, for the purpose of considering the causes of the disparity between the prices paid by the consumer and the returns received by the producers, also the waste in marketing food-stuffs. In the following year the Marketing of Primary Products Act was passed to authorise the formation of marketing boards representing producers and consumers. A marketing board for any product may not be formed unless a poll be taken of the producers thereof and two-thirds of the votes are in favour of its constitution. At the end of November, 1928, boards had been appointed for marketing rice and eggs; polls in respect of butter and wheat had proved unfavourable to this system of marketing; and polls were impending in respect of a board for certain varieties of canning fruit (Trevatt apricots and clingstone peaches) and boards for broom millet and honey.

CONSUMPTION OF FOOD.

On the 13th September, 1910, the system of keeping records of interstate trade ceased, so that it became difficult to determine accurately the quantity of commodities consumed within the State. In view, however, of the special interest attached to the question of food consumption, particularly in relation to the cost of living, efforts have been made since 1916 to obtain data from other sources, and in spite of the absence of official records of interstate trade, the following estimates are published with a large degree of confidence as indicating the consumption of the more important articles of diet.

In order to show the changes of regimen, the information is shown as at ten-year intervals since 1901. In regard to 1911 it has been assumed that the consumption of all the commodities except meat was the same as the average of the three years, 1907-09. The quotations for 1921 and 1927 relate to the twelve months ended 30th June:—

Commodity.	Unit.	Consumption per head per annum.				Commodity.	Unit.	Consumption per head per annum.					
		1901.	1911.	1921	1927.			1901.	1911.	1921.	1927		
<b>Meat—</b>													
Beef .. ..	lb.	134.4	150.9	94.0	123.1	Flour .. ..	lb.	244.4	228.4	211.2	217.		
Mutton ..	lb.	90.7	101.3	66.1	71.6	Bread .. ..	2-lb. loaf.	105.0	102.0	99.0	100.0		
Pork .. ..	lb.	4.6	5.0	2.3	5.4	Rice* .. ..	lb.	7.8	6.6	4.4	4.1		
Bacon, Ham ..	lb.	9.0	10.7	8.4	12.6	Sago, Tapioca ..	lb.	1.9	2.0	1.8	1.7		
<b>Total Meat ..</b>	<b>lb.</b>	<b>238.7</b>	<b>267.9</b>	<b>170.8</b>	<b>212.7</b>	Oatmeal .. ..	lb.	7.0	7.6	4.9	5.3		
						Sugar .. ..	lb.	107.8	103.8	102.2	110.9		
<b>Fish—</b>						Jam .. ..	lb.	14.2	15.7	11.4	10.8		
Fresh, Smoked ..	lb.	4.8	6.4	10.9	9.5	Butter .. ..	lb.	19.6	26.1	27.3	35.5		
Preserved .. ..	lb.	4.7	4.3	2.8	4.2	Cheese .. ..	lb.	3.7	3.5	3.4	3.8		
<b>Total Fish ..</b>	<b>lb.</b>	<b>9.5</b>	<b>10.7</b>	<b>13.7</b>	<b>13.7</b>	Milk—							
						Fresh .. ..	gal.	16.4	17.4	19.6	21.0		
Potatoes .. ..	lb.	197.7	181.0	104.9	103.3	Preserved .. ..	lb.	3.5	4.4	5.9	6.2		
						Tea .. ..	lb.	7.9	7.3	8.1	7.9		
						Coffee and Chicory	oz.	13.3	11.0	10.9	10.1		

\* Revised since last issue.

The consumption of fresh fish, as estimated above, is exclusive of the catches of private fishermen, and of a proportion of the fish caught by licensed fishermen and sold to consumers in the immediate vicinity of the

fishing grounds. In estimating the consumption of potatoes, the quantities produced on holdings which are less than one acre in extent, and in market gardens, have not been taken into account, as particulars relating to such quantities are not recorded. The potatoes and rice used for seed are excluded. The figures relating to the consumption of sugar include the sugar contents of golden syrup and treacle. The consumption of fresh milk is exclusive of the quantities recorded as being consumed in the form of sweet cream or used in the manufacture of ice-cream.

From the table shown above, it will be seen that there was a marked decline in the average consumption of many important food commodities in 1921, as compared with the consumption ten years earlier, the decline being greatest in respect of meat, potatoes, and cereal foods. In the year 1920-21 food was very dear, the general level of retail prices in Sydney being twice that of the year 1911. Moreover, industrial and commercial interests were undergoing a period of deflation following the post war boom, and these conditions necessitated the exercise of economy in respect of all classes of expenditure. Since 1921 there has been an appreciable increase in the average consumption of food, notably meat and butter, but the consumption per head of all the commodities except fish, sugar, dairy products and tea remains below the average of the year 1911.

#### Meat.

The quantity of meat consumed is large, though it is lower than in the years prior to 1914-15, when the combined effects of drought and war caused a decrease in supplies and a phenomenal rise in prices. Approximately one-third of the meat sold for consumption is bone and waste, and there is little doubt that more economy is exercised now in the use of meat than in earlier years, when its cheapness caused a wasteful consumption. Therefore, the actual decline in consumption has been less than is indicated by the figures in the following statement, which shows the average annual consumption per head of the various kinds of meat at intervals since 1901:—

Year.	Beef and Veal.	Mutton and Lamb.	Pork.	Bacon and Ham.	Total.
	lb.	lb.	lb.	lb.	lb.
1901	134.4	90.7	4.6	9.0	238.7
1906	140.5	89.8	4.2	9.2	243.7
1911	150.9	101.3	5.0	10.7	267.9
1915-16	97.5	72.2	2.0	7.9	179.6
1920-21	94.0	66.1	2.3	8.4	170.8
1921-22	112.6	86.1	4.4	10.2	213.3
1922-23	123.0	78.3	4.2	9.7	215.2
1923-24	126.1	59.9	3.7	11.1	200.8
1924-25	125.3	54.7	3.7	11.9	195.6
1925-26	125.4	64.1	3.8	12.9	206.2
1926-27	123.1	71.6	5.4	12.6	212.7

Between 1911 and 1920-21 the consumption per head decreased by 97 lb., or 36 per cent. In 1921-22 the average moved sharply upwards, and there was an increase of 42½ lb. over the average of the previous year. During the two years ended June, 1925, there was a decrease, then the average commenced to rise again. During the last four years the movement has been somewhat irregular, and in 1926-27 it was 55½ lb., or 21 per cent lower than in 1911.

As a general rule fluctuations in the average consumption are the result of variations in prices. In 1921-22 the increase in consumption followed a decline of 30 per cent. in retail prices. In 1926-27 prices were 20 per cent. dearer, but the average consumption was practically the same in both years.

The movement in the average retail prices of meat (including bacon and ham), and in the consumption per head of population is illustrated in the following table of index numbers, the average for the year 1901 being taken as 100 in each case.

Year.	Average Retail Price of meat.	Average Annual Consumption of meat.	Year.	Average Retail Price of meat.	Average Annual Consumption of meat.
1901	100	100	1922-23	180	90
1906	101	102	1923-24	219	84
1911	101	112	1924-25	211	82
1915-16	223	75	1925-26	215	86
1920-21	248	72	1926-27	204	89
1921-22	174	89			

It is noticeable in regard to the consumption of meat in New South Wales that there is a preference for beef, though it is usually dearer than mutton.

The following statement shows the average retail prices in Sydney of each kind of meat. The averages are based on the same data as to prices and weights as those used for the compilation of the index numbers of retail prices of food which are shown elsewhere in this chapter:—

Year.	Average Retail Prices per lb.			
	Beef.	Mutton.	Pork.	Bacon.
	d.	d.	d.	d.
1911	4.1	3.2	8.1	9.6
1915-16	10.1	7.2	12.1	15.2
1920-21	9.9	8.3	18.3	23.6
1921-22	6.6	5.8	14.5	18.0
1922-23	6.8	6.2	12.8	17.9
1923-24	8.2	8.1	15.1	18.9
1924-25	7.2	8.6	14.6	17.1
1925-26	7.8	8.3	14.0	18.0
1926-27	7.7	7.4	13.9	17.7
1927-28	9.2	8.1	14.7	17.6

In 1920-21 when the average price of beef was 9.9d. per lb., and of mutton 8.3d., the average consumption of beef was 94 lb. per head, and of mutton 66 lb. There was a sharp decline in prices of beef in the following year and the consumption increased, and it has remained fairly constant during the last five years. The consumption of mutton has fluctuated with the rise and fall of prices. In 1923-24 the prices of beef and mutton were practically equal, and the consumption of beef amounted to 126 lb. per head, and of mutton to 60 lb.

The slaughter of stock and the sale of meat in the county of Cumberland, which contains the metropolitan area, are under the control of the Metropolitan Meat Industry Board, which consists of three members appointed by the Governor.

In the Newcastle district, *i.e.*, within a radius of 14 miles from the Newcastle Post Office, slaughtering and inspection are controlled by the Newcastle District Abattoir Board. Outside the county of Cumberland and the Newcastle district, slaughtering is done at private abattoirs, which are subject to inspection by officers appointed by the local authorities and by the Board of Health.

The abattoirs controlled by the Metropolitan Meat Industry Board are situated at Homebush Bay in proximity to the stock saleyards. The carcase butchers purchase stock on the hoof, supply the labour for slaughtering and pay abattoir fees at fixed charges per head of stock treated. Meat for the metropolitan market is killed during the day and placed in a chill room until midnight, when it is despatched by rail to the city for distribution to the retail butchers. A distributing depot is situated within the city area on the Darling Harbour railway line, and it has a capacity to accommodate 6,000 carcases of mutton and 600 carcases of beef.

An estimate of the number of livestock (cattle, sheep, and pigs) used for food in New South Wales in various years since 1901 is shown in the following statement:—

Year.	Bullocks and Cows.	Calves.	Sheep and Lambs.	Pigs.
1901	297,200	18,500	2,717,400	264,900
1911	412,300	54,500	4,068,300	335,400
1915-16	331,200	30,300	3,358,500	234,600
1920-21	404,400	78,300	3,483,500	247,600
1921-22	470,600	94,500	4,099,700	352,900
1922-23	557,300	116,500	4,072,800	363,700
1923-24	572,400	123,700	3,046,600	379,900
1924-25	577,900	154,400	2,788,500	435,500
1925-26	575,000	168,800	3,320,600	485,800
1926-27	606,800	143,900	4,068,700	518,700

The figures differ from those published elsewhere in this volume showing the animals killed in slaughtering establishments, as the latter include animals slaughtered for export and those treated in boiling-down works. Moreover, the number of pigs shown in the table is larger than the number slaughtered in New South Wales in some years, when the production of bacon was not sufficient for local requirements.

Further particulars relating to meat are published in the chapter of this volume entitled "Pastoral Industry."

#### *Fish.*

The quantity of fish consumed in New South Wales in 1927 represented only 13.7 lb. per head, viz., fresh and smoked 9.5 lb. and preserved 4.2 lb.

The seaboard waters contain large supplies of edible fish, but owing to the climatic conditions it is difficult to devise an effective method of distributing fresh fish to private consumers, and it is not probable that fish will become a popular food throughout the State until this difficulty has been overcome. Under existing conditions the bulk of the fresh fish is consumed in the metropolitan district, where facilities for marketing are available. About two-thirds of the supply is obtained in the river estuaries and coastal lakes and inlets, and one-third by deep-sea trawling.

The Sydney Corporation (Fish Markets) Act, passed in November, 1922, prescribed that in a defined area, which embraces the metropolitan and extra-metropolitan districts, fish may not be sold by auction except in public markets under the control of the council of a municipality or shire, and no person, except the original owner, may sell fish by wholesale unless it has been sold previously in a municipal market. The effect of the Act is to centralise the marketing of fish in Sydney in the Municipal Market, where the sales are conducted by licensed agents.

Regulations under the Fisheries Act require that all fish sold in the fish market or by wholesale dealers must be sold by weight.

*Bread, Flour, and Cereal Foods.*

Such food commodities as bread and potatoes were of greater importance in the usual family dietary in early years than at the present time, when a variety of vegetables and other foods are obtainable readily.

The average consumption of bread in 1927 is estimated to have been about 100 loaves (2 lb.) per head. A decline from 102 loaves in 1911, to 96 in 1917, is attributed to the introduction of day-baking in Sydney in 1914, as the bread was comparatively stale when delivered on the day after it was baked. Subsequently the hours of baking were adjusted, and as fresher bread became available the consumption increased.

The supply of bread is sold for the most part by the bakers direct to the consumers. In March, 1926, baking between the hours of 6 p.m. and 5.30 a.m. was prohibited, also baking on holidays, and, in the counties of Cumberland and Northumberland, on Sundays. The prohibition does not apply, however, when the day upon which the bread is to be delivered is a "double" or a "treble" delivery day, *i.e.*, a day preceding one or two holidays. In and around the districts of Sydney and Newcastle bread may not be delivered between 6 p.m. and 6 a.m.; in other places delivery is prohibited between 6 p.m. and 5 a.m.

Before the prohibition of night-baking practically all the bread was delivered at the consumers' houses, but the practice became less common when a large portion of the bread could not be delivered on the day of baking, and customers began to buy at the shops in order to obtain fresher and cheaper supplies. In recent years there has been a marked increase in the quantity of bread consumed in restaurants and hotels, with a corresponding diminution in the average quantity delivered to householders.

The price of bread in Sydney is fixed by the Master Bakers' Association with relation to the price of flour, which is fixed ordinarily by an association of millers.

The variations in the price of bread in Sydney since December, 1920, are shown below in conjunction with the price of flour, at the time when the price of bread was altered. The prices in 1901 and 1911 are given also for the purpose of comparison. The prices stated are for delivery and weekly payments. In recent years the price has been  $\frac{1}{4}$ d. per loaf less for cash over the counter.

Date.	Price of 2-lb. Loaf.	Cost of Flour per ton.	Date.	Price of 2-lb. Loaf.	Cost of Fl. ur per ton.
	d.	£ s. d.		d.	£ s. d.
1901... ..	2½	6 15 0	1925—January ...	5½	15 15 0
1911... ..	3¼	8 15 0	1926—May ...	6	15 0 0
1920—December ...	6½	19 12 6	July ...	6½	15 15 0
1921—September ...	6½	20 17 6	December ...	6½	13 10 0
December ...	5	11 15 0	1927—January ...	6	12 10 0
1924—July ...	5¼	13 0 0	September ...	6¼	13 15 0
October ...	5½	15 5 0	1928—February ...	6	12 10 0

The consumption of flour is estimated at 217 lb. per head, including 176,000 tons, or 150 lb. per head, used for bread. In factories where biscuits are made for local consumption and for export 14,367 tons of flour, or 12.2 lb. per head, were used during 1926-27, but the quantity used by pastrycooks is not available. Exclusive of the quantity used for bread and biscuits, it is estimated that the average household consumption of flour by a family of five persons is about 4 lb. per week, or 42 lb. per head per annum.

The consumption of oatmeal since 1911 has declined, probably on account of an increased consumption of other breakfast foods. The consumption of sago and tapioca is small, and the average fairly constant.

The quantity of rice has decreased from 7.8 lb. to 4.1 lb. per head. The averages indicating the consumption of rice, as shown in the table on page 747, have been amended since the previous issue of the Year Book, in order to make due allowance for the loss in weight incurred in treating rice imported as uncleaned, and included previously at its gross weight. Until 1925 the supply of rice was imported mainly from China and India, and dressed locally by a mechanical process. During more recent years large quantities have been grown on the Murrumbidgee Irrigation Area.

#### *Butter, Cheese, and Milk.*

Butter is an article of diet in general consumption throughout New South Wales, the local product being choice in quality and more than sufficient in quantity to supply the demand. The consumption of cheese is small, the average being  $3\frac{3}{4}$  lb. per head per annum, and it varies very little from year to year.

The quantity of fresh milk consumed is about 21 gallons per head per annum, or less than half-a-pint per day. Milk is regarded as one of the most valuable articles of diet, and it is desirable that the supply should be of good quality, plentiful, and available at a low price to enable families to consume it in sufficient quantities.

The conditions under which milk and other dairy products are produced and distributed for human consumption are subject to regulation under the Dairies Supervision Act of 1901—a consolidating measure which replaced a statute passed in 1886—and under the Pure Food Act of 1908, and the Dairy Industry Act of 1915.

There has been a marked improvement in the condition of dairies since they were brought under supervision and this has been an important factor in effecting a reduction in the death-rates from preventable diseases. The Dairies Supervision Act prescribes the registration of all dairymen and milk vendors, and of dairy premises. The duties of registration and of inspection are vested in the local authorities, and the administration of the Act is supervised by a staff of inspectors attached to the Board of Health. Dairy premises are subject to inspection at all reasonable times.

As at 31st December, 1927, there were 21,478 registered dairymen in the State, and the cattle in their dairy herds numbered 909,829. There were also 9,012 registered milk-vendors. In the metropolitan district there were 536 registered dairymen, with 12,687 cattle, and there were 4,855 registered milk-vendors.

The standard for milk is fixed by regulation under the Pure Food Act, which prescribes that it must be normal, clean and sweet, and taken from a cow which is healthy, fed properly and milked regularly. It must contain 8.5 per cent. of solids, not fat, and 3.2 per cent of milk fat, and must be free from any added substance. During the year 1927, inspectors collected over 14,000 samples of milk, and 2.9 per cent. were found to be below standard. Prosecutions were instituted in 235 cases, and penalties in fines and costs amounting to £1,010 were imposed.

The Dairy Industry Act is applied generally to the manufacture of butter, etc., in factories, and its provisions are stated in the chapter relating to the dairying industry.

About one-third of the milk supply of Sydney is derived from dairies within the metropolitan area and the balance from country districts, viz., the South Coast district between Wollongong and Nowra, the districts traversed by the Main Southern Railway between Liverpool and Moss Vale, the Penrith, Windsor, and Richmond Districts, the districts around Singleton and Branxton on the Northern Railway line, and those in the neighbourhood of Dungog and Taree on the North Coast line.

The milk from the metropolitan dairies is distributed directly to the consumers who receive it within a few hours of milking, but the proportion of the supply from this source has decreased considerably, as the pressure of population and the demand for residential sites has caused the land used formerly for dairying to be diverted to other uses.

The milk from the country is handled for the most part by four distributing companies, who take delivery from the producers at country railway stations. The time occupied by the journey from the most distant stations is about ten hours, the average time between milking and arrival in Sydney being between sixteen and twenty-four hours. The country milk is pasteurised before distribution, and in 1926-27 the companies distributed nearly 16,500,000 gallons of pasteurised milk in the metropolitan districts.

The prices of milk in Sydney have been doubled since 1901, as indicated in the following statement, which shows the wholesale price paid by the distributing companies to the farmer for milk delivered on trucks at country railway stations, and the retail price charged to the householder for country milk, and for fresh milk from the Metropolitan dairies.

Year.	Wholesale.		Retail.		Year.	Wholesale.		Retail.	
			Country.	Fresh.				Country.	Fresh.
	per gal.		per qt.			per gal.		per qt.	
	d.	d.	d.	d.		d.	d.	d.	d.
1901	6	7	4	4-5	1924	13 to 15	7½-8	8½-9	
1911	6	9	4-5	5	1925	12 „ 13	7½	8½	
1916	8	12	5-5½	6	1926	12 „ 16	7½-9	8½-9½	
1921	13	17	7½-8½	8½-10	1927	14 „ 16½	8½-9	9-9½	
1922	13	15	7½-8	8½-9	1928	16½d.	9	9-9½	
1923	13	17	8-8½	9					

The retail price of country milk was reduced from 9d. to 8½d. per quart in February, 1927, and increased to 9d. in April, when the last variation was made. The price usually charged for local milk ranges from 9d. to 9½d. per quart. The wholesale price was reduced from 1s. 4d. to 1s. 2d. per gallon in February, 1927, and increased to 1s. 4d. in April, and to 1s. 4½d. in November, and this price was still ruling at the end of the year 1928.

#### *Sugar and Jam.*

The quantity of sugar consumed (110 lb. per head) appears high, but the average consumption, as estimated, includes the quantities used in the manufacture of products such as jam and biscuits, of which a proportion is exported. The records of the manufacturing industry in 1926-27 show that 7,026 tons of sugar (6.7 lb. per head) were used for jam and canned fruit; 3,558 tons (3.4 lb. per head) for biscuits; 5,337 tons (5.1 lb. per head) in breweries; 3,744 tons (3.6 lb. per head) in aerated water factories; 11,132 tons (10.6 lb. per head) in making confectionery; and 2,039 tons (2 lb. per head) in making condiments, pickles and sauces, and condensed milk.

The average household consumption of sugar is estimated at 6 lb. per week for a family of five persons, or 62 lb. per head per annum.

In normal seasons sugar is produced in New South Wales and Queensland in sufficient quantity to supply local requirements. The retail price of sugar in the metropolitan shops is from 4½d. to 4¾d. per lb.

Jams and preserved fruit are manufactured in Australia in larger quantities than the local demand can absorb. During the war there was a great expansion in production for export, but increases in prices led to a shrinkage in the local consumption of the factory-made article, though it encouraged home production, of which records are not available.



*Tea and Coffee.*

Tea enters largely into consumption among all classes, the average annual consumption being nearly 8 lb. per head. Of coffee, on the other hand, the average was only 10 oz. per head.

The tea consumed in New South Wales is imported mainly from Ceylon and Netherlands East Indies. During the three years ended June, 1927, the Netherlands East Indies supplied about 51 per cent. of the total importations; 36 per cent. was imported from Ceylon, 10 per cent. from India and 3 per cent. from China. The figures for the three pre-war years, 1911-13, were:—Netherlands East Indies, 13 per cent.; Ceylon, 58 per cent.; India, 20 per cent., and China, 9 per cent. The great bulk of the coffee is imported from the Netherlands East Indies and India. The importation from the Dutch territories has increased considerably since 1913.

*Vegetables and Fruit.*

The potato is the chief article of diet in the vegetable group, but it is subject to great fluctuations in supplies and in prices, and the consumption varies accordingly. Local production is inadequate, and large quantities are imported from Victoria and Tasmania. Imported potatoes are sold by private treaty on the wharf shortly after arrival, the wholesale prices being fixed by arrangement between the sellers. Locally-grown potatoes are sold by auction in the railway yards. In 1911 the average retail price of potatoes in Sydney was 12½d. per 14 lb., and the consumption per head was 181 lb. In 1926-27 potatoes were very dear, the average price being 2s. 10d. per 14 lb., and the average consumption 103.3 lb.

Onions are imported in large quantities from Victoria. Other vegetables are obtained chiefly from local sources, the Sydney supplies being marketed at the City Council's market, where the growers sell their produce by private treaty.

The fruit supply is derived mainly from the local orchards, and from Victoria, Tasmania, and Queensland. From November or December to February or March the supply is for the most part grown locally. From March to October the market for all fruits, except citrus, is supplied chiefly from the other States, and from May to December local supplies of citrus fruits are available. Prior to the war bananas were imported in large quantities from Fiji, but Queensland is now the chief source of supply, and some are grown locally in the Tweed River district. The industry in Australia is protected by a duty of 1d. per lb. on imports.

In Sydney there are two fruit markets, viz., the Fruit Exchange, conducted by a private company, and the City Market, controlled by the City Council. Market sales are conducted generally by private treaty. The majority of the country and interstate distributors operate in the Fruit Exchange, which is exclusively a wholesale market. In the City Market, which has direct connection with the main railway system, a considerable amount of retail as well as wholesale trade is transacted, part of the space being reserved for the use of growers, and the remainder let to agents. The provisions of the Farm Produce Agents Act must be observed by agents who transact business in these markets.

**WHOLESALE PRICES.**

Information relating to wholesale prices in Sydney is published in detail in the "New South Wales Statistical Register." The average prices in each year from 1901 to 1920 are published in the issue for 1919-20, and the monthly averages in later years are shown in subsequent issues.

From the prices of 100 commodities, which include the majority of items of importance in the economic life of the State, the index numbers shown in the following tables have been compiled to show the movement in wholesale prices in Sydney since 1901. It is not claimed that they give an exact measure of the changes in wholesale prices, but it is considered that they indicate approximately the general trend of the movement.

In compiling the index numbers the commodities have been arranged in eight groups, and each commodity has been weighted according to the average annual consumption in New South Wales during the three years 1911-1913. Further details relating to the composition of the index numbers of wholesale prices are stated in the 1919 and 1920 issues of the Year Book, e.g., the grade of the articles or commodities included, the source of information as to prices, and the weights applied.

The wholesale price index numbers in various years since 1901 are shown in the following statements. The numbers for intervening years not included in the tables are published in the 1921 issue of the Year Book. The prices in the year 1911 have been used as a base, and called 1,000.

The index numbers of each group and of all groups combined are as follows; the indexes are not comparable between groups, except to illustrate the respective changes in price:—

Year.	I. Agricultural Produce.	II. Groceries	III. Wool, Cotton, Leather, Jute.	IV. Metals and Coal.	V. Building Materials	VI. Meat.	VII. Dairy Produce.	VIII. Chemicals.	All Commodities.*
1901	834	949	737	1001	745	1222	963	977	904
1906	929	960	937	996	806	1163	953	951	955
1911	1000	1000	1000	1000	1000	1000	1000	1000	1000
1913	1069	1033	1043	1039	1107	1379	1093	1093	1092
1916	1163	1245	1367	1725	1241	2896	1380	1617	1489
1920	2430	1914	3079	2602	2415	3113	2236	2501	2503
1921	1750	1941	1471	2511	2259	1921	2020	1863	1956
1922	1638	1859	1628	2164	2074	1513	1735	1668	1800
1923	1720	1754	2061	2131	1994	2121	1939	1531	1925.
1924	1475	1676	2408	2127	1985	2039	1671	1493	1874
1925	1680	1673	2094	2117	1895	2042	1612	1423	1854
1926	1892	1683	1652	2161	1893	1802	1760	1447	1834
1927	1767	1682	1633	2197	1957	1971	1831	1483	1840

\* Weighted average.

Prices were at the lowest point at the beginning of the period under review, and with some fluctuations they rose slowly until 1911. Subsequently the upward movement was almost constant until 1920, when the index number was 150 per cent. higher than in 1911. In 1921 and 1922 there were successive decreases of 22 per cent. and 8 per cent., then a rise of 7 per cent. in 1923 was followed by a decline of 3½ per cent. During the three years 1925 to 1927 there has been little change in the index number of all commodities, but some groups have shown material alteration, e.g., agricultural produce has fluctuated, wool and other textiles have become cheaper, and dairy produce dearer. During 1927 the principal variations as compared with the preceding year were a decline of 7 per cent. in agricultural produce and increases in meat 9.4 per cent., dairy produce 4 per cent., building materials 3.4 per cent.

The movement month by month since January, 1927, may be gauged from the following table, the base being the year 1911 as in the preceding table:—

Month.	I. Agricultural Produce.	II. Groceries	III. Wool, Cotton, Leather, Jute.	IV. Metals and Coal.	V. Building Materials	VI. Meat.	VII. Dairy Produce.	VIII. Chemicals.	IX. All Commodities.
1927.									
January ...	1853	1674	1467	2200	1940	1901	1756	1483	1818
February ...	1722	1713	1463	2260	1940	1760	1775	1498	1784
March ...	1683	1678	1472	2197	1951	1606	1753	1498	1754
April ...	1625	1677	1456	2191	1968	1629	1829	1481	1750
May ...	1656	1679	1603	2185	1968	1593	1889	1485	1780
June ...	1634	1683	1633	2177	1968	1561	1945	1488	1781
July ...	1767	1676	1672	2218	1981	1854	1838	1488	1840
August ...	1867	1676	1718	2218	1956	1917	1845	1487	1872
September ...	1991	1680	1851	2217	1957	2341	1918	1493	1967
October ...	2004	1679	1773	2197	1954	2574	1907	1493	1977
November ...	1750	1680	1767	2187	1933	2587	1771	1461	1900
December ...	1646	1685	1725	2181	1972	2384	1742	1447	1859
1928.									
January ...	1537	1680	1753	2181	1965	2093	1707	1470	1806
February ...	1482	1679	1758	2181	1967	2209	1676	1510	1804
March ...	1448	1673	1805	2173	1967	2150	1773	1510	1805
April ...	1495	1672	1864	2173	1933	2132	1802	1510	1820
May ...	1475	1672	1957	2159	1933	1990	1806	1504	1814
June ...	1411	1672	1845	2159	1933	1922	1796	1491	1776
July ...	1486	1671	1890	2161	1933	2104	1775	1491	1815
August ...	1400	1671	1763	2159	1930	1931	1756	1491	1758
September ...	1360	1675	1727	2192	1930	1897	1764	1491	1747
October ...	1430	1675	1744	2192	1922	1802	1771	1491	1755
November ...	1438	1677	1733	2192	1921	1764	1727	1476	1747

In the early months of the year 1927 wholesale prices declined slowly, the lowest point being in April, when the index number was 75 per cent. above that of the base year 1911. Then a movement towards a higher level became apparent in the textile and dairy produce groups though prices of meat declined again. In July the index number of nearly all the groups became higher, the change being greatest in respect of agricultural produce and meat. After another rise in these two groups the index number in October was nearly double that of the base year, then a sharp decline occurred, so that prices were lower in January, 1928, than at the beginning of the previous year.

The movement in the prices of Australian products is compared with the changes in respect of imported goods in the following statement. The prices of local products are affected to a great extent by local seasonal conditions, though the prices of such commodities as wool, wheat, and metals are practically fixed in the countries to which they are exported in large quantities:—

Year.	Australian Products.	Imported Goods.	All Com- modities.	Year.	Australian Products.	Imported Goods.	All Com- modities.
1901	903	906	904	1922	1722	1950	1860
1906	955	955	955	1923	1892	1987	1925
1911	1000	1000	1000	1924	1822	1974	1874
1916	1481	1509	1490	1925	1888	1845	1854
1920	2354	2799	2503	1926	1892	1711	1834
1921	1866	2136	1956	1927	1893	1737	1840

The increase in the prices of imported goods between 1911 and 1920 was more pronounced than the rise in prices of local products. The prices of

both classes of commodities reached the maximum in 1920, and declined by about 30 per cent. in the two years after the end of the war. In 1923 the prices of Australian products rose by 10 per cent., and those of imported goods by 2 per cent. Both groups showed a slight decrease in 1924, then the price level of Australian goods began to rise slowly, but the prices of imported commodities continued to decline. In 1927 Australian goods were 20 per cent. and imported goods were 38 per cent. cheaper than in 1920.

The average wholesale prices in Sydney of thirty-one commodities, which are representative of the various groups, are shown in the following statement. The quotations represent the mean of the monthly prices except in the case of wool and cotton. For the former it was not practicable to determine an average commercial price for the years when the Imperial purchase scheme was in operation, and the average import value into Great Britain of Australian wool is stated instead. For cotton Liverpool (England) prices are stated.

Commodity.	1901.	1911.	1914.	1920.	1921.	1926.	1927.
Wheat—milling .. .. bush.	s. d. 3 8	s. d. 3 6	s. d. 4 1 <sup>2</sup> / <sub>3</sub>	s. d. 8 7 <sup>2</sup> / <sub>2</sub>	s. d. 8 7 <sup>9</sup> / <sub>9</sub>	s. d. 6 2	s. d. 5 5
Flour .. .. ton	124 5	169 9	188 5	370 7	386 7	297 5	260 2
Chaff, wheaten .. .. "	65 0	81 0	100 7	212 11	123 9	156 3	180 11
Hay, oaten .. .. "	75 0	94 5	97 2	233 9	151 11	168 4	196 8
Potatoes .. .. "	101 10	111 5	94 7	246 3	119 0	253 3	161 0
Sugar .. .. "	422 5	437 8	480 10	681 3	680 0	746 8	746 8
Tobacco, dark plug .. lb.	4 0	5 0	5 0	7 8 <sup>3</sup> / <sub>3</sub>	8 2	8 2	8 2
Tea .. .. "	1 1 <sup>5</sup> / <sub>5</sub>	1 1 <sup>5</sup> / <sub>5</sub>	1 1 <sup>5</sup> / <sub>5</sub>	2 1 <sup>9</sup> / <sub>9</sub>	2 1	2 2	2 2
Soap .. .. 40 lb.	14 6	18 4	18 4	33 10 <sup>5</sup> / <sub>5</sub>	23 9	27 0	24 0
Jam .. .. 20 "	9 6	6 10	7 10 <sup>5</sup> / <sub>5</sub>	13 3	14 5	11 6	12 7
Kerosene .. .. 3 <sup>1</sup> / <sub>2</sub> gal.	6 3	7 3	7 1 <sup>1</sup> / <sub>1</sub>	20 9 <sup>8</sup> / <sub>8</sub>	20 7 <sup>8</sup> / <sub>8</sub>	12 6	13 4
Cotton .. .. lb.	0 4 <sup>7</sup> / <sub>7</sub>	0 7	0 6 <sup>4</sup> / <sub>4</sub>	2 1 <sup>8</sup> / <sub>8</sub>	0 10 <sup>4</sup> / <sub>4</sub>	0 10	0 10
Wool .. .. "	0 8 <sup>3</sup> / <sub>3</sub>	0 10 <sup>8</sup> / <sub>8</sub>	0 11 <sup>2</sup> / <sub>2</sub>	2 0 <sup>4</sup> / <sub>4</sub>	1 1 <sup>5</sup> / <sub>5</sub>	1 8 <sup>5</sup> / <sub>5</sub>	1 7 <sup>4</sup> / <sub>4</sub>
Leather, sole .. .. "	0 9 <sup>9</sup> / <sub>9</sub>	1 1 <sup>7</sup> / <sub>7</sub>	1 2 <sup>7</sup> / <sub>7</sub>	2 9 <sup>2</sup> / <sub>2</sub>	1 11 <sup>2</sup> / <sub>2</sub>	1 11	2 0
Woolpacks .. .. each	1 11 <sup>6</sup> / <sub>6</sub>	2 4	3 7 <sup>5</sup> / <sub>5</sub>	6 3 <sup>5</sup> / <sub>5</sub>	3 8 <sup>6</sup> / <sub>6</sub>	5 1 <sup>4</sup> / <sub>4</sub>	4 7
Iron—Pig, local .. .. ton	84 7	78 4	81 0	165 5	182 6	120 10	120 0
Plate, girder .. .. "	269 2	238 4	268 4	706 8	696 8	382 6	390 0
Corrugated, gal. .... "	360 10	346 8	387 6	1239 7	979 2	605 10	594 2
Copper, sheet .. .. lb.	1 2	0 10 <sup>5</sup> / <sub>5</sub>	0 11 <sup>8</sup> / <sub>8</sub>	2 2 <sup>5</sup> / <sub>5</sub>	2 1 <sup>5</sup> / <sub>5</sub>	1 6 <sup>6</sup> / <sub>6</sub>	1 6
Coal .. .. ton	11 9	13 10	14 2	26 8	30 4 <sup>9</sup> / <sub>9</sub>	32 2	33 8
Hardwood, local (3 x 2) 100 lin. ft.	6 0	8 6	9 5 <sup>5</sup> / <sub>5</sub>	18 0	18 0	14 3	16 6
Pine—Local (4 x 1) 100 sup.ft.	17 0	25 5	27 5	61 2	62 0	62 0	63 6
N.Z. (4 x 3) .. .. "	20 3	22 2	24 0	60 4	62 0	45 0	43 9
Oregon (2 x 2) .. .. "	12 6	15 7	18 1 <sup>5</sup> / <sub>5</sub>	64 2	47 1	26 0	27 7
Bricks .. .. 1,000	33 6	42 0	45 0	60 9	68 0	70 4	72 1
Beef—Fores .. .. lb.	0 2 <sup>4</sup> / <sub>4</sub>	0 1 <sup>7</sup> / <sub>7</sub>	0 3	0 4 <sup>9</sup> / <sub>9</sub>	0 2 <sup>2</sup> / <sub>2</sub>	0 2 <sup>3</sup> / <sub>3</sub>	0 2 <sup>9</sup> / <sub>9</sub>
Hinds .. .. "	0 3 <sup>4</sup> / <sub>4</sub>	0 2 <sup>7</sup> / <sub>7</sub>	0 3 <sup>9</sup> / <sub>9</sub>	0 8 <sup>5</sup> / <sub>5</sub>	0 5 <sup>6</sup> / <sub>6</sub>	0 5 <sup>1</sup> / <sub>1</sub>	0 5 <sup>9</sup> / <sub>9</sub>
Mutton .. .. "	0 2 <sup>2</sup> / <sub>2</sub>	0 2	0 3 <sup>7</sup> / <sub>7</sub>	0 6 <sup>7</sup> / <sub>7</sub>	0 4 <sup>2</sup> / <sub>2</sub>	0 4	0 4
Butter .. .. "	0 10 <sup>6</sup> / <sub>6</sub>	0 10 <sup>6</sup> / <sub>6</sub>	0 11 <sup>6</sup> / <sub>6</sub>	2 1	1 9 <sup>6</sup> / <sub>6</sub>	1 7 <sup>8</sup> / <sub>8</sub>	1 9 <sup>9</sup> / <sub>9</sub>
Eggs, new laid .. .. doz.	1 3 <sup>4</sup> / <sub>4</sub>	1 4	1 4 <sup>6</sup> / <sub>6</sub>	2 4 <sup>6</sup> / <sub>6</sub>	2 3 <sup>8</sup> / <sub>8</sub>	1 10 <sup>9</sup> / <sub>9</sub>	1 8
Cream of tartar .. .. lb.	0 10 <sup>6</sup> / <sub>6</sub>	0 11 <sup>2</sup> / <sub>2</sub>	1 8	3 4	2 0	1 4 <sup>4</sup> / <sub>4</sub>	1 3 <sup>9</sup> / <sub>9</sub>

During 1927 there were decreases in the average prices of wheat, flour, potatoes, wool, woolpacks, and soap. The commodities which were dearer than in the previous year included chaff, hay, kerosene, coal, bricks, beef, and butter.

*Comparison with Other Countries.*

The following statement shows the wholesale price index numbers for various parts of the British Empire and for the United States of America, with 1913 as common base, and affords an interesting comparison of the manner in which wholesale prices have varied during recent years:—

Year.	New South Wales. (Sydney). [Bureau of Statistics.]	Victoria. (Melbourne). [Common- wealth Bureau of Census and Statistics.]	New Zealand. [Census and Statistics Office.]	Canada. [Dominion Bureau of Statistics.]	United Kingdom. [Board of Trade.]	United States of America. [Bureau of Labour.]
Number of Commodities.	100	92	180	238	150	404
1913	100	100	100	100	100	100
1920	229	228	207	243	307	226
1921	179	175	192	172	197	147
1922	165	162	165	152	159	149
1923	176	179	158	153	159	154
1924	172	173	165	155	166	150
1925	170	169	161	160	160	159
1926	168	168	153	156	148	151
1927	169	167	147	152	141	147

Prices had been increasing steadily in all countries for many years before the war, and the effect of the war on prices was less marked in the countries more remote from the centre of conflict. In every case there was a general increase in prices after the cessation of hostilities. The peak was reached during 1920, and there has since been a very marked decline. As compared with the wholesale prices in 1913, the index number in 1927 was higher in Australia than in New Zealand, the United Kingdom, Canada, or the United States.

RETAIL PRICES.

The average retail prices in Sydney of various commodities, as shown in this chapter, are based on the prices charged in shops in the metropolitan district, and the annual averages represent the mean of the monthly prices during each year.

The following statement shows the averages for various years since 1901. The averages for each year from 1901 to 1920 are shown in the 1919-20 issue of the "Statistical Register of New South Wales."

The table is useful for comparative purposes in regard to the measurement of the general change in prices, but the figures do not disclose a most

interesting feature in a history of prices, namely, the fluctuations during the year, which are considerable, especially in the case of perishable produce. For such information readers are referred to the "Statistical Registers," where the average monthly prices are shown.

Commodity.	1901.	1911.	1913.	1916.	1920.	1921.	1926.	1927.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bread .. .. . 2lb. loaf	0 2 5	0 3 5	0 3 5	0 4 0	0 5 9	0 6 2	0 5 9	0 6 1
Flour .. .. . 25lb.	1 11 0	2 9 0	2 10 0	3 6 1	6 0 4	6 1 6	5 2 3	4 9 8
Tea .. .. . lb.	1 3 0	1 3 5	1 3 8	1 6 1	2 4 5	1 10 7	2 3 2	2 2 9
Coffee and Chicory .. .. . "	1 5 0	1 5 0	1 5 5	1 6 0	2 2 6	1 11 6	2 2 4	2 2 2
Sugar .. .. . "	0 2 3	0 2 7	0 2 7	0 3 5	0 5 4	0 5 7	0 4 6	0 4 6
Rice .. .. . "	0 2 5	0 2 7	0 3 0	0 3 2	0 7 4	0 4 9	0 3 4	0 3 7
Sago .. .. . "	0 2 5	0 2 7	0 2 7	0 3 2	0 5 6	0 3 6	0 3 6	0 3 5
Jam (Australian) .. .. . "	0 4 0	0 4 1	0 5 0	0 6 0	0 9 1	0 10 0	0 8 1	0 7 9
Oatmeal .. .. . 5lb.	0 11 3	1 0 5	1 2 3	1 2 6	2 2 1	1 3 0	1 8 6	1 3 8
Raisins .. .. . lb.	0 6 2	0 6 2	0 6 4	0 7 7	0 10 7	0 11 5	0 8 7	0 8 9
Currants .. .. . "	0 6 6	0 7 0	0 7 2	0 9 1	0 11 0	0 11 1	0 8 7	0 8 8
Starch .. .. . "	0 4 0	0 5 5	0 5 4	0 6 4	0 10 2	0 9 7	0 9 9	0 9 8
Blue .. .. . 12 squares	0 9 0	0 9 0	0 9 0	0 9 2	1 5 0	1 4 7	1 3 0	1 2 7
Candles .. .. . lb.	0 5 5	0 6 5	0 6 5	0 8 0	1 2 2	1 1 0	0 11 7	0 11 8
Soap .. .. . "	0 2 5	0 3 0	0 3 3	0 3 4	0 7 0	0 5 0	0 5 4	0 5 5
Potatoes .. .. . 14lb.	0 11 3	1 0 2	1 0 8	1 6 5	2 2 5	1 4 5	3 1 4	2 4 8
Onions .. .. . lb.	0 1 4	0 0 7	0 1 3	0 1 1	0 3 0	0 1 5	0 4 1	0 2 4
Kerosene .. .. . gal.	0 10 1	0 11 1	1 0 2	1 6 7	2 8 6	2 10 9	1 11 5	2 0 4
Milk .. .. . quart	0 4 0	0 4 4	0 5 2	0 5 3	0 8 3	0 8 1	0 8 6	0 8 9
Butter .. .. . lb.	1 0 2	1 1 7	1 1 8	1 5 3	2 4 4	2 0 7	2 0 1	1 11 7
Cheese .. .. . "	0 7 5	0 8 7	0 9 5	1 0 1	1 5 5	1 3 9	1 4 1	1 4 0
Eggs, Fresh .. .. . doz.	1 3 0	1 3 5	1 3 1	1 6 4	2 6 9	2 6 5	2 3 1	2 4 0
Bacon, Middle Cut .. .. . lb.	0 9 0	0 10 5	1 0 7	1 4 5	1 11 9	1 10 9	1 7 6	1 8 7
Shoulder .. .. . "	0 6 5	0 7 0	0 8 7	1 0 4	1 6 1	1 4 5	1 0 4	1 6 4
Ham .. .. . "	0 11 0	1 1 0	1 2 0	1 5 5	2 2 0	2 0 9	2 0 0	2 0 2
Beef, Sirloin .. .. . "	0 4 5	0 4 5	0 5 0	0 11 1	0 11 5	0 9 1	0 9 3	0 10 2
Ribs .. .. . "	0 3 8	0 3 8	0 4 5	0 9 5	0 9 9	0 6 7	0 6 8	0 7 4
Gravy .. .. . "	0 2 0	0 3 0	0 3 5	0 7 6	0 7 2	0 4 8	0 4 1	0 4 7
Veal, Rump .. .. . "	0 7 0	0 7 0	0 7 9	1 1 3	1 4 9	1 2 0	1 1 3	1 2 7
Shoulder .. .. . "	0 3 5	0 3 5	0 3 5	0 8 5	0 10 1	0 6 9	0 6 1	0 7 0
Beef, Corred Round .. .. . "	0 4 0	0 4 0	0 4 4	0 9 6	0 10 2	0 8 1	0 7 1	0 7 7
Mutton, Leg .. .. . "	0 3 2	0 3 0	0 3 3	0 7 8	0 8 8	0 6 9	0 7 6	0 7 7
Shoulder .. .. . "	0 2 8	0 2 5	0 3 1	0 6 7	0 7 2	0 5 2	0 6 0	0 5 9
Loin .. .. . "	0 3 8	0 3 8	0 4 0	0 7 9	0 9 3	0 7 6	0 8 9	0 8 7
Neck .. .. . "	0 3 2	0 3 0	0 3 5	0 7 0	0 7 4	0 5 4	0 6 0	0 5 9
Chops, Loin .. .. . "	0 4 2	0 4 0	0 4 7	0 9 0	0 10 5	0 8 6	0 9 9	0 9 9
Leg .. .. . "	0 3 8	0 3 8	0 4 7	0 8 6	0 10 0	0 8 1	0 5 2	0 9 2
Neck .. .. . "	0 3 2	0 3 0	0 4 0	0 7 3	0 8 3	0 6 4	0 7 2	0 7 1
Pork, Leg .. .. . "	0 6 2	0 7 8	0 8 5	1 0 1	1 5 4	1 3 4	1 1 1	1 2 1
Chops .. .. . "	0 6 8	0 8 5	0 9 0	1 0 1	1 6 0	1 5 8	2 2 2	1 5 0

The annual average of the retail prices of most food commodities reached a maximum in 1920, and prices in the following year were much lower. There were exceptions, however, and the upward movement was continued during 1921 in regard to the prices of commodities which are amongst the most important articles of diet, viz., bread, flour, sugar, jam, and milk. In 1927 bread, flour, potatoes, tea, coffee, and dairy products were dear. On the average the prices of beef were about  $\frac{1}{2}$ d. per lb. dearer than in 1926, and the average for mutton was the same in both years.

HOUSE RENTS.

Rents vary considerably according to locality. Position, class of building, proximity and means of speedy transport to the city are important factors also in respect of rents in the suburbs. The average amount of

rent paid by tenants of various types of houses in Sydney and suburbs in 1901 and later years is shown below. The figures represent the average predominant rents per week paid for each class of houses up to the year 1925 inclusive, and those for later periods are actual averages.

Year.	Under Four Rooms.	Four Rooms.	Five Rooms.	Six Rooms.	Seven Rooms.	Over Seven Rooms.	Weighted Average.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1901	9 0	11 1	13 7	15 4	19 1	22 2	13 5.
1906	9 2	11 7	14 0	16 9	19 1	22 6	13 11
1911	11 4	14 5	17 1	20 2	23 3	26 10	17 0
1916	12 3	14 8	17 11	20 6	24 6	29 8	18 11
1921	14 2	18 5	21 7	25 2	29 7	35 9	23 0
1922	15 4	19 6	22 6	26 0	31 2	36 3	24 0
1923	15 5	19 10	23 5	28 3	33 3	39 4	25 3
1924	15 8	20 2	24 10	29 10	34 7	40 5	26 4
1925	16 2	20 10	25 9	30 7	35 4	40 8	27 0
1926	15 4	21 0	25 6	33 6	36 9	47 6	28 4
1927	15 3	20 9	25 3	32 7	37 4	49 5	28 3
1928	15 3	21 2	26 9	32 2	36 5	53 6	29 0

Note.—Kitchen is included as a room.

Between 1901 and 1916 weekly rents in Sydney and suburbs increased by 5s. 6d., or 41 per cent. During the post-war period there was an active demand for houses, and the supply being inadequate, the average rental increased steadily. In 1921 it was 4s. 1d. higher than in 1916 and a further rise of 4s. occurred between 1921 and 1925. The averages shown for 1926 and later periods, being actual averages, are not strictly comparable with those for earlier years, which are the average predominant rents.

#### *Cost of Building.*

The increased cost of building has been an important factor in causing the upward movement in house rents. The extent of the increase is indicated in the following comparison which shows the estimated cost of building in Sydney, in various years since 1901, a plain brick cottage with 4 rooms, kitchen, bathroom, pantry, and back and front verandahs, complete with bath, laundry fittings, gas stove, fencing, water and sewerage. The cost of the land has not been included and no allowance has been made for the builder's profit or other expenses, e.g., insurance. The comparison is based on the assumption that the quantity of materials and of labour was equal in each year, and that wages were paid according to industrial awards or agreements. In recent years, however, the prevailing rates of wages paid to some of the skilled workers in the building industry have been somewhat

higher than the award rates. The estimates for 1920 and earlier years are based on the prices and rates ruling in the month of July, and the figures for later years relate to the month of June.

Year.	Cost of—			Proportion of Total Cost.		Index-number of Cost. 1911=1,000.		
	Materials.	Labour.	Total.	Materials.	Labour.	Materials.	Labour.	Total.
	£	£	£	per cent.	per cent.			
1901 ...	181	100	281	64	36	797	833	840
1911 ...	227	120	347	65	35	1000	1000	1000
1914 ...	255	133	388	66	34	1123	1108	1118
1920 ...	483	221	704	69	31	2128	1842	2029
1921 ...	482	225	707	68	32	2123	1875	2037
1922 ...	449	220	669	67	33	1978	1833	1928
1923 ...	441	208	649	68	32	1943	1733	1870
1924 ...	449	212	661	68	32	1978	1767	1905
1925 ...	435	218	653	67	33	1916	1817	1882
1926 ...	431	228	659	65	35	1899	1900	1899
1927 ...	444	242	686	65	35	1956	2017	1977
1928 ...	438	299	677	65	35	1930	1992	1951

Between 1901 and 1911 there was an increase of 23 per cent. in the cost of building, with a further rise of 12 per cent. during the succeeding three years. In 1921 the cost was 82 per cent. above pre-war level, then a decrease of about 8 per cent. occurred during the two years ended June, 1923. Since that date the cost has fluctuated, with an upward tendency, though the cost in 1928 was somewhat lower than in the preceding year. As compared with pre-war level the cost in June, 1928, was 75 per cent higher, materials being 72 per cent. dearer and wages 80 per cent. higher.

Particulars are given in the chapter relating to Social Condition concerning the number of new buildings erected and arrangements for assisting people to build dwellings.

#### *Fair Rents Act.*

In view of a continuous rise in the rents of private dwellings which had persisted for some years prior to the war, the Fair Rents Act was passed in 1915 to provide a measure of regulation with the object of preventing undue increases in this important item of family expenditure. It is administered by Fair Rents Courts, each consisting of a stipendiary or police magistrate, and application for the review of the rental of a dwelling may be made by the lessor or by the lessee. The Act was amended in 1920 and 1926, and again in 1928.

The Principal Act provided for the determination of rents for dwellings leased at a rent not exceeding £3 per week; the amending Act of 1926 extended its provisions to rents of retail shops and of buildings, which were partly shops and partly dwellings, let at a rental not exceeding £6 per week; the amendment of 1928 limited future operations under the Act to dwellings



erected at the date it was passed, and exempted shops and other classes of premises as noted below. The Act does not apply to premises licensed for the sale of spirituous liquors nor to houses ordinarily leased for summer residence.

In accordance with the provisions of the Act prior to the amendment of 1928 the fair rent was fixed on the basis of the capital value at a rate not lower, nor more than  $2\frac{1}{2}$  per cent. higher, than the rates charged on overdrafts by the Commonwealth Bank of Australia, plus rates, repairs, maintenance, insurance, and depreciation. The capital value was the unimproved capital value of the land plus the estimated cost of erection as at the date of the application, less a fair sum for depreciation. It had been the practice of the Court to use a rate of  $6\frac{1}{2}$  per cent. of the capital value in determining the fair rent, but the rate was increased to  $7\frac{1}{2}$  per cent. as from the beginning of the year 1925. From 1st July, 1925, to November, 1928, the rate of 7 per cent. was used in nearly all the cases.

It was prescribed, however, that, excepting where circumstances were proved which rendered an increase equitable, the fair rent might not exceed the rent which was charged for the dwelling on 1st January, 1915, and in respect of dwellings leased at that date the Court allowed only such increases as were necessary to cover increases in respect of rates, repairs, etc. This provision of the Act was applied also to any building, which was partly shop and partly dwelling, let to one tenant, if it was so leased on 1st January, 1915, but other shops were exempt from its operation.

The determinations of the Court remained in force for a period not less than twelve months and not longer than three years as specifically stated, notwithstanding change of ownership or tenancy. The Court usually fixed the rentals for a term of twelve months. During the pendency of an application or the period of six months after decision, the lessor was not permitted to determine the lease without reasonable cause if the lessee performed the conditions of his lease.

The Fair Rents Amendment Act, 1926, imposed certain restrictions on the right of an owner to recover from a tenant possession of a house or shop, even if it was not subject to a determination of the Court, but these clauses were repealed in 1928.

The Fair Rents (Amendment) Act passed in November, 1928, exempts from the jurisdiction of the Court all shops, premises of which part is used as a shop, boarding-houses, flats, and residential chambers, premises of farms, orchards, grazing areas, etc., also dwelling-houses occupied with more than half an acre of land, and houses erected after, or in course of erection on, the date the Act commenced, viz., 11th November, 1928. It provides that the fair rent is to be determined on the market value of the house and land therewith as at the date of the application, and on the basis of a rate at least  $1\frac{1}{2}$  per cent. above the Commonwealth Bank rate for overdrafts. It repealed the provision that the fair rent might not exceed the rent charged on 1st January, 1915, and provides that under certain circumstances, owners of houses subject to a determination of the Court may terminate the lease during or at the end of the period of the determination. The Fair Rents Act will cease to have effect on 1st July, 1933.

#### *Fair Rents Court.*

The first sitting of the Fair Rents Court in Sydney was held on the 13th March, 1916, and the provisions of the Act were extended to country districts on 16th August, 1920. The records show interesting particulars

relating to dwellings and rentals, but for several reasons the information cannot be regarded as a satisfactory basis for conclusions as to the effect of the Fair Rents Act upon house rents. For instance, in cases where the tenant applies promptly upon receiving notice of the landlord's intention to increase the rent, the "fair rent" as determined by the Court may be recorded as an increase on the rent at date of application, whereas it is a reduction in comparison with the proposed increased rental against which the action was directed.

The applications dealt with in the Metropolitan district from the inception of the Court to 31st March, 1928, numbered 11,169, of which 4,605 were withdrawn or struck out, and in 6,564 cases the rentals were fixed. The cases in 1927-28 numbered 1,337, of which 432 were withdrawn or struck out. In the country districts the number of cases was comparatively small. Only 481 were concluded between August, 1920, and 31st December, 1927. Of these 232 were withdrawn or dismissed, and in 42 cases the rent was fixed as at date of application, in 109 it was reduced, in 98 it was increased.

The determinations of the Metropolitan Court in respect of cases in which the rentals were fixed during the year 1927-28, and during the period of twelve years since the commencement of its operations, are summarised in the following table:—

Rent (at date of Application).	Year ended 31st March, 1928.				Total to 31st March, 1928.			
	Fixed as at date of Application.	Increased.	Reduced.	Total.	Fixed as at date of Application.	Increased.	Reduced.	Total.
10s. and under ...	3	2	...	5	16	30	17	63
10s. 6d. to 12s. 6d.	9	1	4	14	40	73	94	207
13s. to 15s. ..	18	13	16	47	113	236	276	625
15s. 6d. to 17s. 6d.	10	46	23	84	99	293	295	687
18s. to 20s. ...	21	36	51	108	149	314	424	587
20s. 6d. to 25s. ...	28	41	123	192	197	426	813	1,456
25s. 6d. to 30s. ...	12	24	140	176	112	248	707	1,067
30s. 6d. to 40s. ...	9	29	99	137	69	162	712	943
40s. 6d. to 50s. ...	4	17	59	80	31	56	321	408
50s. 6d. to 60s. ...	...	...	17	17	6	5	131	142
Over 60s. ...	1	3	41	45	1	6	92	99
Total .. ..	115	212	578	905	833	1,849	3,882	6,564

During 1927-28 the Court determined the rents of 831 dwellings, 53 buildings which consisted of shop and dwellings, and 16 retail shops without dwellings. Increases were granted by 23 per cent. of the decisions, and reductions by 64 per cent.

In 113 cases relating to dwellings, the rentals were fixed as at the date of application to the Court; the rentals of 204 were increased, and 514 were reduced. In respect of the other premises the rentals of 2 were fixed at the current rate, 8 were increased and 64 were reduced.

The amount of reduction and of increase in the rentals in the Metropolitan district during the year 1927-28 may be seen in the following statement:—

Amount of Reduction, or of Increase.	Rents Increased.	Rents Reduced.	Amount of Reduction, or of Increase.	Rents Increased.	Rents Reduced.
6d. and under.	60	24	6s. and under 7s. 6d.	8	56
1s. „ 1s. 6d.	24	24	7s. 6d. „ 10s.	3	115
1s. 6d. „ 2s.	20	29	10s. „ 12s. 6d.	1	50
2s. „ 2s. 6d.	20	32	12s. 6d. „ 15s.	6	23
2s. 6d. „ 3s.	12	30	15s. „ 20s.	1	26
3s. „ 4s.	24	49	20s. and over ...	3	46
4s. „ 5s.	20	36	Total ...	212	578
5s. „ 6s.	10	33			

In the cases relating to dwellings the reductions during 1927-28 amounted to a sum of £165 3s. 6d. per week which represents an average of 22.1 per cent., or 6s. 5d. per house per week. In 204 cases the rents were increased, the total increases amounting to £26 18s. 6d. per week, equal to 11.1 per cent., or 2s. 8d. per house. The weekly rents of dwellings reviewed by the Court during 1927-28 amounted in the aggregate to a sum of £1,108 13s. 6d., the net reduction being £138 5s., or 12.5 per cent. The average rental of these dwellings was reduced from 26s. 8d. per week to 23s. 4d.

A brief review of the decisions of the Metropolitan Fair Rents Court in each year since its inception in March, 1916, is shown below:—

Year ended March.	Rentals fixed by Court.				Aggregate weekly rents (as at date of application)	Net Reduction.	
	As at date of application.	Increased.	Reduced.	Total.		Amount per week.	Per cent.
1917 ... ..	137	7	294	438	£ 419	£ 34	8.1
1918 ... ..	49	19	102	170	161	8	5.0
1919 ... ..	36	132	65	233	233	+9	+3.9
1920 ... ..	47	254	141	442	464	+13	+2.8
1921 ... ..	52	256	187	495	572	+9	+1.6
1922 ... ..	75	237	245	557	704	22	3.1
1923 ... ..	64	150	233	447	560	30	5.4
1924 ... ..	75	138	288	501	641	65	10.1
1925 .. ..	63	185	317	565	725	60	8.2
1926 ... ..	62	105	412	579	869	148	17.1
1927 ... ..	56	154	1,020	1,232	1,973	379	19.2
1928 ... ..	115	212	578	965	1,357	207	15.3
Total .. ..	933	1,849	3,882	6,564	8,678	922	10.6

+ Denotes net increase.

Since 1916 the Metropolitan Court has fixed the rentals of 6,564 premises, of which the average weekly rent was 26s. 5d., and the net result of its decisions has been an average reduction of 2s. 10d. per house.

#### RETAIL PRICE INDEX NUMBERS—FOOD AND RENT.

The index numbers of the prices of food and of rent shown in this section should not be used as a complete measure of variations in the cost of living,

as they were compiled with the primary object of showing the general movement of the retail prices of food and of rent, and do not cover other items of family expenditure. As it was noted in regard to wholesale prices, the index numbers are approximations indicating the general movement and it is not claimed that they furnish an exact scale of price-levels.

In measuring a movement in prices over a period of years, changes in dietary each year are not taken into account in computing the index numbers. The price of each food commodity must be weighted over a series of years in accordance with its relative importance in a fixed regimen as determined in or around the basic year. In reviewing prices over a long period there is a probability of a discrepancy between the rise or fall of the index numbers and the increase or decrease in the actual expenditure of a household on food. When there are violent fluctuations in prices and supplies necessitating changes in the kinds, quality, and relative quantities of the various foods, and an adjustment of the family dietary, the discrepancy is likely to be greater than under normal conditions. Variations in the cost of food on the basis of a changed regimen are shown on page 769.

The index numbers of food and groceries, as shown below, are based upon the retail price of forty commodities in every-day use, which are shown in the table on page 759, and the prices have been weighted according to the average annual consumption in the years 1906-10.

The retail price index numbers of food and rent in Sydney in each year from 1864 to 1911 were published in the 1920 issue of the Year Book. The following table shows the index numbers of food and groceries, and of rent, and of food and groceries and rent combined in various years since 1901, and in each quarter of the last two years:—

Year.	Index Numbers (1911=1000).			Amount required in each period to purchase the same quantities of Food and Housing as would have cost, on the average, - 20s. in 1911.
	Food and Groceries.	Rent.	Food and Groceries and Rent Combined.	
1901 ... ..	896	789	848	s. d 17 0
1906 ... ..	967	819	901	18 0
1911 ... ..	1000	1000	1000	20 0
1916 ... ..	1536	1111	1351	27 0
1920 ... ..	2171	1297	1794	35 10
1921 ... ..	1919	1351	1672	33 5
1922 ... ..	1721	1400	1586	31 9
1923 ... ..	1840	1483	1685	33 8
1924 ... ..	1751	1546	1662	33 3
1925 ... ..	1804	1586	1709	34 2
1926 ... ..	1886	1664	1790	35 10
1927 ... ..	1865	1659	1776	35 6
1928 ... ..	1845	1703	1783	35 8
1927—March quarter...	1867	1654	1775	35 6
June ,, ...	1829	1644	1749	35 0
Sept. ,, ...	1838	1664	1762	35 3
Dec. ,, ...	1927	1669	1815	36 4
1928—March quarter...	1853	1713	1792	35 10
June ,, ...	1864	1713	1798	36 0
Sept. ,, ...	1829	1693	1770	35 5
Dec. ,, ...	1836	1698	1776	35 6

Prices of food are affected largely by seasonal conditions, but, even before the war, the trend of prices was generally upwards, and when a bad season, e.g., in 1902 and in 1908, caused a marked rise, prices did not fall to the former level with the return of good seasons. The upward movement, being world-wide, was not due to local causes. Rents also rose steadily during the period of prosperity which preceded the war.

In 1914 and subsequent years, when drought, enlistments, and disorganisation due to the war steadily reduced the productive activity of the population, prices rose abnormally on account of strong oversea demand for raw materials, and of a scarcity of manufactured goods. From 1918 to June, 1920, seasonable conditions were unfavourable, but towards the end of the year 1920 a general process of deflation commenced.

Rents have been increasing slowly since 1920. It is probable, however, that an increase of 4 per cent. recorded in 1926 was a result of a change in the method of collecting data as to rents which was made by the Commonwealth Statistician at the beginning of that year. Agents supplying quarterly returns were asked to quote the actual average rent of the houses of each class instead of the average predominant rental as in former years.

Between 1921 and 1927 the index number of food and rent combined fell and rose in alternate years. The cost of food and groceries fluctuated, but there was a continuous rise in rents. In 1926 the index number was practically the same as in 1920, 79 per cent. higher than in 1911, and 53 per cent. higher than in 1914. In 1927 prices and rents declined during the early months, but rose again before the end of the year.

The variations in the retail prices of food and groceries in each month since January, 1921, are shown below in comparison with the prices in July, 1914, the month before the outbreak of war.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Food and Groceries.												
1921	1886	1869	1766	1705	1653	1630	1612	1592	1569	1539	1494	1439
1922	1454	1405	1417	1436	1462	1455	1493	1531	1544	1493	1523	1505
1923	1493	1480	1472	1550	1573	1628	1649	1674	1644	1595	1600	1586
1924	1568	1539	1531	1508	1524	1482	1484	1477	1449	1401	1505	1497
1925	1490	1495	1510	1507	1528	1547	1560	1575	1583	1601	1578	1608
1926	1582	1565	1636	1663	1660	1632	1629	1614	1609	1585	1615	1648
1927	16.0	1592	1545	1565	1572	1572	1532	1585	1616	1672	1662	1628
1928	1603	1572	1590	1603	1606	1590	1579	1567	1582	1585	1578	1582

Prices of food in Sydney reached the highest level in September, 1920, viz., 102 per cent. above July, 1914. Subsequently the prices declined in each month until March, 1922, when the index number began to move upwards with some fluctuations. In 1923, there were increases in such important items as dairy products and meat, and food became very dear. During 1924 the prices declined slowly until the end of the year, when they commenced to rise again. The upward movement was fairly continuous until in April, 1926, the index number was the highest since August, 1923. The level remained high throughout the year, and another rise during the summer months was followed by a decrease in the early part of 1927. In August the prices of meat began to rise as a result of seasonal conditions; subsequently bread and butter also became dearer, so that the index number for food and groceries was as high in October, 1927, as at the beginning of the year. Then a slow downward movement commenced.

*Comparison with other Countries.*

The following statement shows the increases since July, 1914, in the retail prices of the principal articles of food in other countries. The figures for the oversea countries have been taken from the "London Labour Gazette" and other official sources; those relating to France and to Sweden include fuel and lighting. The particulars for the Australian States relate to the capital cities:—

Country.	Percentage Increases in Retail Food Prices since July, 1914.						
	July, 1922.	July, 1923.	July, 1924.	July, 1925.	July, 1926.	July, 1927.	July, 1928.
New South Wales ... ..	56	66	49	56	62	53	58
Victoria ... ..	54	81	52	62	62	57	51
Queensland ... ..	51	63	58	64	71	55	57
South Australia ... ..	43	54	45	49	51	48	44
Western Australia ... ..	37	41	41	46	42	33	46
Tasmania ... ..	50	57	52	49	55	48	42
Australia ... ..	48	64	49	57	60	53	53
New Zealand ... ..	44	42	48	51	49	44	46
South Africa ... ..	16	16	17	20	16	19	16
United States ... ..	39	44	40	56	54	50	50
Canada ... ..	38	37	34	41	49	49	47
United Kingdom ... ..	80	62	62	67	61	50	65
Denmark ... ..	84	88	100	110	59	53	53
Sweden ... ..	79	60	59	69	56	51	57
Norway ... ..	133	118	148	160	98	75	73
Italy (Milan) ... ..	392	396	408	502	554	424	416
France (Paris) ... ..	197	221	260	321	474	457	447

The price level of food commodities in New South Wales in recent months has been higher in comparison with July, 1914, than in the other Australian States. The index numbers shown above may not be used for exact comparisons between countries owing to differences in the scope of the data, and in methods of compilation.

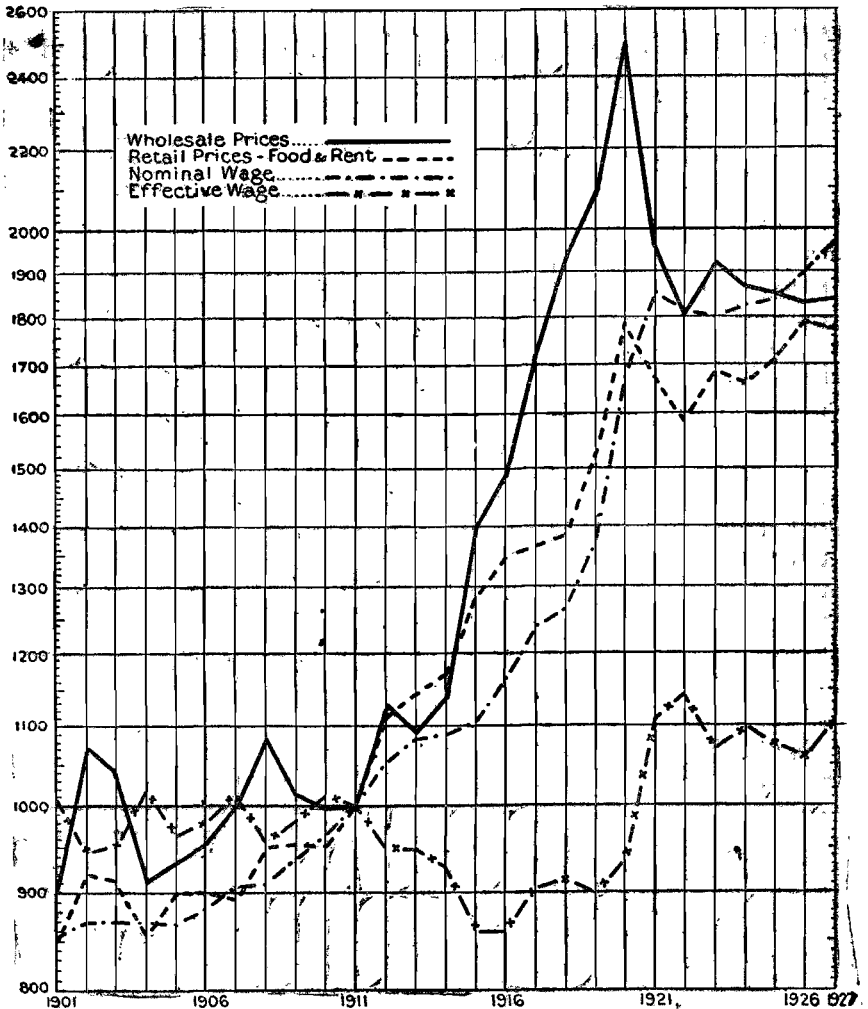
## WHOLESALE AND RETAIL PRICES—INDEX NUMBERS COMPARED.

A comparison of the index numbers of wholesale and retail prices as published in this chapter shows that after 1914 the wholesale price index numbers rose to a level far above that of the retail price index numbers. This is due mainly to the fact that the former are based on the prices of a wide range of commodities while the latter relate only to food and groceries and housing. The prices of food and groceries did not increase as much as those of many other groups of commodities. Moreover the inclusion of rent in compiling the retail price index numbers kept them at the lower level as the rents of existing houses did not advance to the same extent as prices of materials for building new dwellings. Thus in 1920, when wholesale prices were at the peak, building materials were 142 per cent. dearer, and rents were less than 40 per cent. higher, than in 1911.

A comparison of the annual index numbers of wholesale and retail prices is shown in the graph on page 768.

## INDEX NUMBERS—PRICES AND WAGES—SYDNEY, 1901 to 1927.

## RATIO GRAPH.



The numbers at the side of the graph represent the index numbers of prices and of wages with the year 1911 as a base = 1000.

The diagram is a ratio graph, and, the vertical scale being logarithmic the rise or fall of each curve represents the percentage of change. Equal distances on the scale represent the same percentage of change, and when the curves run parallel, they indicate an increase or decrease in equal proportion.

## COST OF LIVING.

For the purpose of measuring the extent of variations in the cost of living it is usual to distribute the expenditure of a family into five main classes, viz., food and groceries, rent, fuel and light, clothing, and miscellaneous items, and, having ascertained the rise or fall in respect of each class, to weight the variation in each group for the purpose of calculating the increase or decrease in the general cost of living.

*Cost of Food—Change in Regimen.*

The index numbers on page 765 show the movement in the retail prices of food on the basis of a fixed regimen. It is recognised however that variations in the actual cost of food depend also upon changes in dietary, which is adjusted to meet changes in prices and in supplies. The combined effect upon the food bill of a family of five persons of changes in prices and in the consumption of the principal food commodities is illustrated in the following table. In calculating the cost, the average consumption per member of the family in 1927 is assumed to have been equivalent to the general average per head of population as shown on page 747, and corresponding figures have been used for the year 1914. An exception has been made in regard to flour and sugar, of which the quantities have been reduced to make allowance for the quantities included in bread, jam, etc.

Fruit and vegetables, except potatoes, have been excluded on account of the impossibility of obtaining prices which would be properly comparable, principally owing to seasonal variations and to the difficulty of estimating the consumption.

Article.	Unit of Quantity.	1914.			1927.		
		Weekly Consumption.	Average Price.	Weekly Cost.	Weekly Consumption.	Average Price.	Weekly Cost.
Beef ... ..	lb.	12·8	5·3	5 7·8	11·8	5·4	8 3·1
Mutton ... ..	lb.	8·1	4·8	3 2·9	6·9	7·8	4 5·8
Pork ... ..	lb.	·3	10·3	3·1	·5	14·5	7·3
Bacon and Ham ... ..	lb.	·9	11·0	9·9	1·2	17·9	1 9·5
Fish—Fresh, etc. ... ..	lb.	·8	9·5	7·6	·9	15·0	1 1·5
„ Preserved ... ..	lb.	·4	10·5	4·2	·4	20·0	8·0
Potatoes ... ..	lb.	14·4	·9	1 1·0	9·9	2·1	1 8·8
Flour ... ..	lb.	4·0	1·4	5·6	4·0	2·3	9·2
Bread ... ..	2lb. loaf	10·0	3·5	2 11·0	9·6	6·1	4 10·6
Rice ... ..	lb.	·6	3·0	1·8	·4	3·7	1·5
Sago and Tapioca ... ..	lb.	·2	2·7	·5	·2	3·5	0·7
Oatmeal ... ..	lb.	·5	2·6	1·3	·5	4·2	2·1
Sugar ... ..	lb.	6·0	2·7	1 4·2	6·0	4·6	2 3·6
Jam ... ..	lb.	1·6	5·0	8·0	1·0	7·9	7·9
Butter ... ..	lb.	2·9	14·2	3 5·2	3·2	23·7	6 3·8
Cheese ... ..	lb.	·3	10·6	3 2	·4	16·0	6·4
Milk—Fresh ... ..	qt.	7·7	5·3	3 4·8	8 1	8·9	6 0·1
Tea ... ..	lb.	·7	15·8	11·1	·8	26·9	1 9·5
Coffee ... ..	oz.	1·3	1·1	1·4	1·0	1·6	1 1·6
Total ... ..		...	...	25 10·6	...	...	42 5·0

The weekly expenditure on the commodities enumerated rose from 25s. 10½d. in 1914 to 42s. 5d. in 1927—an increase of 64 per cent. The meat bill increased from 9s. 11½d. to 15s. 1½d., while the expenditure on milk and butter rose from 6s. 10d. to 12s. 4d.

Taking rent into consideration—the average being 20s. in 1914 and 28s. 3d. in 1927—the total weekly expenditure was approximately 46s. as compared with 71s., and the increase per week during the period amounted to 25s., which represents 53 per cent.

An interesting comparison may be made between the increase in the household expenditure on food calculated on the basis of the average consumption of the various commodities in each year, and the increase in the prices of food as indicated by the index numbers which are computed on the basis of a fixed regimen, as those shown in the table on page 765. In 1920—the year in which prices reached the peak—the average consumption of the commodities enumerated above decreased and the average expenditure was only



65 per cent. greater than in 1914, though the general level of food prices was 86 per cent. higher. Since 1920 the difference in the regimen as compared with 1914, has lessened, and in 1927 the increase in the average expenditure on food—64 per cent. over that of 1914—was approximate to the increase in the price level.

#### *Cost of Clothing.*

The measurement of changes in the cost of clothing presents such great difficulty that this item is frequently omitted from official investigations and it is often assumed that variations in the general cost of living may be determined with a reasonable degree of accuracy by the measurement of the groups, food and housing. The chief difficulty in regard to the clothing group lies in the determination of standards owing to the vast range of articles of clothing, numerous grades of quality, and rapid changes in fashion and design. The group is, however, of such importance that in 1921 arrangements were made with a number of large retail firms in Sydney to supply particulars showing the movement of the prices of clothing since the beginning of the war period. It was not considered practicable to attempt to collect data concerning articles of the same quality nor even of the same material, and the firms were asked to quote the price as in January and in July of each year of each item of the quality usually purchased by persons of moderate means.

In order to form a price-index to indicate the general trend of the cost of clothing, budgets were prepared from the price lists to represent the annual replacements of a man, a woman, and for three children, the replacements of the various articles being approximate to those in the indicator list used by the Australian Basic Wage Commission in 1920.

The method of compiling a price index on the basis of the predominant price paid at various dates by a certain section of the people, viz., those with moderate incomes, does not preserve an identity of standard but involves to some extent changes in quality. In normal times the standard of clothing used by any section of the community, e.g., unskilled workers, changes very slowly and would not vary appreciably within a decade. The period under review, however, was characterised by violent changes, social and economic, which were reflected in every phase of national life. In the earlier years of the war prices of food rose much more rapidly than wages, thus necessitating economy, which would naturally be reflected in the matter of clothing more readily than in the food group. Subsequently as wages increased it is reasonable to suppose that a higher standard of clothing became general amongst the majority of the population.

#### *Cost of Fuel and Miscellaneous Expenses.*

The cost of fuel and light forms the smallest of the groups of family expenditure, but substantial increases which have occurred since 1914 have had an appreciable effect upon the cost of living.

The index numbers of this group are based on the prices of gas, coal and firewood. Kerosene is included in the list of food and groceries, and the average retail prices are shown on page 759.

The price of gas for household use in Sydney was raised from 3s. 6d. per 1,000 cubic feet to 5s. 9d. between July, 1914, and November, 1920, and reduced gradually to 5s. 2d. in February, 1925. The price was increased from 5s. 4d. to 5s. 7d. on 19th January, 1926, to 5s. 8d. on 17th July, 1926, and to 5s. 9d. on 6th August, 1927.

Coal was about 88 per cent. dearer in 1927 than in 1914, having risen from 24s. 6d. per ton to 46s. Firewood increased in price from 28s. per ton in July, 1914, to 46s. in 1927.

Almost all the items of miscellaneous expenditure have become dearer; for instance, fares by train, tram, and ferry, which are an important factor. General increases amounting to about 66 per cent. were made in railway fares between July, 1914, and November, 1920. A reduction was made in May, 1924, when the decreases in second-class suburban fares up to 34 miles ranged from 3 to 11 per cent. Tram fares were charged at the rate of 1d. per section up to 31st March, 1914. On 6th November, 1920, the fares were fixed at the following rates:—One section 2d., two sections 3d., three sections 4d., four sections 5d., five and six sections 6d. In December, 1927, the fares for two, three, and four sections were raised by 1d. Increases have been made also in the fares on the majority of Sydney Harbour ferry routes. For instance, the monthly season ticket rate from Circular Quay to Milson's Point, which was 4s. 9d. in July, 1914, was 8s. in 1927.

The prices of the daily newspapers which had been raised during 1919 and 1920 reverted to the former charge of 1d. per copy at the beginning of July, 1922. For postage the rate for letters was 1½d. per oz. in 1926, as compared with 1d. per ½ oz. in 1914. Fees for telephone calls were increased during the period from ½d. to 1¼d. per call made by a subscriber, and from 1d. to 2d. per call on public telephones. Increases ranging up to 50 per cent. were made in the charges for telegrams.

Contributions to friendly societies amounted on an average to about 1s. 3d. per week in 1914 and to 1s. 7½d. in 1927. Subscriptions to trade unions, which range from 6d. to 1s. per week, have remained constant.

The retail price of tobacco has increased by 75 per cent. since 1914. The average price of plug tobacco of popular brand was 10s. 6d. per lb. in 1927 as compared with 6s. in 1914.

#### *Changes in the Cost of Living.*

A fair indication of the changes in the total cost of living may be obtained by summarising the index numbers of the cost of the various items discussed above, assigning to each group a weight in accordance with the ratio its cost bears to the total family expenditure.

The ratio varies in accordance with the amount of income, the expenditure on the primal necessities of food and shelter being proportionately greater when the income is small. As, however, the question of the cost of living is studied largely in relation to wages and the standard of living in respect of persons of moderate means, it is customary to consider the ratio of the component groups of expenditure on a basis of the wage of an unskilled worker.

In New South Wales a standard distribution on this basis may be obtained from the living wage determinations of the industrial tribunals which are described in the chapter of this volume relating to wages.

A living wage determination made by the Board of Trade of New South Wales in 1919 showed the following proportions, viz., food and groceries, 41 per cent.; rent, 20 per cent.; fuel and light, 4 per cent.; clothing, 13 per cent.; and miscellaneous, 17 per cent. The standard adopted by the Commonwealth Basic Wage Commission in 1920 was somewhat similar, viz., food and groceries, 40 per cent.; rent, 19 per cent.; fuel and light, 4 per cent.; clothing, 23 per cent.; miscellaneous, 14 per cent. By taking an approximate mean of these two sets of ratios the following weights have been deduced for use in assessing the changes in the general cost of living since 1914 as shown in the table below:—Food and groceries 41, rent 20,

clothing 20, fuel and light 4, miscellaneous items 15. The results are not an exact measure of the changes, and they are put forward only as indicating approximately the movement in the general cost of living.

Year.	Food and Groceries.	Rent.	Clothing.	Fuel and Light.	Miscellaneous Items.	General Increase in Cost of Living since 1914.
1914	100	100	100	100	100	...
1915	121	95	110	102	102	about 10 per cent.
1916	131	95	120	105	102	" 15 "
1917	133	95	140	115	105	" 25 "
1918	134	97	160	120	110	" 30 "
1919	154	100	190	130	115	" 45 "
1920	186	110	215	140	140	" 70 "
1921	164	115	200	160	145	" 60 "
1922	147	120	175	165	140	" 50 "
1923	157	126	165	165	135	" 50 "
1924	150	132	165	165	135	" 50 "
1925	154	135	160	160	135	" 50 "
1926	161	142	160	170	135	" 55 "
1927	160	141	160	175	135	" 55 "

The cost of living rose by about 30 per cent. during the war period, then increased to a greater extent during the two years 1919 and 1920, after the armistice was declared. In each of the two following years there was a decline, then it remained fairly constant until 1926, when increases in food, rent, and fuel caused it to rise again.

## EMPLOYMENT AND PRODUCTION.

### EMPLOYMENT.

Information regarding the occupations of the people is obtained only at the Census, and statistics relating to the periods between the Census dates are restricted mainly to certain classes of employment in the primary industries and in manufacturing establishments.

The results of the last Census indicate that in April, 1921, the breadwinners numbered 884,104, of whom 713,169, or 81 per cent. were males. A summary of the statistics relating to occupations is shown below:—

Occupations.	Number of Persons.			Proportion to Total.		
	Males.	Females	Total.	Males.	Females	Total.
Professional ... ..	48,543	29,233	77,776	per cent. 4·67	per cent. 2·85	per cent. 3·72
Domestic ... ..	20,786	60,904	81,690	1·95	5·93	3·91
Commercial ... ..	107,474	31,270	138,744	10·11	3·04	6·64
Transport and Communication ... ..	31,326	2,693	34,019	7·70	·26	4·04
Industrial ... ..	243,862	40,806	284,668	22·94	3·97	13·62
Primary Producers—						
Agricultural ... ..	93,598	910	94,508	8·80	·09	4·52
Pastoral and Dairying ... ..	63,525	2,044	65,569	5·98	·20	3·14
Mining ... ..	32,841	76	32,917	3·09	·01	1·57
Other ... ..	15,593	123	15,716	1·47	·01	·75
Total Primary ... ..	205,557	3,153	208,710	19·34	·31	9·98
Independent ... ..	5,121	2,876	7,997	·48	·28	·88
Total Breadwinners ... ..	713,169	170,935	884,104	67·09	16·64	42·29
Dependents ... ..	349,789	856,463	1,206,252	32·91	83·36	57·71
Not stated ... ..	8,543	1,472	10,015	...	...	...
Total ... ..	1,071,501	1,028,870	2,100,371	100	100	100

The majority of the people are classified as dependents, the numerical importance of the group being due to the fact that it includes, as well as children, women engaged in domestic duties for which wages are not paid.

The breadwinners, as recorded at the Census of 1921, are classified in age groups in the following table:—

Age Group.	Breadwinners.			Proportion of Breadwinners to total in each Age Group.		Proportion of Breadwinners in each Age Group to total Breadwinners.	
	Males.	Females.	Total.	Males.	Females.	Males.	Females.
Under 15 ...	9,488	3,840	13,368	Per cent. 2·8	Per cent. 1·2	Per cent. 1·3	Per cent. 2·3
15-19 ...	76,469	39,612	116,081	86·6	45·7	10·8	23·2
20-24 ...	81,293	36,171	117,464	98·1	40·8	11·4	21·2
25-29 ...	86,355	22,725	109,080	99·4	25·0	12·1	13·3
30-34 ...	91,541	15,932	107,473	99·8	18·1	12·9	9·4
35-39 ...	79,252	12,638	91,890	99·8	16·7	11·1	7·4
40-44 ...	66,397	10,125	76,522	99·8	16·3	9·3	5·9
45-49 ...	54,365	8,377	62,742	99·9	16·5	7·7	4·9
50-54 ...	48,744	6,929	55,673	99·9	16·3	6·9	4·1
55-59 ...	41,287	5,345	46,632	99·9	15·3	5·8	3·1
60-64 ...	32,908	3,932	36,840	99·8	13·9	4·6	2·3
65 and over ...	43,226	4,907	48,133	99·5	11·7	6·1	2·9
Not stated..	1,844	362	2,206	...	...	...	...
Total ...	713,169	170,935	884,104	67·1	16·6	100	100

The proportion of breadwinners amongst males under 15 years of age is less than 3 per cent., but the ratio increases rapidly during the next five years of age, so that the proportion of dependents amongst adult males is very small. On the other hand the proportion of breadwinners amongst females is highest in the age group 15-19 years, viz., 45·7 per cent., and it declines considerably between the ages 25 and 35 years.

Of the total breadwinners of each sex 23 per cent. of the males and 47 per cent. of the females were under 25 years of age; 69 per cent. and 83 per cent. respectively were under 45 years.

Particulars regarding the grade of employment of the persons in various occupations were published in the 1922 issue of the "Year Book" at page 439.

Returns regarding the number of persons employed in the principal rural industries of the State are collected annually, but the information is not comparable with the census figures, because it relates only to persons engaged regularly on rural holdings of one acre or over. It includes occupiers and managers and members of their families, who work constantly on a holding, but temporary hands and contract workers engaged for harvesting, shearing, etc., are omitted. Moreover, the census figures relate to a specific date, when the distribution of the workers amongst the several branches of rural industry differs materially from the annual records which show the average number employed, whose distribution is determined usually in accordance with the main purposes for which each holding was used during the year.

In regard to the number of females employed in rural industries, considerable difficulty is experienced in obtaining satisfactory statistics, owing to the fact that a large number of women and girls, especially on dairy farms, are employed only partly in rural production in conjunction with their domestic duties. Usually they do not receive wages, and at a census they are classified as dependents. In the annual returns there is a tendency to include them as rural workers, consequently a wide discrepancy arises between the census and the annual records, the latter being overstated.

The following statement shows the number of persons engaged in the various branches of rural industry in various years since 1911:—

Year.	Agriculture, Poultry, Pig, and Bee-farming.		Dairying.		Pastoral.		Total, Rural Industries		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1911	58,299	1,141	27,488	11,293	43,387	770	129,174	13,204	142,378
1920-21	50,162	1,509	26,648	13,176	43,766	1,022	120,576	15,707	136,283
1921-22	48,571	1,411	29,660	14,571	42,674	860	120,905	16,842	137,747
1922-23	49,444	1,421	29,170	13,882	42,285	1,120	120,899	16,423	137,322
1923-24	48,176	1,052	28,980	13,594	43,196	624	120,352	15,270	135,622
1924-25	47,785	956	30,329	14,707	45,111	592	123,225	16,255	139,480
1925-26	44,991	841	30,351	15,027	45,652	420	120,994	16,288	137,282
1923-27	43,268	866	29,106	12,525	47,546	854	119,920	14,245	134,165

The number of workers in the rural industries, being affected by seasonal conditions, is subject to great fluctuation. The number engaged in cultivating, etc., has declined since 1911, though the area under cultivation has

increased, the greater use of machinery having lessened the need for workers in agriculture. It is probable also that the decrease in the labour engaged permanently has been offset, to some extent, by the employment of contract workers. Details regarding the labour engaged in relation to machinery used in cultivating are shown in the chapter relating to agriculture.

The number of dairy workers has increased appreciably since 1911. In the pastoral industry the number of permanent employees does not usually vary greatly from year to year, except in very dry seasons, when additional labour is required to tend the flocks and herds under severe drought conditions. On the whole, the number of men engaged permanently on rural holdings in 1926-27 was 6 per cent. less than the average of the three years prior to the war. The number of women increased between 1911 and 1926, but a marked decline was apparent in 1926-27 in the number employed in the dairying industry in which the majority of the women are engaged.

The rural workers in 1926-27 included 67,660 men and 1,444 women, who were classed as working proprietors, *i.e.*, owners, lessees, or share-farmers working on the holdings; 17,111 men and 11,696 women were classed as relatives employed constantly, but not receiving wages; and 35,149 men and 1,105 women, including managers and relatives, were receiving wages.

Annual returns relating to employment are collected also in respect of mining and other primary industries and the manufacturing industries, and the figures for various years since 1911 are summarised in the following statement. The particulars for 1920-21 and subsequent years relate to the twelve months ended 30th June, except those showing the employment in mines, which are for the calendar years ended six months later. In regard to the manufacturing industries, employees in establishments with fewer than four persons have not been included unless machinery was used in the factory:—

Year.	Rural Industries.	Forests, Fisheries, and Trapping.	Mining.	Manufacturing.			Total.		
	Total.			Males.	Males.	Males.	Females.	Total.	Males.
1911	142,378	6,000	33,367	82,083	26,541	108,624	250,624	39,745	290,369
1920-21	136,233	6,701	26,062	112,187	32,824	145,011	265,525	48,731	314,056
1921-22	137,747	6,900	25,820	112,362	38,514	148,876	265,987	53,356	319,343
1922-23	137,322	6,900	28,125	115,287	37,299	152,586	271,211	53,722	324,933
1923-24	135,622	7,800	28,778	121,845	37,829	159,674	278,775	53,099	331,874
1924-25	139,480	8,300	30,001	126,496	39,264	165,760	288,022	55,519	343,541
1925-26	137,282	7,900	30,429	132,239	41,862	174,101	291,562	58,150	349,712
1926-27	134,165	8,500	33,549	138,309	44,884	183,193	297,278	59,129	356,407

Employees engaged in treating minerals at the place of production are included in the returns of the manufacturing industries, and not with the mining employees, *viz.*, those engaged in the manufacture of coke at coke works, in the manufacture of lime, cement, etc., at limestone quarries, and in the treatment of ores at mines. The number of miners, as stated for the last seven years, includes fossickers, who numbered 1,176 in 1927. In view of the small output which they obtained, it is probable they were not wholly employed in fossicking.

In the coal and shale mines employment increased from 17,247 in 1911 to 18,534 in 1914, and a decline of about 2,000 occurred during the war period, when the export trade was restricted. Between 1921 and 1927 there was a steady increase in the number of coal-miners, 24,483 being employed in 1927.

In other mines there was a marked decline. The number of miners was 16,120 in 1911, and it was only 4,116 in 1922. Since that year there has been an improvement, though the number in 1927 was less than in the preceding year.

In factories the figures for the last seven years show a steady increase, which was fairly general in all classes of factories, though it was greatest in metal and machinery works. The majority of female factory workers are engaged in the clothing trades, and fluctuations in the number of female employees reflect generally the condition of that group of industries.

#### Government Employees.

In New South Wales a large number of persons are employed by the State and Commonwealth Governments. In addition to services such as education, police, justice, health, lands administration, and the construction of public works, etc., the State owns railways, tramways, and wharves, and engages in various industrial enterprises, *e.g.*, abattoirs, dockyards, quarries, brick and pipe works. Thus a large number of persons are in constant employment. The Commonwealth services include posts, telegraphs and telephones, customs, taxation, and defence.

The number of employees in New South Wales under the Crown as at 30th June, 1928, is shown below. The figures include persons employed in the Government Savings Bank and in the Commonwealth Bank, and at Cockatoo Island Dockyard. They include also a large number of employees attached to various State departments, who are not under the jurisdiction of the Public Service Board, and were not included in a similar table in earlier issues of the Year Book.

Services.	Permanent.		Temporary.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
<b>State—</b>							
Public Service Board ...	11,012	6,833	2,209	2,070	13,221	8,903	22,124
Railways and Tramways ...	42,777	930	14,425	726	57,202	1,656	58,858
Sydney Harbour Trust ...	209	16	1,040	7	1,249	23	1,272
Water Supply and Sewerage —Metropolitan and Hun- ter District ...	1,929	48	3,088	38	5,017	86	5,103
Water Conservation and Irrigation Commission ...	340	33	831	35	1,171	68	1,239
Metropolitan Meat Industry Board ...	695	23	...	...	695	23	718
Main Roads Board ...	...	...	3,618	40	3,618	40	3,658
Police ...	3,296	9	8	...	3,304	9	3,313
Fire Commissioners ..	761	26	...	...	761	26	787
Savings Bank ...	1,258	269	36	...	1,294	269	1,563
Other ...	209	92	9,076	853	9,285	945	10,230
Total ...	62,486	8,279	34,331	3,769	96,817	12,048	108,865
<b>Commonwealth—</b>							
Public Service Commissioner	8,846*	1,152	2,731	709	11,577	1,861	13,438
Defence Department ...	168	3	1,362	56	1,530	59	1,589
Repatriation Department ..	128	41	154	105	282	146	428
Other ...	381	188	1,288	77	1,669	265	1,934
Total ...	9,523*	1,384	5,535	947	15,068	2,331	17,399
Grand total ...	72,009*	9,663	39,866	4,716	111,875	14,379	126,254

\*Commonwealth Public Service at 30th June, 1927.

The figures in the table include the general labourers and navvies employed by the various public bodies. The wages staff of the railways and tramways numbered 51,595, of whom 6,910 were employed in the construction and duplication of lines; and 13,303 were employed on wages on water conservation, sewerage, and harbour works, main roads, etc.

## UNEMPLOYMENT.

Particulars relating to unemployment are collected at the census, persons being returned as unemployed who had been out of work for more than a week at the date of collection. The number of persons unemployed in April, 1921, was 61,640, or 9·5 per cent. of the group embracing salary and wage earners and the unemployed combined. The males numbered 54,028, or 10·6 per cent., and the females 7,612, or 5·5 per cent. At the previous census, in March, 1911, less than 4 per cent. of the male salary and wage earners, and 2·6 per cent. of the females were out of work. The proportions indicate that entirely different industrial conditions prevailed in those years, the census of 1911 being taken during a period of high productive activity, whereas in April, 1921, unemployment resulting from post-war disorganisation was probably at a maximum.

At the census of 1921, persons were asked to state the cause of their unemployment. The information was not supplied in respect of 3,028 persons. Of the remainder, 29,304 cases, or 50 per cent., were due to scarcity of employment; 14,573, or 25 per cent., to illness; 2,119, or 3·6 per cent., to industrial disputes; 1,852, or 3 per cent., to accident; and 863, or 1·5 per cent., to old age. The majority of males, viz., 53 per cent., were out of work on account of scarcity of employment, but illness was the principal cause of unemployment amongst women, 48 per cent. being idle for that reason. The duration of unemployment was stated in regard to 51,185 persons. Those unemployed for less than 5 weeks numbered 24,299, or 48 per cent.; from 5 to 10 weeks, 9,395, or 18 per cent.; from 10 to 15 weeks, 5,237, or 10 per cent.; over 15 weeks, 12,254, or 24 per cent.

In regard to intercensal periods, quarterly returns relating to the condition of employment amongst various classes of workers are obtained by the Commonwealth Statistician from secretaries of certain trade unions, but many unions do not supply any information owing to lack of records.

The secretaries are asked to state in their returns the number of members out of work for 3 days or more during a specified week in each quarter, those out of work through strikes and lockouts being excluded. Unemployment returns are not collected from unions of persons in permanent employment, such as railway and tramway employees, nor from unions of persons whose employment is casual, such as wharf labourers. The data are compiled by the Commonwealth Statistician. During the year 1927 returns were received from 103 unions with 190,195 members in New South Wales, and 13,356 members, or 7 per cent, were reported to be unemployed. The corresponding figures for the year 1926 were 100 unions with 171,190 members, of whom 12,606, or 7·4 per cent., were unemployed. The yearly figures represent the average of the four quarters.

*Intermittency of Employment.*

In many industries a considerable loss of working time occurs even in normal periods on account of intermittency arising from various causes, but information regarding its extent is not available except in respect of the coalmining industry, in which intermittency is a constant factor. For a number of years the Department of Labour and Industry has endeavoured to collect information relating to interruptions to work in the principal coal mines.

Particulars obtained from these records show that during the period of thirteen years—1925-27—the average number of work-days was 273 per annum, after making allowances for Sundays, pay Saturdays, and regular public holidays. The days on which operations were suspended numbered, on an average, 68 per annum, or 25 per cent. of the total work-days; 24 days,



or 9 per cent., were lost through industrial disputes, and 44 days, or 16 per cent., through other causes. Slackness of trade, owing to restrictions imposed on the export of coal, was the cause of considerable loss during the war period.

The total loss of working time involved by the interruptions to work in the coal mines during the last five years is shown below. The figures have been obtained by multiplying the number of days on which the collieries were idle by the number of employees affected, and by classifying the working-days lost according to the causes of the dislocations.

Causes.	Days Lost.					1923-1927.	
	1923.	1924.	1925.	1926.	1927.	Average	Per
						per	cent.
						Annun.	of
						Total.	Total.
Industrial disputes..	851,241	544,771	615,203	1,134,640	683,389	765,849	47.4
Truck shortage ...	30,022	26,960	37,185	49,652	102,392	49,242	3.1
Slackness of trade...	403,147	563,038	597,083	547,140	780,285	578,139	35.7
Mine disabilities, etc.	121,478	126,363	107,654	114,938	154,343	124,956	7.7
Deaths of employees	27,050	59,679	20,921	28,746	17,477	30,775	1.9
Meetings, extra holi- days ...	21,034	14,370	18,678	10,302	11,500	15,177	0.9
Other causes ...	6,248	5,919	119,567	14,793	121,309	53,567	3.3
Not stated ...	157,304	68,978	139,921	104,386	111,058	116,329	...
<b>Total ...</b>	<b>1,617,524</b>	<b>1,410,078</b>	<b>1,656,212</b>	<b>2,004,597</b>	<b>1,981,758</b>	<b>1,734,034</b>	<b>100.0</b>

The average number of days lost on account of dislocations in this industry during the period of five years was 1,734,034 days per annum. Lack of trade or of shipping was responsible for 36 per cent. of the loss, and industrial disputes for 47 per cent.

The loss through industrial disputes, as stated in the table, represents the working days lost in each year through disputes which commenced in that year, or at an earlier date. Further details relating to the disputes are shown on a later page.

The number of employees in the coal mines is nearly 24,500 and as it is a fundamental industry, intermittency in mining operations has a far-reaching effect on other industries and commercial enterprises.

#### *Relief of Unemployment.*

Measures for the relief of unemployment are undertaken by the State Department of Labour and Industry, and are directed mainly towards the organisation of the supply of labour, by means of labour exchanges, and the assistance of destitute persons in need of sustenance while seeking employment.

A few of the trade unions provide for the payment of out-of-work benefits to their members, but otherwise there is little insurance against unemployment. The State has not instituted any fund for the purpose, and there have not been any operations under a section of the Industrial Arbitration Act which authorises the Government to subsidise from public revenue unemployment insurance funds created by contributions of employers and employees.

A Royal Commission on National Insurance, appointed by the Government of the Commonwealth, submitted a progress report relating to unemployment in June, 1926. Notwithstanding the absence of complete records as to its volume and incidence, the Commission found sufficient evidence to

indicate that unemployment is a prevalent factor in some industries in certain periods of the year, and recommended that action be taken by the Federal Government towards minimising the risks of unemployment and relieving the distress arising therefrom. The Commission recommended that a council comprised of representatives of the Government and the employers' and employees' organisations be constituted to organise a national system of employment bureaux to supervise private labour exchanges, to co-operate with governing authorities and private employers for the prevention of unemployment, and to promote technical training; also that a system of insurance against unemployment be instituted.

#### *State Labour Exchanges.*

The State labour exchanges are administered in conjunction with the office dealing with assisted immigration. The exchanges are situated in the main industrial centres, Sydney, Newcastle, and Broken Hill, and there are agencies in the principal country towns. The expenses are borne by the State, fees are not charged, and advances by way of loan may be made to enable persons to avail themselves of employment offered.

The functions of the exchanges are to bring together intending employers and persons seeking employment, to encourage industrial training in skilled trades, to provide suitable training for vagrant and other persons unsuited for ordinary employment, and to co-operate for these purposes with private employment agencies.

In terms of the Returned Soldiers and Sailors Employment Act, employers desiring to obtain employees are required to apply to a State labour exchange or to a committee dealing with the repatriation of soldiers and sailors.

The operations of the State labour exchanges during the last nine years are shown below:—

Year ended 30th June.	Males.			Females.		
	Registered for Employment.	Sought by Employers.	Sent to Employment.	Registered for Employment.	Sought by Employers.	Sent to Employment.
1920	36,825	24,499	21,107	5,809	9,517	6,091
1921	39,450	31,757	29,104	6,438	10,324	7,073
1922	40,806	25,789	24,763	5,448	10,935	7,551
1923	31,159	22,866	21,379	5,732	11,843	7,650
1924	31,225	23,060	21,490	5,455	10,626	7,031
1925	37,510	28,266	25,067	4,365	9,940	6,277
1926	50,694	33,690	32,204	4,534	9,310	6,204
1927	48,777	28,257	27,543	5,148	9,371	6,424
1928	66,706	31,451	30,658	5,637	9,090	7,180

#### *Private Employment Agencies.*

Private employment agencies are subject to supervision by the State authorities in terms of the Industrial Arbitration Act. Such agencies may be conducted by licensed persons only, and they are required to keep registers of persons applying for labour or employment, and of engagements made. The scale of fees chargeable is fixed by regulation, and if an applicant does not obtain labour or employment within fourteen days, the fee must be repaid, less out-of-pocket expenses. Licensees are prohibited from sharing fees with employers, and from keeping as lodgers persons seeking employment.

At 30th June, 1928, there were 92 private agencies on the register, viz., 50 in Sydney, 28 in the suburbs, and 14 in country districts.

## TRADE UNIONS.

Until 1881 trade unions in New South Wales were subject to Imperial legislation, by which the right to combine was recognised, but actions done in restraint of trade were penalised, and the unions lacked the power to safeguard their funds. The first legislation passed in New South Wales (the Trade Union Act of 1881) is still in operation, though it was amended in 1918 by the Industrial Arbitration Act.

Provision is made for the registration of trade unions, the appointment of trustees, in whom the union property is vested, and for the constitution of rules. The use of union funds for political purposes is subject to the provisions of the Industrial Arbitration (Amendment) Act of 1918, and such payments must be made from a separate fund, to which contribution by members is optional.

There are two classes of trade unions, viz., unions of employers and unions of employees. The latter constitute the bulk of the registered organisations, and a brief account of their development was published in the 1921 issue of the Year Book at page 553.

The introduction of a system of compulsory industrial arbitration in 1901 led to an increase in the organisation of new trade unions, registration of employees' unions to bring them within the scope of the system being granted only to organisations registered under the Trade Union Act of 1881. It should be clearly understood, however, that an industrial union of employees is the same organisation as the trade union bearing the same title, the term industrial union indicating merely that it has undergone dual registration for the purposes of the administration of the Industrial Arbitration Act.

After the introduction of the Commonwealth system of industrial arbitration in 1904 some of the unions previously on the State registry became merged into federal associations, but unless a union elects to be regulated exclusively under federal arbitration and conciliation the branch in New South Wales retains its registration under the Trade Union Act of 1881.

Statistics relating to the trade unions of employees in the State are shown in the following statement for various years since 1911. The figures are not quite complete, as in every year some of the unions fail to supply returns to the Registrar:—

Year.	Unions of Employees	Members.			Receipts.	Expenditure.	Funds at end of Year.
		Males.	Females.	Total.			
1911	179	145,784	4,743	150,527	£ 157,202	£ 146,757	£ 112,494
1916	202	218,609	12,941	231,550	241,644	249,691	202,950
1921	197	234,898	23,965	258,863	363,067	345,854	194,360
1922	192	230,126	23,170	253,296	386,428	372,069	213,520
1923	184	224,042	24,157	248,199	508,396	486,346	232,480
1924	177	223,928	26,987	250,915	416,620	387,867	262,559
1925	177	256,269	28,290	284,559	402,346	365,141	307,397
1926	170	286,245	33,354	319,599	494,341	494,979	322,912
1927	170	306,380	33,689	340,069	487,723	454,190	357,588

At the end of the year 1927 there were 170 registered trade unions of employees, with a membership of 345,069, and funds amounting to £357,588. The increase in membership, especially amongst women, since 1911 has been due in a large measure to organisation for the purposes of industrial arbitration and conciliation. The receipts during 1927 amounted to

£487,723, including contributions, £460,225. Of the total expenditure, payments in respect of benefits amounted to £117,891, and management and other expenses, including legal charges in connection with industrial awards, etc., to £336,299. The total receipts and expenditure are liable to fluctuate under the influence of prevailing industrial conditions, the amounts being inflated in some years by the inclusion of donations for relief from one union to another.

The funds include cash and freehold property and such assets as shares in Trades Halls and newspapers. In the case of unions which are branches of federated unions the balance of funds at the close of the year is usually transferred to the credit of the central executive.

The following statement shows the receipts, expenditure, accumulated funds, and membership of trade unions of employees, according to industrial classification, in the year 1927:—

Industrial Classification.	Membership at end of year.			Receipts.	Expenditure.	Funds at end of year.	Funds per member.
	Males.	Females.	Total.				
	No.	No.	No.	£	£	£	s. d.
Engineering and Metal Working ... ..	43,726	72	43,798	82,627	77,869	54,062	24 8
Food, Drink, and Narcotics ...	24,360	12,462	36,822	26,133	25,203	16,774	9 1
Clothing ... ..	6,140	9,245	15,385	9,209	8,454	15,869	20 8
Printing, Bookbinding, etc. ...	5,519	1,718	7,237	15,061	12,052	29,792	32 4
Manufacturing, n.e.i. ...	17,335	1,156	18,491	22,016	20,334	24,022	23 0
Building ... ..	31,419	8	31,427	33,509	34,929	25,431	16 2
Mining and Smelting ... ..	20,177	...	20,177	105,720	96,188	54,791	54 4
Railways and Tramways ...	41,570	1,058	42,628	34,299	33,852	18,509	8 8
Other Land Transport ...	5,526	...	5,526	9,711	8,578	7,494	27 1
Shipping and Sea Transport ...	13,371	25	13,396	22,500	22,970	11,278	16 10
Pastoral ... ..	35,751	1,049	36,800	46,148	45,676	23,156	12 7
Governmental, excluding Railways and Tramways ...	26,823	5,089	31,912	33,473	27,214	36,544	22 11
Miscellaneous Industries ...	34,663	6,507	41,470	42,436	36,392	23,262	14 1
Labour Council and Eight-hour Committees ... ..	...	...	...	4,851	4,479	10,604	...
<b>Total Unions of Employees ...</b>	<b>306,380</b>	<b>38,689</b>	<b>345,069</b>	<b>487,723</b>	<b>454,190</b>	<b>357,588</b>	<b>20 9</b>

The average membership per union, excluding labour councils and eight-hour committees, is approximately 2,160, but the majority of the unions are small. In 1927 there were 19 with less than 100 members; 66 with 100 to 1,000 members; 52 with 1,000 to 5,000 members; 18 with 5,000 to 10,000; and 5 unions had more than 10,000 members.

A number of the unions are affiliated with labour councils, which have been formed in the main industrial centres.

*Unions of Employers.*

The records of the Registry of Trade Unions show that few unions of employers seek registration under the Trade Union Act of 1881, so that the available information concerning them is scanty and does not afford any indication of the extent of organisation amongst employers.

The unions of employers registered under the Trade Union Act in 1927 numbered 24. The membership at the end of the year was 11,264, and the funds at the end of the year amounted to £52,889. The receipts during 1927 amounted to 54,568, and the expenditure to £49,849.

Any employer or group of employers with at least 50 employees may register as an industrial union under the Industrial Arbitration Act.

## INDUSTRIAL ARBITRATION.

The term "Industrial Arbitration" is used here in a broad sense to embrace all provision made by legislation for the adjustment of industrial relations between employers and employees, by arbitration, by conciliation, or by co-operation of employers and employees.

In New South Wales there are two systems of industrial arbitration: one under State law, its operation being confined to the area of the State; and the Commonwealth system, which applies to industrial disputes extending beyond the limits of one State.

A brief account of the development of the State system was published in the Year Book for 1925-26. Under current legislation extensive powers for the regulation of industrial conditions are exercised by an Industrial Commission and by conciliation committees which consist of representatives of employers and employees and a chairman.

The federal system of industrial arbitration was inaugurated in 1904 when a court was constituted in terms of the Commonwealth Conciliation and Arbitration Act for the settlement of disputes extending beyond the boundaries of one State. Under legislation passed in 1920, a special tribunal, consisting of a chairman and representatives of employers and of employees, may be appointed to exercise the powers of the Court in respect of disputes in any industry.

Provision is made under both State and federal systems for collective bargaining and the registration and enforcement of industrial agreements.

The industrial conditions of employment in the public service of the Commonwealth are determined by an arbitrator appointed in terms of the Public Service (Arbitration) Act, 1920.

### *Relation between State and Commonwealth Systems.*

The relation between the State and Commonwealth systems in respect of industrial awards and orders rests upon the provision of the Commonwealth Constitution Act that if a State law is inconsistent with a federal law, the latter prevails and the former becomes inoperative so far as it is inconsistent. There is, however, no organic connection between the industrial systems. The industrial authorities have adopted generally the same broad principles for the promotion of industrial peace and the maintenance of standard conditions. Nevertheless fundamental differences in legislation and in the extent of their constitutional authority have prevented them from co-ordinating their methods and practices and from blending their determinations into an industrial code for the guidance of employees and employers in all branches of industry throughout the Commonwealth. Thus differences have arisen in regard to wage determinations, disturbing the distinctions in grade, as expressed by wages, which had been recognised for many years amongst skilled workers, and the overlapping of jurisdiction has caused confusion, especially where members of a number of craft unions work in the same industry under different awards or agreements.

In recent years the divergence between the conditions of employment as laid down by the State and federal tribunals has become more pronounced, especially those relating to such important issues as rates of wages and hours of work. In both jurisdictions it has been accepted as a principle that the minimum remuneration shall be sufficient to cover the cost of maintaining a worker's family and that the rates should be adjusted during

the currency of an award to meet changes in the cost of household expenditure. In practice, however, there have been appreciable differences in the basic rates and dissimilar methods of adjustment have been used. A recent change in the State system by which the basic rate is assessed on the cost of maintaining a man and his wife only, with a supplementary system of family allowances, is likely to widen the differences already apparent.

In relation to hours the State Parliament by direct legislation has reduced the standard hours of work for practically all classes of workers except those working under federal awards. On the other hand the effect of amendments of the federal industrial arbitration law has not been favourable to the movement towards the reduction of working hours.

Efforts have been made by the Government of the Commonwealth to obtain exclusive jurisdiction in industrial matters. Proposals to alter the Constitution of the Commonwealth for this purpose were submitted to a referendum in September, 1926, but they were rejected. Subsequently the Federal law was amended by the Commonwealth Conciliation and Arbitration Act, 1928, with the object of effecting a degree of co-ordination between the Federal and State systems. Under the Act, as amended, the Federal Court may order a State industrial authority to cease dealing with any matter covered by a Federal award, or the subject of proceedings before the Federal Court. State laws, awards, etc., are declared to be invalid insofar as they are inconsistent with, or deal with any matter dealt with in, a Federal award, etc. The Federal Court may refrain from determining a dispute if it considers that a State authority should deal with it, and the Judges of the Commonwealth Court may confer with State industrial authorities in relation to any industrial matter with a view to securing co-ordination between awards and orders of the Federal and State authorities.

#### STATE SYSTEM OF INDUSTRIAL ARBITRATION.

##### *Industrial Unions.*

For the purpose of bringing an industry under the review of the State industrial tribunals, the employees must be organised as a trade union under the Trade Union Act of 1881, and must obtain registration as an industrial union under the Industrial Arbitration Act. Registration for the purpose has been effected by practically all classes of employees throughout the State. The principal exceptions have been certain classes of workers in rural industries, in which the conditions present practical difficulties to regulation by award, and domestic workers in private houses, who are not organised. A recent development has been the extension of organisation amongst rural workers and the determination of awards for groups of rural employees.

Registration as a union of employers may be granted to any person or group of persons employing not less than fifty employees, and prior registration under the Trade Union Act is not prescribed, as in the case of unions of employees.

##### *State Industrial Tribunals.*

The principal tribunal is the Industrial Commission, first constituted in terms of the Industrial Arbitration (Amendment) Act, which commenced to operate in April, 1926, and was amended in December, 1927. Under the Act of 1926, the Commission was constituted by the Industrial Commissioner, sitting alone or with members. Sitting alone he was authorised to deal with cases relating to such matters as strikes and lock-outs, the registration of industrial unions, and appeals against the decisions of industrial magistrates, and to conduct inquiries under the Monopolies Act, 1923.

Except where the Act prescribed that the Commissioner should sit alone, an even number of members equally representing employers and employees might be appointed to sit with him in any particular matter as the Minister for Labour and Industry might determine.

In terms of the Act of 1927 the Commission is now a superior court of record, constituted by three members having the same status as a puisne judge of the Supreme Court. It may delegate its powers in any particular matter to one member, his decision being subject to appeal to the full Commission.

The Commission is authorised to determine any industrial matter referred to it by the Minister, to determine, not more frequently than once in every six months, a standard of living and to fix the living wages based thereon, to hear appeals, to confer with persons and unions in regard to anything affecting the settlement of industrial matters, and to summon conferences.

There is also a Deputy Commissioner who exercises the powers of the Commission in matters which it refers to him, and from his determinations appeal lies to the Commission.

An industrial board consisting of nominees of employers and employees, and a chairman may be constituted by the Minister on the recommendation of the Industrial Commission for any industry or group of industries. The boards are appointed, though they do not function.

A conciliation committee consisting of an equal number of representatives of employers and employees, and a chairman may be appointed for any industry or calling for which an industrial board has been constituted. The Minister appoints a number of persons to act as chairmen of the committees, the maximum number under existing regulations being twelve. The Industrial Commission allots one of the chairmen for each committee, and in this way the committees for allied industries may be grouped under the same chairman.

The Act of 1927 deprived the chairman of the power to vote at meetings of the committee, except when the other members are equally divided in opinion as to any question, and they agree to accept his decision.

Appeal from the determinations of a committee lies to the Industrial Commission, which under the Act of 1926, was constituted by the same members as the committee, except the chairman, whose place was taken by the Industrial Commissioner. Under the amendment of 1927 these members may sit with the Commission to hear appeals, but only as assessors without vote.

The conciliation committees exercising the powers of the industrial boards may make awards fixing minimum rates of wages and salaries, minimum prices for piecework, overtime rates, number of apprentices, and hours and times to be worked to entitle employees to the wages fixed. Awards may be made prescribing that preference of employment shall be given to unionists, under conditions described on page 790.

The maximum rate of wages or salary which may be fixed by award is £15 per week or £750 per annum, the limit having been raised from £10 per week or £525 per annum by the Act of 1926. An award or an agreement may not be made for a wage lower than the living wage declared by the Industrial Commission, and if a declaration is varied during the currency of an award the rates of wages prescribed by the award may be varied accordingly. Permits to work for less than the minimum wages prescribed by award may be granted to aged, infirm or slow workers.

Awards as to wages, overtime, and hours of work, except those relating to employees in rural industries, are subject to the provisions of the Forty-four Hours Week Act, which is discussed on a later page.



Proceedings before an industrial tribunal are initiated usually upon the application of employers of not less than twenty employees in any industry or calling, or by an industrial union of employees. Matters may be referred also by the Minister for Labour and Industry, and where the public interests are likely to be affected the Crown may intervene in any proceedings before a tribunal or may appeal from an award.

Awards are binding on all persons engaged in the industries or callings, and within the locality covered, for a period not exceeding three years specified therein, and after such period until varied or rescinded.

#### *Industrial Agreements.*

Industrial unions and trade unions are empowered to make with employers written agreements, which become binding between the parties when filed in the prescribed manner.

The maximum term for which an agreement may be made is five years, but it continues in force after the expiration of the specified term until varied or rescinded, or terminated after notice by a party thereto. An industrial agreement may not provide for wages lower than the living wages declared by the Commission.

#### *Number of Industrial Awards and Agreements.*

During the year ended 30th June, 1928, industrial boards made 2 principal awards, conciliation committees 120 principal awards and 215 variations, and the Industrial Commission 15 principal awards and 46 variations. At 30th June, 1928, there were 269 Conciliation Committees.

The number of awards and agreements made by the State industrial tribunals during each of the last ten years is shown below:—

Year ended 30th June.	Awards Made.		Agreements Filed.	In Force at end of Year.	
	Principal.	Variation.		Awards.	Agreements.
1919 ... ..	109	90	48	308	77
1920 ... ..	141	270	76	331	104
1921 ... ..	113	391	75	370	116
1922 ... ..	81	274	54	323	114
1923 ... ..	73	586	62	299	118
1924 ... ..	60	282	67	321	127
1925 ... ..	46	122	51	318	140
1926 ... ..	53	305	63	342	168
1927 ... ..	190	166	32	369	173
1928 ... ..	137	261	31	425	144

Complaints regarding breaches of award and industrial agreements are investigated by officers of the Labour and Industry Department, who may direct prosecutions. Proceedings may be taken also by employers and by the secretaries of industrial unions, and the cases are dealt with by the Industrial Registrar or the industrial magistrates.

During the year ended June, 1928, the Industrial Magistrates heard 2,148 cases, and convictions were recorded or orders were made in 1,412 cases. An aggregate amount of £5,298 was ordered to be paid as penalties, wages, subscriptions, etc., and £1,758 as costs.

## THE COMMONWEALTH SYSTEM OF INDUSTRIAL ARBITRATION.

Under the Commonwealth law, registration is a necessary qualification to entitle unions to submit disputes to the Court, or to be represented in proceedings relating to disputes, and industrial organisations of employers and of employees, representing at least 100 employees, may be registered on compliance with prescribed conditions.

The Court of Conciliation and Arbitration consists of a Chief Judge and other Judges appointed by the Governor-General, with life tenure. The Chief Judge is charged with the duty of endeavouring to reconcile the parties in industrial disputes, and for the purpose he may convene compulsory conferences. The other judges exercise such powers of the Chief Judge as are assigned to them. Conciliation Commissioners, appointed by the Governor-General, are authorised also to intervene in industrial disputes and to summon conferences.

The Court endeavours to induce the settlement of disputes by amicable agreement, or, failing an agreement, determines the disputes by award. Industrial agreements, when certified by a judge of the Court and filed, are binding on the parties thereto. The awards and agreements are made for a specified period up to a maximum of five years, and after the expiration of the definite period an award continues until a new award is made, unless the Court orders otherwise. Agreements continue unless rescinded, or terminated by notice.

The powers conferred upon the Federal Court include the power to determine rates of wages, hours, and other conditions of employment, and to grant preference to members of organisations. Questions relating to standard hours are determined by the full bench of the Court. In such cases and in those relating to the basic wage the Attorney-General, by public notification, may authorise any person, union, or organisation interested in the matter to apply to the Court for liberty to be heard and to examine and cross-examine witnesses.

Important amendments were made in the Commonwealth Conciliation and Arbitration Act by an amendment passed in June, 1928. Authority was given for the appointment of conciliation committees, consisting of members representing in equal numbers the employers and employees, with a chairman, who is not entitled to vote upon any matter before the committee. The Court is required in making awards or certifying to agreements to take into consideration the probable economic effect thereof upon the community in general and upon the industry concerned. Organisations submitting disputes to the Court may be required to give security that awards and orders will be observed, and inspectors may be appointed to secure the observance of the Act, awards, etc. Secret ballots must be taken if ordered by the Court in respect of any matter in dispute, or, upon the demand of ten members of an organisation, in respect of the election of officers or any proposed resolution. Action may be taken for the expulsion of members or officials of an organisation for breaches of the Act or awards, etc.

Special tribunals may be appointed under the Industrial Peace Acts of 1920 consisting of an equal number of representatives of employers and employees, and a chairman, to exercise, in respect of the industry concerned, similar jurisdiction to that of the Court of Conciliation and Arbitration. An award or order of a special tribunal, or an agreement made at a conference and filed with the Industrial Registrar, is binding on the parties, and may be enforced as an award of the Court.

A special tribunal was appointed in 1920 for the coalmining industry, which is one of the most important industrial activities in New South Wales, where most of the Australian coal is produced. Other large enterprises subject to federal awards and agreements include shipping, pastoral

industries, shipbuilding, timber trades, clothing factories, breweries, glass works, and rubber works, a large section of the metal and printing trades and of the railway and tramway employees.

At 31st March, 1928, there were 224 awards of the Commonwealth Court, and 263 industrial agreements in force, of which 138 awards and 99 agreements were in force in New South Wales.

#### CROWN EMPLOYEES AND ARBITRATION.

Under the State Arbitration system, employees of the State Government and of governmental agencies, with the exception of the police, have access to the ordinary industrial tribunals for the settlement of disputes and the regulation of the conditions of their employment. It is prescribed moreover that conditions or wages fixed by award for employees of the Crown may not be less favourable than those for other employees doing substantially the same class of work, and the fact that employment is permanent and additional privileges are allowed to Government employees may not of itself be regarded as a substantial difference.

The employees of the State Government who are subject to the Public Service Act were excluded from the jurisdiction of the industrial tribunals in 1922, and provision was made for the determination of their salaries by agreement between the Public Service Board and an organisation of public servants, or in the case of salaries up to £525 per annum, by salaries committees, consisting of representatives of the Public Service Board, of the class of employees concerned, and of the department in which they are engaged. Appeals against the decisions of the committees may be made to the Public Service Board or to a tribunal consisting of a Judge and two members of the Board. When the Industrial Arbitration Act was amended in 1926 provisions were re-enacted to restore to public servants the right to obtain awards up to £750 per annum.

The employees under the administration of the Public Service Board include those engaged in the work of the Government departments, but do not include the staff controlled by the State Railway Commissioners or by many other Governmental agencies.

The police are excluded from the jurisdiction of the industrial tribunals, and are controlled by the Commissioner of Police. An appeal tribunal has been constituted to determine appeals against his decisions in regard to promotions and punishments. The tribunal is constituted by a Judge of the District Court, with or without assessors.

The rates of pay and terms and conditions of employment in the public services of the Commonwealth are regulated by a special tribunal constituted by an arbitrator appointed by the Governor-General to deal exclusively with the public service. There is no appeal against the decisions of the arbitrator, but they do not come into operation until they have been laid before both Houses of the Commonwealth Parliament. At 31st March, 1928, there were in force in New South Wales 34 determinations of the Public Service Arbitrator.

In 1905 the High Court of Australia decided, in the case relating to the State railway employees, that the Commonwealth Conciliation and Arbitration Act, 1904, in so far as it purported to include the employees of a State Government within its scope, was *ultra vires* the Commonwealth legislature. This judgment was overruled in the case of the Amalgamated Society of Engineers in 1920. Consequently the Federal Court has decided that it is bound to make an award unless the rates paid and the conditions of work conform with the usual rules and conditions laid down by the Court. Both Federal and State awards are in operation in respect of the State-owned railways and tramways of New South Wales.

## HOURS OF WORK.

Prior to the introduction of industrial arbitration, hours of work in New South Wales were restricted by legislation in order to safeguard the health of the workers, especially women and juveniles. Thus the Factories and Shops Act has prohibited the employment in factories of youths under 16 and of women for more than 48 hours in any week, though overtime not exceeding 3 hours in any day is allowed on 30 days in a year, or by written permission of the Minister, on 60 days.

Hours of employment in shops have been restricted by the operation of the Early Closing Acts. Except in the case of specified shops, only one late shopping night is allowed, when the closing hour must not be later than 10 o'clock. On four days a week the shops must close at 6 o'clock, and on one day at 1 o'clock. In the Metropolitan and Newcastle districts, and in the country shopping districts in the county of Northumberland, the shops are subject to the Saturday Half-holiday Act; the late closing night is on Friday, and the 1 o'clock closing on Saturday. In other districts the half-holiday is either on Wednesday with the late night on Saturday, or on Saturday with the late night on Friday.

With the development of the arbitration system the actual working hours in organised trades and callings became subject to awards and agreements. In making awards and agreements under the State industrial jurisdiction the provisions of the Forty-four Hours Week Act, 1925, must be observed.

This Act prescribes that the ordinary hours in industries—with the exception of coal-mining and ocean shipping and of rural industries as defined by the Industrial Arbitration Act—may not exceed 8 per day, 44 per week, 88 in fourteen consecutive days, or 176 in twenty-eight consecutive days. It is provided, however, that the time worked in a day may exceed 8 if a short day or less working days than six per week are adopted by award or agreement. Thus allowance is made for the practice, adopted in many cases, of completing the full week's work in five days, leaving Saturday a whole holiday. Overtime may be permitted under certain conditions.

The Act provides also that rates of wages fixed by award or agreement upon a weekly basis may not be reduced by reason only of a reduction in hours in accordance with the Act, and that the rates fixed upon a daily or hourly basis must be increased so that each employee working full time as reduced will receive the same amount of wages as for full time under the provisions of the award or agreement.

The Act contains provisions to apply the forty-four hours week to industries under federal awards and agreements, but it has been decided by the High Court of Australia that in so far as it purports to vary hours or rates of wages fixed under federal award it is invalid.

The hours of work in the coal-mines are fixed by award of a special tribunal, viz., eight hours bank to bank, inclusive of one half-hour for meal time, on Monday to Friday, and six hours bank to bank, inclusive of one half-hour for meal time, on Saturday, Sunday, and holidays, the usual number of shifts being eleven per fortnight. The hours are reckoned from the time the first person working on a shift leaves the surface to the time the last man on the same shift returns to the surface.

The power of the Commonwealth Court of Arbitration and Conciliation in regard to hours is restricted by the condition that the question of varying the hours which have been adopted in an industry must be decided by the Full Bench. Until February, 1927, the general practice had been to adhere to the standard hours of 48 per week, and shorter hours were granted only in exceptional cases, e.g., to miners working below ground, to builders' labourers who are required to spend much time in travelling to jobs, and to clothing factory hands, who are mostly women.

In 1926 a claim by the Amalgamated Engineering Union for a 44-hour week was before the Court, and upon the intervention of the Attorney-General representatives of other industries were enabled to take part in the case. By a majority verdict delivered in February, 1927, the Court approved of the reduction of the standard hours to 44 per week. The finding was limited to the engineering industry, and it was indicated by the Chief Judge that the Court would probably apply a similar reduction in other industries "which are similar in their conditions as to leisure or want of leisure, to the engineering industry."

Subsequent claims for a reduction of hours were granted in the case of some industries—*e.g.*, the printing trades, and certain employees in gas works—and refused in others—*e.g.*, furnishing trades, makers of agricultural implements, stoves, bedsteads, etc., railway locomotive enginemen. The orders for reduction did not materially affect the working hours in New South Wales, where the 44-hour week was prevailing already in the industries concerned.

#### *Public Holidays.*

Certain days are observed as public holidays, on which work is suspended as far as practicable. In continuous processes and in transport and other services where the employees work on holidays they receive recreation leave in lieu thereof, and in some cases extra wages.

The days which are observed generally throughout the State as public holidays are as follows:—1st January (New Year's Day), 26th January (the Anniversary of the first settlement in Australia), Good Friday, Easter Monday, 25th April (Anzac Day), Christmas Day, 26th December (Boxing Day), and the King's Birthday.

If a public holiday falls upon a Sunday, or if Boxing Day falls upon a Monday, the following day is a holiday. If the King's Birthday falls upon any day of the week other than Monday the following Monday is a holiday in lieu thereof.

In addition to the days listed above, the day after Good Friday and the first Monday in August are bank holidays, observed in respect of banks and many other financial institutions and public offices. The Governor may appoint by proclamation a special day to be observed as a public holiday throughout the State or any part of the State. It is customary in certain districts to proclaim a day in each year as Eight Hour Day. In the county of Cumberland the first Monday in October is Eight Hour Day.

#### PREFERENCE TO UNIONISTS.

The State industrial tribunals may prescribe by award that preference of employment be given to members of a union, and it is a general rule to grant preference to a union which substantially represents the trade concerned. By the Industrial Arbitration (Amendment) Act of 1926 the tribunals were authorised to award "absolute preference," and many awards contained provisions which practically precluded non-unionists from engagement or made it a condition that when such persons were engaged they must apply for admission to an appropriate union. An Amending Act in 1927 nullified such provisions of current awards, and limited the authority of the tribunals so that preference may be prescribed only as between unionists and other persons offering or desiring service or employment at the same time.

The Commonwealth Court is authorised to grant preference to members of registered organisations, but it is the usual practice to refuse to order preference if the respondents undertake not to discriminate against unionists.

An award, order, or agreement under the arbitration systems may not operate to prevent the employment of returned soldiers or sailors.

## APPRENTICESHIP.

Conditions of apprenticeship in New South Wales are subject to general regulation in terms of the Apprentices Act of 1901, which prescribes that children may not be indentured until they reach the age of 14 years, the maximum term of apprenticeship being seven years. The hours of work may not exceed 48 per week, except in farming occupations and in domestic service.

The Industrial Arbitration Act of New South Wales confers upon the industrial tribunals authority to attach certain conditions to the employment of apprentices, the term being defined to include all employees under 22 years of age serving a period of training under indenture or other written contract for the purpose of rendering them fit to be qualified workers in an industry. Under this authority the conditions in nearly all the skilled occupations in which apprenticeship is a recognised custom were determined by industrial awards and agreements, until the year 1923, when the Board of Trade, in the exercise of its powers in regard to the control of apprenticeship, issued regulations in respect of many occupations, and the relevant provisions of awards and agreements ceased to have effect.

In April, 1926, when the Board of Trade was dissolved, apprenticeship in each industry became a matter for determination by the Conciliation Committee concerned, and provision was made for the continuance of the Board's regulations until varied or rescinded by a committee.

The occupations for which regulations issued by the Board of Trade were in operation at the end of June, 1928, were as follows:—Boilermakers, bricklayers, carpenters and joiners, electrical fitters and electrical mechanics, fibrous plaster fixers, marble and slate workers, masons and polishers, metal-ceiling fixers, painters and decorators, plasterers, plumbers, slaters, tilers and shinglers, stone-cutters and setters, stone masons and polishers, coopers, coachmakers (road), engineers, farriers, metal moulders, tinsmiths, sheet-metal workers, gasmeter makers and repairers.

A separate set of regulations was issued for each occupation, but the rules are generally similar, except in cases where it is necessary to provide for the special circumstances of any trade. Contracts of apprenticeship must be registered. A short period of probation is allowed before indenture. The normal period of apprenticeship is usually five years in the case of boys entering the trade before reaching the age of 17 years. Shorter periods are arranged for those entering at older ages, and such apprentices are required usually to attend trade or continuation schools, and, in some cases, to pass through courses of intensive training. In several occupations adult apprenticeship may be allowed under special contract. To obviate difficulties which arise from the intermittent employment of those qualified to undertake the training of apprentices, it is provided that apprentices may be transferred from one master to another, and that organisations of employers and of operatives, by official representatives, may be masters of apprentices. In some occupations the proportion of apprentices to journeymen is fixed. The rates of wages are prescribed for the apprentices in each trade. The hours and other conditions of employment are those determined by the industrial awards relating to the trade.

## INDUSTRIAL DISLOCATIONS CONTINGENT UPON DISPUTES.

Under the State law strikes may be recognised as lawful if fourteen days' notice of the intention to strike has been given to the Minister for Labour and Industry, except strikes by employees of the Government or of municipal and shire councils, or by workers engaged in military or naval contracts. Strikes are illegal also in industries in which conditions of employment

are regulated by award or agreement, unless the award has been in operation for at least twelve months and the union has decided by a secret ballot to withdraw from its conditions. When a strike is contemplated, or at any time during a strike, the Minister may direct a secret ballot to be taken in order to ascertain whether the majority of the unionists concerned is or is not in favour of the strike.

The maximum penalty for being concerned in a lockout is £1,000, and for an illegal strike £500 in the case of a union, and £50, or six months' imprisonment, in regard to an individual. Penalties may be imposed also for obstructing a ballot, for picketing in connection with an illegal strike, or for inducing persons to refrain from handling any commodity during a strike.

Within the jurisdiction of the Commonwealth Conciliation and Arbitration Act lockouts and strikes are prohibited under a penalty of £1,000 in the case of an organisation or employer and of £50 in the case of any other person.

The Crimes Act as amended by the Federal Parliament in 1926 provides that in the event of a serious industrial disturbance prejudicing or threatening trade or commerce with other countries or among the States the Governor-General may make a proclamation to that effect. During the operation of the proclamation persons concerned in a lock-out or strike relating to the interstate or oversea transport services or to the provision of any public service by the Commonwealth become liable to imprisonment for a period not exceeding one year, and (if not born in Australia) to deportation.

#### *Particulars of Dislocations.*

Records relating to industrial dislocations contingent upon disputes in all classes of industry in New South Wales are kept by the Department of Labour and Industry. Data are obtained principally from reports by police officers, departmental inspectors, and managers of coal-mines, also from managers of other industrial establishments, from union secretaries, and from newspapers and trade journals.

In the compilation of the tables relating to industrial dislocations contingent upon disputes, it is the rule of the Department of Labour in counting the number of dislocations to consider that the cessation of work contingent upon any one dispute constitutes only one dislocation. For example, if a section of employees in an industry ceases work and the dispute extends subsequently to other employees in that industry in the same or in other localities, one dislocation is recorded. On the other hand, if employees in other industries cease work in sympathy with the militant unions, the sympathy strikes are counted as another dislocation, that is, one in addition to the original dislocation.

In the coal-mining industry, when the action of one section of the employees has caused a complete cessation of the operations of the mine, the number counted is the full complement of the mine. Where a section has ceased work and the operations of the mine have continued, only those who ceased work have been included as workers involved.

In calculating the working days lost, only actual working days, viz., days on which work would be performed ordinarily, have been counted, but apparently no allowance has been made for intermittency of employment, and it has been assumed that if the dispute had not occurred work would have been continuous during the period of its currency.

The following statement shows, so far as can be ascertained, the number of workers involved, and the time lost by industrial dislocations contingent upon disputes in each year since 1918. Particulars are shown separately regarding dislocations which originated during the year specified, and those which commenced at an earlier date:—

Year.	Dislocations.			Workers Involved.			Working Days Lost during Year.		
	Anterior.	New.	Total.	Anterior.	New.	Total.	Anterior.	New.	Total.
1918	1	152	153	340	38,652	38,992	4,080	186,344	190,424
1919	7	306	313	1,949	123,174	125,123	19,484	2,113,114	2,132,598
1920	9	411	420	10,023	151,018	161,041	1,558,634	741,744	2,300,378
1921	4	555	559	20,597	160,510	190,107	227,645	433,273	665,918
1922	3	479	482	358	188,861	189,219	733	587,726	588,459
1923	2	250	252	957	83,739	89,696	28,143	811,419	869,562
1924	4	520	524	484	185,268	185,752	28,634	611,135	639,769
1925	6	644	650	4,192	230,320	243,512	29,436	893,668	923,104
1926	13	379	392	2,368	211,366	213,734	127,275	1,304,246	1,431,521
1927	3	457	460	650	178,920	179,570	58,250	841,702	899,592

Preliminary data indicate that about 499,800 days were lost during the year 1928.

A classification of the dislocations according to mining and non-mining industries reveals the fact that disputes leading to a suspension of work occur more frequently and are more extensive in the mining industry than in all other industries combined. The following statement shows the particulars in relation to each group of the dislocations which commenced in each of the last ten years. The working days lost have been assigned to the year in which the dislocation commenced, and for this reason the figures differ from those in the previous table, which show the loss actually occurring during the year specified.

Year.	Dislocations.			Workers Involved.			Working Days Lost.		
	Mining.	Non-mining.	Total.	Mining.	Non-mining.	Total.	Mining.	Non-mining.	Total.
1918	106	46	152	30,246	8,406	38,652	194,751	101,077	295,828
1919	228	78	306	86,778	36,396	123,174	2,958,056	713,692	3,671,748
1920	351	60	411	109,464	41,554	151,018	316,823	652,566	969,389
1921	531	24	555	145,282	24,228	169,510	360,652	73,354	439,006
1922	417	62	479	171,327	17,534	188,861	470,972	144,897	615,869
1923	197	53	250	86,110	2,629	88,739	878,820	11,233	890,053
1924	433	37	520	173,190	12,078	185,268	537,040	103,531	640,571
1925	555	89	644	218,034	21,286	239,320	741,825	280,968	1,022,793
1926	315	64	379	143,210	63,156	211,366	1,010,052	350,594	1,360,646
1927	366	91	457	153,095	25,825	178,920	710,731	160,207	870,938

The days lost in non-mining industries in 1925 include 172,000 days attributed to a dispute regarding wages between the owners and the crews of British oversea vessels engaged under articles signed in ports outside Australia.

It is difficult to obtain reliable information regarding the cost of industrial dislocations. An estimate of the losses in wages in each of the last ten years is shown below, the method adopted being as follows:—The working days lost were classified into the fourteen industrial groups, for which average rates of wages are shown subsequently in this chapter, the days



being assigned to the year in which the dislocation commenced; the days lost in respect of each group in each year were then multiplied by the rate of wages which is the mean of the average rate for adult males in that group as at the end of that year and at the end of the previous year.

Year.	Working Days Lost.			Estimated Loss of Wages.		
	Mining.	Non-mining.	All Industries.	Mining.	Non-mining.	All Industries.
	Days.	Days.	Days	£	£	£
1918	104,751	101,077	205,828	65,900	54,900	120,800
1919	2,958,056	713,692	3,671,748	1,990,600	420,100	2,410,700
1920	316,823	652,566	969,389	252,800	485,100	737,900
1921	360,652	78,354	439,006	317,100	66,600	383,700
1922	470,972	144,897	615,869	411,100	115,400	526,500
1923	878,820	11,233	890,053	765,300	9,000	774,300
1924	537,040	103,531	640,571	469,900	52,800	552,700
1925	741,825	280,968	1,022,793	663,000	232,000	895,000
1926	1,010,052	350,594	1,360,646	928,000	295,800	1,223,800
1927	710,731	160,207	870,938	660,400	136,900	797,300

These quotations of estimated loss of wages are open to question in so far as the records are deficient in regard to the sex and age of the workers involved, therefore allowance has not been made for the proportion of women and juveniles. The proportion is small, however, as dislocations have been relatively unimportant in industries in which the majority of the women and juvenile workers are employed. Another factor for which allowance has not been made is the extent to which losses in wages during a dislocation were compensated by higher rates of pay or increased activity after resumption of work, *e.g.*, in the coal-mining industry, where operations are affected in normal times by intermittency due to trade conditions or blocks in the transport system.

Information is given in the following table regarding the duration of the dislocations which originated during the year 1927:—

Duration in Working Days.	Dislocations.	Workers Involved.	Work Days Lost.
Under 1 day ... ..	15	3,844	1,951
One day ... ..	244	92,886	92,886
Over 1 and not exceeding 7 ...	148	47,814	155,635
" 7   "   "   14 ...	27	19,562	177,850
" 14   "   "   21 ...	7	2,457	48,035
" 21   "   "   28 ...	6	10,205	233,871
" 28   "   "   50 ...	6	1,503	57,088
" 50   "   "   100 ...	2	85	5,342
" 100 ... ..	2	564	98,780
Total ... ..	457	178,920	870,938

A very large proportion of the dislocations are of brief duration. The number of workers affected by dislocations lasting one day or less during 1927 was 96,730, and the loss of working days 94,837. These brief dislocations accounted for approximately 57 per cent. of the total number, 54 per cent. of the workers involved, and 11 per cent. of the working days lost.

The causes of the disputes which led to dislocations in the mining industries and in the non-mining group are classified in the following statement. Dislocations arising from the employment of non-union labour are included

in the category, "employment of persons, etc." Those pertaining to the recognition of a union and the enforcement of union rules are classified under the head of "trade unionism."

Cause.	Mining.			Non-Mining.			All Industries.		
	Disloca- tions.	Workers in- volved.	Work- ing days lost.	Disloca- tions.	Workers in- volved.	Work- ing days lost.	Disloca- tions.	Workers in- volved.	Work ing days lost.
Wages .. .. .	72	36,935	253,004	18	4,112	70,329	90	41,017	323,333
Hours .. .. .	18	6,770	10,021	6	5,625	49,850	24	12,395	50,371
Working conditions ..	88	38,143	295,382	10	592	1,674	98	38,735	297,056
Employment of persons or classes of persons ..	66	24,029	78,754	50	8,917	37,905	116	32,940	116,659
Trade unionism .. .. .	8	3,303	7,973	..	..	..	8	3,303	7,973
Sympathy .. .. .	6	2,338	6,396	1	45	22	7	2,333	6,418
Miscellaneous .. .. .	65	29,857	35,365	6	6,534	9,427	71	36,391	41,792
Not stated .. .. .	43	11,720	18,836	..	..	..	43	11,720	18,836
<b>Total.. .. .</b>	<b>366</b>	<b>153,095</b>	<b>710,731</b>	<b>91</b>	<b>25,825</b>	<b>160,207</b>	<b>457</b>	<b>178,920</b>	<b>870,938</b>

In the mining industries disagreements about working conditions involved the greatest loss of working time during 1927, viz., 48 per cent., and the loss in disputes relating to wages represented 37 per cent. In the non-mining group the important cause of dissension was the question of wages, 44 per cent. of the loss of working time being due to such disputes, the loss relating to the question of hours being 25 per cent. and to the employment of persons 24 per cent.

By extending the analysis of the causes of disputes over a period of five years from 1923 to 1927 it is found that in the mining industries 37 per cent of the time lost was due to disagreements regarding wages and 22 per cent. to those relating to working conditions. Disputes in reference to the employment of persons or classes of persons were the cause of 16 per cent. of the loss, and those relating to hours, 12 per cent.

In non-mining industries working time was the subject of disputes which were responsible for the greatest loss, viz., 43 per cent.; wages showed a proportion of 38 per cent., employment of persons 10 per cent., and working conditions 7 per cent. during the quinquennium.

Taking all classes of industries together, the experience of the quinquennium showed that the loss of working time incurred in disputes about wages was about 37 per cent., in disputes relating to working conditions 19 per cent., hours 19 per cent., and employment of persons or classes of persons 15 per cent.

#### INDUSTRIAL HYGIENE.

The trend of legislation, the organisation of public services for research and propaganda, and the development of private schemes for the promotion of industrial welfare afford convincing evidence that widespread attention is being directed towards the reduction of the waste occasioned by preventable diseases and accidents arising in the course of industrial employment.

In both State and Federal departments of public health a section has been created to deal with industrial hygiene. The work of these units embraces the investigation of occupational diseases, the supervision of health conditions in industry, and the dissemination of advice regarding measures which safeguard the health of the workers.

Legislation in regard to industrial hygiene is contained in a number of Acts which apply to various classes of industry. The Factories and Shops Act, 1912, as amended in 1927, imposes upon occupiers of factories the obligation of providing suitable buildings and of keeping the premises clean, of securing adequate protection against fire, and of safeguarding

dangerous machinery. The employment of women and juveniles and of out workers is subject to limitations, and the employment of workers without remuneration is prohibited. Factories must be registered annually, and inspection, with the object of securing compliance with the law, is conducted by a staff of inspectors attached to the Department of Labour and Industry. In match factories the use of white phosphorus is prohibited by the White Phosphorus Prohibition Act, 1915.

In terms of the Scaffolding and Lifts Act, 1912, the use of scaffolding, lifts, cranes, hoists, and derricks is subject to supervision in order to minimise the risk of accident. In the Metropolitan and Newcastle districts where the Act is operative regulations have been promulgated regarding the construction of scaffolding, lifts, etc., and lift attendants and crane-drivers must obtain certificates of competency, which are issued by the Department of Labour and Industry.

Under the Rural Workers Accommodation Act, 1926, employers are required to provide proper accommodation for rural workers who reside on the premises. The Act applies in proclaimed districts in respect of workers employed for a period exceeding twenty-four hours in agricultural, dairying, or pastoral occupations.

The conditions under which mining is conducted are subject to regulation in terms of Acts which are described in the chapter relating to the mining industry. The Navigation Acts—State and Federal—prescribe conditions to be observed for safeguarding the health of seamen.

In modern establishments the principle has become widely recognised that the business interests of an industry may be advanced considerably by due attention to the wellbeing of the employees. As a result provision is made in many large factories and business premises for rest rooms, dining and recreation halls for the staff. In some cases medical services are arranged, recreation clubs are organised, and facilities are provided for promoting thrift and for advancing the education of young employees.

#### *Industrial Accidents.*

Under various enactments relating to industrial hygiene, employers are required to give notice to the statutory authority of accidents which cause injury to workers, but the available data do not supply a comprehensive record of such occurrences. In factories, employers are required to report accidents causing loss of life; accidents due to machinery or to hot liquid or other hot substance, or to explosion, escape of gas or steam, or to electricity, if an employee is disabled as to prevent him from returning to his work in the factory within forty-eight hours; and other accidents if an employee is disabled for seven days or more.

The following table shows the number of accidents in factories which were reported during the three years 1925 to 1927:—

Accidents caused by machinery, etc.	Number reported.			Rate per 10.00 Employees.		
	1925.	1926.	1927.	1925.	1926.	1927.
Fatal ... ..	15	13	23	1.1	9	1.5
Partial disablement ... ..	161	159	147	11.8	11.3	9.8
Temporary incapacitation ... ..	778	738	732	57.1	52.3	48.7
Total ... ..	954	910	902	70.0	61.5	60.0

During the year 1927 there were 28 fatal and 89 non-fatal accidents in connection with lifts, scaffolding, cranes, and boilers. Particulars of accidents in mines and of railway and tramway and traffic accidents are shown in other chapters of this Year Book.

## WORKERS' COMPENSATION.

Under State legislation provision has been made for the payment of compensation to workers who suffer injury in the course of their employment. The principal enactment is the Workers' Compensation Act, 1926-27, which commenced on 1st July, 1926.

Special provision for workers who are disabled by the effects of silica dust is made under the Workmen's Compensation (Silicosis) Act, 1920, as amended in 1926, and for certain cases of disablement by pneumoconiosis, tuberculosis, and lead poisoning in the Broken Hill mines under the Workmen's Compensation (Broken Hill) Acts, 1920 and 1927, and the Workmen's Compensation (Lead Poisoning—Broken Hill) Acts, 1922 and 1924.

Compensation to members of the police force, killed or disabled by injury in the execution of duty, is payable in terms of the Police Regulation (Superannuation) Act, which is described in the section of this Year Book relating to the police. The amount of compensation is determined by the Governor.

In addition to the general enactments of the State, specific enactments of the Commonwealth provide for compensation to men in a particular class of work, such as that of seamen, which is subject to special risks, and to workers in the service of the Commonwealth Government.

Under the Workers' Compensation Act, 1926-27, compensation is payable to manual workers irrespective of the amount of their earnings, and to other classes of employees whose remuneration does not exceed £750 per annum.

A worker and, in the case of his death, his dependents are entitled to compensation if he receives personal injury in the course of his employment, or, without his default or wilful act, on the daily or other periodic journey between his place of abode and his place of employment. Personal injury includes a disease contracted in the course of employment to which the employment was a contributing factor, except a disease caused by silica dust, in respect of which special legislation has been enacted. The Act does not impose the obligation of compensation in respect of an injury unless it disables a worker for at least three days.

Where death results from an injury persons wholly dependent on the worker's earnings are entitled to a sum equal to four years' earnings or £400, whichever is the larger, but not exceeding £800. The amount of any weekly payments or lump sum received by the worker is to be deducted from the amount payable, but may not reduce it below £200. In addition a sum of £25 is payable in respect of each dependent child under 16 years.

Where there are no persons totally dependent, compensation, as determined by agreement or by the Workers' Compensation Commission, may be paid to persons partially dependent. Where there are no dependents reasonable burial expenses up to £30 are payable.

In cases of total or partial incapacity the compensation payable includes: (a) weekly payments, and (b) the cost of medical, surgical, and hospital treatment and nursing.

The maximum weekly payment in respect of the worker is two-thirds of the average weekly earnings up to £3 a week, and the minimum for an adult worker is £2 a week. If a minor whose earnings are less than 45s. a week is incapacitated, he may be paid 100 per cent. of his earnings up to 30s. a week. In addition, a worker is entitled to £1 a week in respect of his wife and 8s. 6d. per week in respect of each child under 14 years totally or mainly dependent upon his earnings. Where no compensation is payable

in respect of a wife, a worker may receive £1 a week in respect of one adult totally or mainly dependent, and, where no compensation is payable in respect of children, 8s. 6d. a week in respect of each dependent brother and sister under 14 years. The total weekly payments to the worker and his dependants may not exceed his average weekly earnings, or £5 whichever is the smaller amount, and the total liability of the employer in respect of weekly payments may not exceed £1,000, except where there is permanent and total disablement. The cost of medical benefits is limited to £50 unless the Commission directs otherwise.

With the consent of a worker, the liability for a weekly payment may be redeemed wholly or in part by the payment of a lump sum determined by the Commission, having regard to the worker's injury, age, occupation, and diminished ability to compete in an open labour market. By agreement or order of the Commission the lump sum may be invested or applied for the benefit of the person entitled thereto. The Act contains a list of amounts which, if the worker so elects, may be paid for specific injuries. The amounts range from £75 for the loss of a joint of a toe to £675 for the loss of either arm; but a worker is not entitled to more than £1,000 in addition to medical expenses, even if he sustains more than one of the specified injuries, unless he is totally and permanently disabled.

The Act prescribes that every employer must insure with a licensed insurer against his liability to pay compensation, unless he is authorised by the Workers' Compensation Commission to undertake the liability on his own account. Insurers transacting workers' compensation business must obtain a license from the Commission, and must deposit with the State Treasurer a sum of £6,000 or £10,000 according to premium income as a guarantee that compensation payments will be met when due. Self-insurers must deposit an amount determined by the Commission.

The Workers' Compensation Commission consists of a chairman, who must be a barrister-at-law of five years' standing, and two other members appointed by the Governor. The Commission exercises judicial functions in regard to the determination of compensation claims, and its decisions are final. The Commission is required to furnish workers and employers with information as to their rights and liabilities under the Act, and to make reasonable efforts to conciliate the parties to any dispute which may arise. The Commission may appoint medical practitioners as referees, and may summon a medical referee to sit as an assessor, or may submit any matter to a medical referee or a board of medical referees for report.

Salaries and other expenses incurred by the Commission are payable from a fund constituted for the purpose by contributions from insurers, who are required to pay thereto a percentage, fixed by the Commission, of their total premiums in respect of workers' compensation insurance.

Facilities to enable employers to insure are provided by the State Insurance Office as well as by private insurers.

The Workmen's Compensation (Lead Poisoning—Broken Hill) Acts, 1922 and 1924, provide for the payment of compensation in respect of lead poisoning amongst men who had been employed by Broken Hill mine owners prior to 31st May, 1919, when mining operations were interrupted as a result of an industrial dispute. The duties of certifying surgeon or medical referee are entrusted to a board consisting of three medical practitioners appointed by the Governor, including one nominated by the mine owners and one by the workmen.

In terms of the Workmen's Compensation (Broken Hill) Acts, 1920 and 1927, which will remain in force until Parliament otherwise provides, compensation is payable in respect of persons who contracted pneumoconiosis or

tuberculosis by reason of employment in the Broken Hill mines. Compensation in respect of those who were employed in the mines after the commencement of the Act of 1920 is paid by the mine owners, and payments to other persons eligible under the Acts is paid from a fund which is maintained by contributions—one-half by the Government of New South Wales and one-half by the mine owners. During 1927 the amount of compensation was £96,000, and at the end of the year the beneficiaries numbered 1,508, viz., 437 employees and 1,071 dependants, including 558 children.

The Workmen's Compensation (Silicosis) Act, 1920, as amended by the Workers' Compensation Act, 1926, empowers the Government to establish a scheme for the payment of compensation with respect to workmen who suffer death or disablement owing to fibroid phthisis or silicosis of the lung, or other diseases of the pulmonary or respiratory organs caused by exposure to silica dust. Provision may be made by the scheme for the establishment of a general compensation fund to which employers in any specified industry involving exposure to silica dust may be required to contribute. In this manner liability in respect of a disease contracted by a gradual process may be distributed amongst the employers concerned. A scheme of compensation for stonemasons, quarrymen, rock-choppers, and sewer miners employed in the county of Cumberland, entitled the Workmen's Compensation (Silicosis) Scheme No. 1, 1927, was gazetted in September, 1927.

#### *Compensation Paid.*

The following statement shows particulars regarding compensation paid since 1922 under the Workmen's Compensation Acts, 1916 and 1920, including payments in respect of cases under the Workmen's Compensation (Lead Poisoning—Broken Hill) Acts, 1922 and 1924. Cases which occurred since the Workers' Compensation Act, 1926, commenced on 1st July, 1926, are not included in this table, but are shown on page 800.

Year.	Accidents.			Industrial Diseases.			Total Cases.	Compensation Paid.
	Fatal.	Non-Fatal.	Total.	Fatal.	Non-Fatal.	Total.		
1922	101	17,263	17,364	10	179	189	17,553	£ 314,685
1923	90	18,860	18,950	9	154	163	19,113	310,467
1924	138	20,912	21,050	9	108	117	21,167	359,885
1925	104	21,730	21,834	5	73	78	21,912	343,006
1926*	83	9,050	9,133	3	44	47	9,180	179,703
1927†	...	340	340	1	12	13	353	41,426

\* New cases up to 1st July, and cases continued from previous years.  
† Cases continued from previous years.

In the compilation of the figures shown above, cases continued from one year to another have been included in each year in which payments were made. Therefore, the particulars are not comparable with the following information relating to operations under more recent legislation.

The annual report of the Workers' Compensation Commission for the twelve months ended 30th June, 1927, indicates that over 50,000 claims for compensation under the Workers' Compensation Act, 1926-27, were admitted during the year, but employers supplied complete information to the Commission in respect of only 28,495 cases, in which compensation was paid.

It is estimated that 61,000 claims were admitted in 1927-28, and returns were received in respect of 44,304 new cases. Particulars of the returns received during the two years are shown below:—

Year.	Accidents.			Industrial Diseases.			Total Cases Reported.	Compensation Paid during Year.
	Fatal.	Non-Fatal.	Total.	Fatal.	Non-Fatal.	Total.		
				<i>Males.</i>				
1926-27 ...	86	27,244	27,330	1	188	189	27,519	£ 439,980
1927-28 ...	136	42,114	42,250	5	296	301	42,551	721,288
				<i>Females.</i>				
1926-27 ...	...	911	911	...	65	65	976	6,557
1927-28 ...	2	1,675	1,677	...	76	76	1,753	12,678

The compensation paid in 1927-28 included payments in respect of cases continued from the preceding year.

Of the compensation paid in 1926-27 in respect of male workers, £18,041 were paid for medical treatment and £76,589 in weekly payments to dependants. The corresponding figures for 1927-28 were £52,458 and £115,873. Compensation in respect of female workers included £972 for medical treatment and £75 to dependants in 1926-27, and in the following year medical expenses £2,352 and dependants £102.

The provisions of the Act which provide for compensation in respect of injuries on the periodic journey between the place of abode and the place of employment covered 16 fatal and 886 non-fatal cases amongst male workers, and payments amounting to £19,092 in 1926-27; and there were 14 fatal and 963 non-fatal cases, and compensation £19,085 in 1927-28. Thus the amounts paid in the two years represented 3.5 per cent. of the total compensation payments.

## WAGES.

For the protection of juvenile labour a law was passed in 1908 to prevent the threatened development in unorganised trades of a system under which young workers were being employed without remuneration. It provides that a minimum wage of not less than 4s. per week must be paid to factory workers, shop assistants, and others.

In recent years the minimum rates of wages for nearly all classes of juvenile and of adult workers have been fixed by industrial tribunals exercising statutory authority.

### *The Living Wage.*

Early legislation empowering industrial tribunals to fix minimum wages, as incidental to the preservation of industrial peace, did not give any direction regarding the principles to be observed in the exercise of the function. In practice, the tribunals adopted the principle of basing their determinations on the living wage, which must be sufficient to secure to the unskilled worker a reasonable standard of living, as distinct from the secondary wage, which is remuneration for skill or other special qualifications.

Details regarding the development of the living wage principle since it was defined by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, in the well-known Harvester case in 1907, are published in the 1921 issue of the "Year Book," with particulars relating to the standard of living and the living wage determinations. In this issue only a brief description of the existing practice is inserted.

In the State jurisdiction the living wages for men and for women have been fixed by an industrial tribunal, after public inquiry regarding the average cost of living, the declarations having statutory force as the basis of industrial awards and agreements relating to wages. For the purpose of the declarations which were made prior to December, 1926, the living wage for adult males was defined as the standard wage which would do neither more nor less than enable a worker of the class to which the lowest wage would be awarded to maintain himself, his wife, and two children, in a house of three rooms and a kitchen, with food, plain and inexpensive, but quite sufficient in quantity and quality to maintain health and efficiency and with an allowance for miscellaneous expenses.

A living wage for women was fixed for the first time under the State industrial arbitration system in 1918, when the Board of Trade conducted an inquiry into the matter. The standard adopted was the minimum wage to cover the cost of living of the adult female worker of the lowest paid class, but having no other responsibility and living away from home in lodgings.

In April, 1926, the function of fixing the living wage was vested in the Industrial Commission with authority to determine a standard of living and to declare the living wages for men and for women not more frequently than once in every six months.

At its first inquiry the Commission consisted of the Industrial Commissioner and eight members, of whom four were women—half representing the employers and half the employees. For the purpose of determining the standard of living the Commission adopted as a hypothetical basis a family of a man, his wife and three dependent children, viz., a boy aged 10½ years, a girl 7 years, and boy 3½ years—the domestic unit adopted by



the Royal Commission on the Basic Wage appointed by the Commonwealth Government in December, 1919, under the chairmanship of Mr. A. B. Piddington, K.C., now Industrial Commissioner of New South Wales. A regimen of food, clothing and miscellaneous needs similar to the findings of the Basic Wage Commission was adopted, and for housing, a five-roomed house in sound tenable condition, not actually cramped as to allotment, situated in decent surroundings, and provided with bath, copper and fixed tubs.

The weekly wage necessary to provide this standard of living for the family was found to be £5 6s. on the basis of the cost of living in the metropolitan area during the six months ended 30th September, 1926. The Commission decided, however, that it was not possible to determine a standard of living available for all and "to associate with it a rigid domestic unit consisting of any specified number of children," and on 15th December, 1926, declared the living wage for adult males at the rate which had been in operation since August, 1925, viz., £4 4s. per week. The decision was coupled with a further declaration that "it is essential in order that the standard of living now determined may be made attainable for all those for whom it is intended, that a system of motherhood endowment should be made an adjunct to the wage."

As a result of the recommendation a system of family allowances was inaugurated in terms of the Family Endowment Act which is described on page 154 of this Year Book, and the Industrial Arbitration Act was amended to provide that the living wage for adult males shall be based on the requirements of a man and his wife without children. Thus the family allowances, though not restricted to the families of wage-earners, are supplementary to the living wage fixed by the Industrial Commission. Allowances, at a maximum rate of 5s. per week per dependent child, are payable where the family income for the period of twelve months preceding the date of the claim therefor has been less than the amount of the current basic wage for one year plus £13 for each dependent child.

On 27th June, 1927, the Commission declared the living wage for men on this basis to be £4 5s. per week, which represents the same rate as that declared in December, 1926, with an addition to cover an increase in prices since that time. The employers' and employees' representatives dissented from the decision of the Commissioner, which "rests upon the dual support of the accepted meaning of the 'living wage' as implying the legalisation of current human standards—in other words upon the golden rule of interpreting words in a statute upon their ordinary meaning—and of the principle of British law that rights which have been either created or acquiesced in by the Legislature, ought not to be disturbed without some irresistible necessity." Thus it is apparent that the Commission regarded as a vested right the standard of living which had been available for a number of years to the married couple without children where the man was receiving the living wage fixed by earlier declarations, notwithstanding the fact that a lower standard had prevailed where there were children to be maintained.

On the same date, 27th June, 1927, the living wage for women was declared at £2 6s. per week, being 54 per cent. of the rate for men. This percentage was adopted because it was regarded as being "the percentage which is generally predominant in Australia" and "the accepted percentage in Commonwealth jurisdiction and in the State of Western Australia." Upon declaring the wage the Commissioner stated that a request by any parties for an inquiry into the itemised cost of living of adult female employees before the next declaration would receive consideration.

The variations in the living wages, as determined by the industrial authority constituted under State legislation, are shown below. The determinations were made by the Court of Industrial Arbitration in the years 1914 to 1916, by the Board of Trade from 1918 to 1925, and later by the Industrial Commission:—

Year.	Men.		Women.	
	Date of Declaration.	Living Wage.	Date of Declaration.	Living Wage.
		£ s. d.		£ s. d.
1914	16th February	2 8 0	...	...
1915	17th December	2 12 6	...	...
1916	18th August...	2 15 6	...	...
1918	5th September	3 0 0	17th December	1 10 0
1919	8th October ...	3 17 0	23rd December	1 19 0
1920	8th October...	4 5 0	23rd December	2 3 0
1921	8th October ..	4 2 0	22nd December	2 1 0
1922	12th May ...	3 18 0	9th October ..	1 19 6
1923	10th April ...	3 19 0	10th April ...	2 0 0
1923	7th September	4 2 0	7th September	2 1 6
1925	24th August...	4 4 0	24th August...	2 2 6
1927	27th June ...	4 5 0	27th June ...	2 6 0

Declarations of the basic wage for men prior to 1927 were fixed on the basis of a man, his wife, and two children, but the 1927 declaration was for a man and wife only.

The rates shown in the table did not apply to employees in rural industries, for which a declaration fixing the living wage at £3 6s. per week was made in October, 1921, and lapsed twelve months later. Under legislation in force from 1922 to 1926 the provisions of the Industrial Arbitration Act governing the living wage declarations did not apply to rural industries. In July, 1927, the Industrial Commission, in terms of the Industrial Arbitration (Living Wage Declaration) Act, 1927, issued a separate declaration fixing the living wage for men employed in rural industries at £4 4s. per week, pending a full investigation into the matter.

Under Federal jurisdiction, the Commonwealth Court assesses a basic wage for each case in which minimum wages are to be determined. The standard adopted is the Harvester wage, 7s. per day in Melbourne in 1907, which was based apparently on the needs of a man, his wife, and three children. The rate is adjusted to cover variations in the cost of living so as to ensure to the lowest paid worker the same standard of comfort as that rate gave in 1907.

In view of the fact that federal awards are made for extended periods, difficulty has been experienced in devising a satisfactory method of adjustment. For some years after the Harvester wage was determined, the movement in the cost of living was slow, and wages were fixed by the Court after consideration of the cost of living at the time of the award, on the basis of the evidence given in the Harvester case. In July, 1913, the President decided to assess the basic wage, by applying to the Harvester rate the index number of the cost of food, groceries, and rent, as determined by the Commonwealth Statistician for the calendar year preceding the date when the award was made. Subsequently, as prices began to rise with increasing rapidity, it became the general practice to apply the index number for the twelve months immediately preceding the making of the award.

None of the foregoing methods, however, gave the desired result, and the Court decided that it was necessary in some cases to give awards a

retrospective effect in order to relieve employees who had been receiving wages below a fair equivalent of the standard rate. Obviously, a system which involved retrospective pay had many disadvantages, and in 1921 the Court adopted a new method for the periodical adjustment of rates of wages during the term of an award. Since that decision it has been a general practice to make the adjustments quarterly or half-yearly on a basic rate which is ascertained by applying to the Harvester wage the index number of the cost of food, groceries, and rent for the preceding quarter, and adding 3s. per week to the result. The sum of 3s. per week, though an arbitrary figure, was chosen after deliberation as a fair addition to cover possible increases in the cost of living in the quarter succeeding each adjustment, and to set off past losses suffered by the workers during the period when wages had been lagging behind the rapidly rising prices.

This method of adjustment has been embodied in the majority of federal awards, though there are notable exceptions. For instance the addition of 3s. was not made in assessing the rates for railway and tramway employees in New South Wales, who have special privileges as to holidays, etc.; nor in the rates for shearers for whom the marginal wage was increased in the same proportion as the basic rate.

In making the periodical adjustments during the term of a federal award, the following scale is generally used for increasing or decreasing the rates for adult male employees according to the rise or fall of the index number of the cost of food and groceries and rent on which the rates in the award were based:—

Increase or Decrease in Index Number.	Increase or Decrease in Wages.	Increase or Decrease in Index Number.	Increase or Decrease in Wages.	Increase or Decrease in Index Number.	Increase or Decrease in Wages.
Under 11 ...	s. d. Nil.	94 and under 115	s. d. 5 0	198 and under 219	s. d. 10 0
11 and under 32	1 0	115 ,, 136	6 0	219 ,, 240	11 0
32 ,, 52	2 0	136 ,, 157	7 0	240 ,, 261	12 0
52 ,, 73	3 0	157 ,, 177	8 0	261 ,, 282	13 0
73 ,, 94	4 0	177 ,, 198	9 0	282 and over ...	14 0

When it is necessary to assess a basic wage for women the Commonwealth Court takes into consideration any special conditions affecting the employees concerned, such as broken time, allowances for travelling, etc. For this reason the rates used by the Court for various awards sometimes show substantial differences. In two industries in which the majority of women working under federal awards are employed, viz., clothing and printing, the basic rate has been about 54 per cent. of the corresponding rate for men and in periodical adjustments this ratio has been preserved.

In a case relating to the clothing industry the Court obtained evidence as to the cost of living and fixed the basic rate for women in March, 1928, at 49s. 6d. per week, including an allowance for two and a half weeks' lost time in a year. The basic rate for men in the award was 89s. per week allowing for two weeks' lost time.

An amendment of the Commonwealth Conciliation and Arbitration Act, passed in 1926, provides that when the question of the basic wage is before

the Court the Federal Attorney-General may intervene to enable interested persons or organisations or associations of employers or employees to apply to the Court for liberty to be heard and to examine and cross-examine witnesses.

*Living Wage in the other States.*

In Queensland a minimum wage is fixed for industries of average prosperity, and the Board of Trade and Arbitration, which replaced the Industrial Arbitration Court in 1925, may determine a basic wage with regard to the particular circumstances of any industry of greater or less than average prosperity.

In South Australia the standard living wage is fixed by the Board of Industry. In Victoria and Tasmania the rates of wages in the various industries are fixed by wages boards by a process of collective bargaining between the employers and the employees in the industry concerned. In Victoria it has become the usual practice to assess a basic rate according to the method used by the Commonwealth Court of Conciliation and Arbitration. In Tasmania the standard of the Federal Court is observed to some extent, but the general average rate for unskilled labour is somewhat lower. In Western Australia the Arbitration Court determines a basic wage in June of each year, and the rate so determined operates for a period of twelve months from 1st July following.

The following statement shows the rates used as the basis of wage determinations by the State industrial tribunals at various dates since July, 1914, also for the purposes of comparison the basic rates for each capital city in August, 1928, calculated according to the method used by the Commonwealth Court. The rates for Melbourne and Perth in July, 1914, and the rates for Hobart, may be regarded as fair average rates for unskilled labour:—

Metropolitan Areas.	Weekly Living Wage for Adult Males determined by State Industrial tribunal.					Basic Rates for Adult Males according to method used by Commonwealth Court—August, 1928.
	1914. (July).	1925. (June).	1926. (August).	1927. (August).	1928. (August).	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Sydney ...	2 8 0	4 2 0†	4 4 0	4 5 0	4 5 0	4 12 0
Melbourne ...	2 5 0	4 4 6	4 12 0	4 7 0	4 7 6	4 7 6
Brisbane ...	2 2 0	4 0 0	4 5 0	4 5 0	4 5 0	3 19 6
Adelaide ...	2 8 0	4 2 0*	4 5 6	4 5 6	4 5 6	4 7 6
Perth ...	2 14 0	4 0 0	4 5 0	4 5 0	4 5 0	4 4 0
Hobart ...	2 8 0	3 18 0	4 5 6	4 4 0	4 2 6	4 2 6

\* Increased to £4 5s. 6d. in July, 1925.

† Increased to £4 4s. in August, 1925.

In the quarterly adjustment of the wages prescribed by awards of the Commonwealth Court the rates shown in the table were altered as from 1st November, 1928, as follows, viz.—decreases, Sydney and Melbourne 1s. 6d., Adelaide 2s. 6d., Brisbane and Hobart 6d., and an increase of 1s. in Perth.

*Secondary Wage.*

Having ascertained the basic rates of wages for unskilled labour, the assessment of the secondary wages is a matter to be considered separately in connection with each occupation. It is the usual practice, under the State system in New South Wales, when varying wages on account of an

increase or decrease in the cost of living, to preserve unaltered the recognised margin between the skilled and the unskilled workmen in an industry, and to vary all rates of wages by the amount by which the basic wage has been increased or reduced.

The Commonwealth Court determines in each case an amount which it considers to be the fair value, as at the date of the award, of the skill required.

#### RATES OF WAGES.

The rates of wages for various occupations at intervals since 1901 are shown in the following statement. Except where specified, the figures indicate the minimum amounts payable for a full week's work on the basis of the weekly, daily, or hourly rates fixed by industrial awards and agreements, and for occupations not subject to industrial determinations, the ruling or predominant rates are stated. The table contains particulars of a few occupations only, but similar information relating to a large number of callings is published annually in the "Statistical Register of New South Wales." In the Register for the year 1920-21 the rates are stated for each year from 1901 to 1913, inclusive, and for 1921; and the following issue contains the rates for each year since 1913:—

Occupation.	1901.	1911.	1921.	1923.	1924.	1925.	1926.	1927.
<b>Manufacturing—</b>	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Cabinetmaker .. .. .	52 0	56 0	101 9	102 0	102 0	102 0	110 0	111 0
Boilermaker .. .. .	60 0	66 0	107 6	107 6	108 6	112 6	115 6	114 6
Coppersmith .. .. .	60 0	68 0	109 6	109 6	108 6	112 6	115 6	114 6
Fitter .. .. .	60 0	64 0	107 6	107 6	108 6	112 6	115 6	114 6
" electrical .. .. .	60 0	66 0	108 6	115 0	115 0	117 0	117 0	121 0
Baker .. .. .	52 6	56 0	109 6	100 6	100 6	102 6	127 6	128 6
Bootlicker .. .. .	45 0	54 0	98 6	94 9	96 0	96 0	101 6	100 0
Tailor (ready-made) ..	50 0	55 0	102 6	104 6	102 6	101 6	107 6	105 6
Compositor (jobbing) ..	52 0	60 0	105 0	102 0	104 0	102 0	114 0	113 0
<b>Building—</b>								
Bricklayer .. .. .	60 0	69 0	108 0	113 0	113 0	113 0	126 6	126 6
Carpenter .. .. .	60 0	63 0	110 0	107 6	121 0	121 0	126 6	127 6
Painter .. .. .	54 0	60 0	104 0	103 0	103 0	108 0	117 6	117 6
Plumber .. .. .	60 0	66 0	110 0	107 0	107 0	117 0	117 0	129 6
<b>Mining—</b>								
Coalminer, per ton (best coal)	4 2	4 2	6 11½	6 11½	6 11½	6 11½	6 11½	6 11½
Coalwheeler .. .. .	42 0	42 0	103 6	103 6	103 6	109 6	109 6	109 6
Silverminer .. .. .	54 0	66 0	106 6	106 6	106 6	112 6	112 6	112 6
<b>Transport—</b>								
Railway loco-driver ..	66 0	66 0	106 0	106 0	106 0	109 0	112 0	111 0
Wharf-labourer per hour	1 0	1 6	2 9	2 11½	2 11½	2 11½	2 11½	2 11
<b>Rural industries—</b>								
Shearer .. per 100 sheep	20 0	24 0	40 0	38 0	38 0	38 0	40 0 and	41 0 and
Station-hand, with keep ..	20 0	25 0	48 0	48 0	52 0	52 0	45 0	45 0
Farm-labourer, with keep	15 0	20 0	42 0	30 0	30 0	30 0	55 0	55 0
Miscellaneous—								
Pick and shovel man ..	42 0	48 0	94 6	91 0	91 0	93 6	96 6	98 0
Standard minimum wage ..	*	45 0	82 0	82 0	82 0	81 0	84 0	85 0†

\* Standard not fixed.

† Plus family endowment.

Prior to the determination of the Harvester rate in 1907 a standard wage was not fixed, and an inspection of the predominant rates in 1901 shows that wages as low as 30s. per week were paid for unskilled labour in some factories, but the average was probably about 35s. per week. The living wage, 85s. per week, in 1927 showed an increase of 50s. as compared with that rate.

In the building trades when there is a brisk demand for skilled workers as in recent years, the artisans command higher wages than the award rates shown in the table. In 1923, for instance, the award rate for carpenters was 2s. 4d. per hour for 46 hours per week, but most of these skilled workers were paid at a higher rate, afterwards embodied in an agreement, viz., 2s. 9d. for 44 hours. Similarly in 1925, the predominant rates for bricklayers were from 2s. 10½d. to 3s. per hour for a week of 44 hours.

The wages of coalminers are based on contract rates, which vary according to the condition of the seams or places where the coal is mined, the rates being determined by a special tribunal. The rates for miners and wheelers shown in the table relate to the northern district, where the bulk of the coal is produced.

The wages of railway engine-drivers are increased by 6s. per week on the completion of each of the first four years of service, the highest rates being paid to drivers of mail and passenger trains. The rates are generally higher than those fixed for most industrial occupations, but the increase since 1901 has been smaller than the increase in the other rates shown in the table. An hourly rate is prescribed for wharf-labouring, as intermittency is a constant factor owing to irregularity in the daily volume of shipping trade. Extra rates are paid for handling special cargoes such as wheat, explosives, and frozen meat.

In the rural industries, contract rates for shearing and the wages of station hands are fixed by the Commonwealth Court of Conciliation and Arbitration. In September, 1923, the rate for shearing ordinary flock sheep was raised from 35s. per 100 to 38s., in June, 1926, to 40s. and in September, 1927, to 41s. In the current award provision is made for the adjustment of the rates as from 1st March in each year and a reduction equal to 2s. 3d. per week was made as from 1st March, 1928. A State award for pastoral employees prescribes a shearing rate of 45s. per 100 as from 1st August, 1926. This award must be observed by persons not bound by the federal award.

Until October, 1926, the wages of farm labourers were not fixed, except during the twelve months dating from October, 1921, when a living wage declaration was in operation, viz., 66s. per week without board or residence or 42s. per week for those who were provided with board and lodging. In October, 1926, an award covering agricultural workers was issued by the Conciliation Committee relating to the industry, and in July, 1927, the living wage for rural employees at the rate of 84s. per week was declared by the Industrial Commission.

The rates shown in the table for pick and shovel men relate to those engaged in the work of railway construction.

The following table of average rates shows the extent to which changes in the rates for individual occupations have affected wages in various groups of industries, and in all industries combined. The figures represent the average weekly rates of wages payable to adult males in each group of industries, and the weighted average for all groups combined in various years since 1901.

For the computations particulars were obtained in respect of 874 occupations. The industrial awards and agreements were the main sources of information, and for occupations not subject to the industrial determinations, the ruling or predominant rates were ascertained from employers and from secretaries of trade unions. The occupations were classified into fourteen industrial groups, and the averages were calculated on the basis

of the weekly rates payable to adult male employees in the Metropolitan district, except in regard to the mining, shipping, and rural industries, which are conducted for the most part outside the Metropolitan area.

In determining the average wage in each group an arithmetic mean was taken; that is, the sum of the rates was divided by the number of occupations, no detailed system of weights being applied owing to the difficulty of obtaining satisfactory data as to the number of persons employed in each occupation. In computing the average for all the industries combined, the average for each industrial group was weighted in accordance with the relative number of all male workers engaged in that group.

The rates shown in the table for 1921 and later years are those determined for New South Wales by the Commonwealth Statistician.

In the shipping, pastoral, and domestic industries, where food and lodging are supplied, the value of such has been added to the rates of wages:—

Group of Industries.	Average Weekly Rates of Wages at end of Year.									
	1901.	1911.	1913.	1921.	1923.	1924.	1925.	1926.	1927.	
1. Wood, Furniture, Sawmill, Timber Works, etc. ...	s. d. 48 4	s. d. 55 6	s. d. 58 0	s. d. 101 0	s. d. 101 0	s. d. 99 9	s. d. 101 4	s. d. 107 5	s. d. 107 7	
2. Engineering, Shipbuilding, Smelting, Metal Works, etc. ...	49 4	55 4	57 8	98 7	98 0	97 11	100 9	102 0	103 1	
3. Food, Drink, and Tobacco Manufacture and Distribution ...	44 11	51 4	56 0	95 2	94 3	93 7	95 3	98 10	99 11	
4. Clothing, Hats, Boots, Textiles, Rope, Cordage, etc. ...	44 5	51 7	54 0	91 10	92 3	91 6	91 11	95 4	96 3	
5. Books, Printing, Bookbinding, etc. ...	53 1	64 4	65 9	106 3	104 3	104 3	107 2	108 2	113 4	
6. Other Manufacturing ...	44 10	51 7	56 3	97 7	96 2	96 0	98 4	101 4	102 9	
7. Building ...	56 2	63 4	68 0	104 7	104 4	104 6	107 4	110 0	114 4	
8. Mining, Quarries, etc. ...	52 3	60 0	62 9	105 4	105 0	105 0	109 6	111 2	111 10	
9. Railway and Tramway Services ...	52 2	55 2	61 1	95 5	97 2	95 5	99 2	102 1	102 1	
10. Other Land Transport ...	41 8	44 4	51 4	92 0	91 5	90 9	92 11	97 4	99 3	
11. Shipping, Wharf Labour, etc. ...	38 4	44 6	48 9	100 5	100 5	98 4	102 7	101 3	102 1	
12. Pastoral, Agricultural, Rural, Horticultural, etc. ...	32 5	43 5	49 11	92 0	85 6	84 0	85 6	98 10	99 10	
13. Domestic, Hotels, etc. ...	37 11	44 3	45 5	89 0	87 1	87 1	89 8	90 2	94 11	
14. Miscellaneous ...	43 5	49 0	53 1	91 5	92 0	90 8	92 9	94 9	96 1	
All Industries ...	43 11	51 5	55 9	95 10	94 6	93 6	96 0	100 5	101 10	

At the end of 1921 the average rate of wages for all industries was 86.4 per cent. above the average of 1911. In the following years the average rose and fell alternately, and in 1925 it was a point slightly above the average in 1921. There was an increase of 4.6 per cent. during 1926 and of 1.4 per cent. in 1927.

The highest average rates are in the building, printing, and mining industries, which are strongly organised, and include a large proportion of skilled artisans. The next in order are the woodworking and the engineering trades. The lowest average is in the domestic group. Between 1921 and 1927 there were increases, ranging from 9s. 9d. to 1s. 8d., in all the groups. The classes with the highest increases were building 9s. 9d., rural 7s. 10d., land transport, other than railway and tramway services, 7s. 3d., printing 7s. 1d. The smallest increase was in the shipping group.

The average in the rural group was reduced in 1922 by an award of the Commonwealth Court, which affected the rates for shearers and other pastoral workers, and by reason of the exclusion of rural workers from the purview of the New South Wales industrial tribunals in respect of living

wage determinations. After the Industrial Arbitration Act was amended in 1926, wages for certain rural occupations were fixed for the first time by awards, which prescribed rates considerably higher than the average or predominant rates which had been paid hitherto. This is the main reason for the marked increase in the average rate for the rural group, which occurred in 1926, viz., from 85s. 6d. to 98s. 10d.

The foregoing tables relate to the nominal rates of wages, that is the actual amounts of money payable in return for labour, and in order to show the effective value of these amounts it is necessary to consider them in relation to the purchasing power of money. Food and rent are the only elements of expenditure of which satisfactory records as to variations in the purchasing power of money are available, and in the following statement the relation between the cost of these items and the average rates of wages is illustrated. For this purpose the average rates of wages have been reduced to index numbers, which have been divided by the index numbers of food and rent. The results indicate the variations in the effective wage.

The index numbers of the nominal wage for 1916 and subsequent years, as shown below, represent the mean of the average rates at the end of the four quarters of each year. Quarterly data are not available for 1901 and 1911 and the average nominal rate at the end of the year has been used; it is not likely, however, that this would have an appreciative effect in these years when the movement in wages was slow.

Year.	Average Nominal Wage per Week.		Index Number of Food and Rent Combined.	Index Number of Effective Wage.
	Amount.	Index Number.		
1901	s. d. 43 11*	854	848	1007
1911	51 5*	1000	1000	1000
1916	59 7	1160	1351	859
1921	95 5	1855	1672	1109
1922	93 2	1812	1586	1142
1923	92 7	1801	1685	1069
1924	93 10	1826	1662	1099
1925	94 7	1840	1709	1077
1926	97 9	1901	1790	1062
1927	101 2	1968	1776	1108

\* At end of year.

In 1901 the effective wage was slightly higher than in 1911. It declined steadily after 1911 as living became dearer, until in 1916 it was 14 per cent. lower than in 1911. Subsequently wages increased at a faster rate than the cost of food and rent, and the effective wage index number rose slowly, but in 1919 its purchasing power in relation to the cost of food and housing was still 10 per cent. lower than in 1911. There were pronounced rises in wages during 1920 and 1921, and as food prices began to decline the effective wage rose to a point 14 per cent. above the



level of the year 1911. In 1923 wages moved downwards and the cost of food and housing increased so that the effective wage declined by 6 per cent. In 1924 the movement of each factor was reversed, and the effective wage showed a slight increase. In 1925 and 1926 both wages and the cost of commodities increased, but the effective wage declined, and in the latter year it was lower than in any year since 1920. In 1927 when wages increased and the cost of food and rent were somewhat cheaper the effective wage was restored to the same level as in 1921.

The rates of wages, nominal and effective, as stated in the foregoing tables, are based on the rates payable to employees under awards or agreements or on predominant rates for work without intermittency or overtime, and not on actual earnings, which are liable to fluctuate on account of the rise and fall in the volume of employment. Thus the census records show that there was a much larger proportion of unemployment in 1921 than in 1911. Moreover, conditions vary in different industries. In the building trade, for instance, there was remarkable activity during the later years of the period under review, and competent men probably have suffered less intermittency than in periods of normal trade; meanwhile some of the other industries experienced periods of slackness.

## PRODUCTION.

The value of production, as shown in this section, relates to the primary industries—pastoral, agricultural, dairying and farmyard, mining, forestry, fisheries, and trapping—and to the manufacturing industries.

The values in regard to the primary industries—except mining—are stated as at the point or place of production, on the basis of the prices to the producers, which are somewhat less than the wholesale prices in the Metropolitan market. No deduction has been made on account of the cost of items such as seed, fertilisers, containers, fodder for animals, machinery, etc.

Some of the quotations are known to be understated. For instance, the values as estimated for agricultural and farmyard produce are deficient, because records are not available as to production (which in the aggregate must be large) on areas less than one acre in extent. The production from fisheries includes only the catches of licensed fishermen.

The figures showing the estimated value of mining production in each year from 1911 to 1919-20 inclusive are based on the records of the Department of Mines, of which details are stated in the chapter of this volume relating to the mining industry. The values as recorded by the Department have been reduced by the exclusion of certain values which are included here in the production of the manufacturing industries, e.g., coke produced at coke works, also the value added to minerals in the manufacture of lime and cement at limestone quarries, and in the treatment of ores at mines. The values shown for the last seven years are those supplied by the mine owners in returns collected under the Census Act, and they indicate the estimated value at the mines of the minerals raised during each year. The figures do not represent exact values, but may be considered to be the best estimates which may be made from the data available. The values do not include the production from quarries except in 1925-26 and earlier years when the output from quarries held under mining title was included. The difficulty experienced in estimating the value of mining production is discussed in the chapter relating to the mining industry.

The value of the manufacturing production is taken as the value at the factory of the manufactured goods less the cost of raw materials, water, fuel, and electricity, and containers used, and of tools replaced. With a few exceptions returns are not collected as to the production in small establishments employing less than four hands where manual labour only is used, nor from bakehouses nor butchers' smallgoods factories.

For the foregoing reasons the aggregate value of production as stated is not complete, and should not be assumed to be the total fund available as the wages fund of the State nor as remuneration for the agents of production in the form of wages, rent for land, and interest on capital invested. The values quoted for the specified industries do not include the value added by reason of transportation to market and distribution to the consumer, nor, in the case of exports, carriage to the point of shipment. Moreover, the earnings of many important activities, such as the building industry, of which records are not available, or from railway construction or commercial and other pursuits are not included.

Thus it will be seen that the amounts quoted have several shortcomings, nevertheless they are valuable as indicating the increase or decrease in the annual production of the industries specified and as important data for measuring the growth of the national income.

The following statement shows the estimated value of production of the specified industries, at the place of production, at intervals since 1871.

After 1913 the values are stated for the years ended 30th June, except those relating to the mining industry, which relate to the calendar years ended six months later.

Year.	Primary Industries.							Manu- facturing Industries	Total, Primary and Manu- facturing Industries.
	Rural Industries.				Forests, Fisheries, and Trap- ping.	Mining.	Total, Primary Indus- tries.		
	Pastoral.	Agri- cultural.	Dairying and Farnyard.	Total, Rural Industries.					
	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000
1871	7,609	2,220	1,110	10,939	324	1,626	12,889	2,490	15,379
1881	10,866	4,216	2,285	17,367	492	2,138	19,997	5,183	25,180
1891	14,725	3,615	2,735	21,075	758	6,434	28,267	7,799	36,066
1901	12,447	7,060	3,188	22,695	986	5,681	29,362	10,011	39,373
1911	20,586	9,749	6,534	36,869	2,213	7,392	46,474	19,432	65,906
1912	19,431	11,817	7,192	38,440	2,347	8,177	48,964	22,681	71,645
1913	21,555	12,378	7,063	40,996	2,644	8,712	52,352	23,764	76,116
1914-15	20,629	10,031	7,846	38,506	2,074	6,090	46,670	24,330	71,000
1915-16	23,494	20,362	7,649	51,505	2,603	7,478	61,586	25,235	86,821
1916-17	32,191	13,012	9,419	54,622	3,055	9,173	66,850	27,133	93,983
1917-18	32,415	13,685	10,635	56,735	3,737	10,493	70,965	29,500	100,465
1918-19	34,750	12,280	11,073	58,103	3,708	7,805	69,616	32,768	102,384
1919-20	40,335	13,582	11,793	65,710	7,760	9,650	83,120	39,314	122,434
1920-21	20,336	32,373	16,447	69,156	4,089	10,192	83,437	43,128	126,565
1921-22	25,020	20,261	12,914	58,195	3,628	9,666	71,489	46,746	118,235
1922-23	36,783	21,301	13,445	71,529	4,810	10,419	86,758	51,596	138,354
1923-24	39,775	20,556	12,327	72,658	4,204	11,845	88,707	55,661	144,368
1924-25	46,028	28,785	14,336	89,149	5,039	11,785	105,973	59,044	165,017
1925-26	42,369	20,741	14,712	77,822	5,609	12,346	95,777	64,838	160,615
1926-27	47,822	22,098	14,591	84,511	6,147	12,352	103,010	69,849	172,859

The total value of production increased in each decade between 1871 and 1891. During the early nineties there was a decline from which the recovery was slow. In 1901, however, the value of production was considerably higher than in 1891. During the succeeding decennium the State entered upon a period of industrial expansion, and the value of production rose rapidly. The upward movement has been almost continuous during the past sixteen seasons. In the year 1914-15 the combined effects of war and drought caused a reduction in the output, and in 1921-22 there was a heavy decline in the general level of prices. In 1925-26 the value of production was less than in 1924-25 owing to a diminution in the value of pastoral and agricultural production, but it was greater than in any year prior to 1924-25. In 1926-27 the value was the highest yet recorded.

Apart from seasonal influences, fluctuations in the value of pastoral production are mainly the result of variations in the prices of wool. In the two years ended June, 1925, producers secured very high prices for the clip, and the total value in 1924-25 was higher than in any earlier year. In 1925-26 the clip was very heavy, but a fall in prices caused a decline of £7,850,000 in the value to the growers. This decline was offset to a large extent by the inclusion, for the first time, of items of pastoral production formerly omitted, viz, the natural increase in livestock, due allowance being made for exports and imports. In 1926-27 the quantity of wool was the largest yet recorded, and with an upward movement in prices the total value to the grower recovered to the extent of £7,000,000. The value of agricultural production shows considerable fluctuation, for which the principal reasons are seasonal.

In the mining industry the condition of the oversea market usually exerts the most powerful influence on the production of metals, which fluctuates accordingly. The demand for coal has been more regular, and has increased steadily with the use of power machinery, so that coal is now one of the most important items of primary production. The value of mineral production reached a high level in 1918, then it declined as the output of metals decreased owing to industrial strife at Broken Hill and to a fall in prices. With the restoration of industrial peace in the principal metalliferous mines, production has improved. The value of mining production in 1927 was the highest on record, though the figure quoted does not include the output from quarries estimated at £1,521,500.

The figures relating to the manufacturing industries disclose a steady advance from the beginning of the period under review, when it was less than £2,500,000, and only 16 per cent. of the total production. In 1926-27 the value was £69,850,000, and 40 per cent. of the total value.

In the following table the values per head of population are shown:—

Year.	Primary Industries.						Manufacturing Industries.	Total Primary and Manufacturing Industries.	
	Rural Industries.				Forests, Fisheries, and Trapping.	Mining.			Total, Primary Industries.
	Pastoral.	Agricultural.	Dairying and Farm-yard.	Total, Rural Industries.					
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1871	14 19 5	4 7 5	2 3 8	21 10 6	0 12 9	3 4 0	25 7 3	4 18 0	30 5 3
1881	14 4 0	5 10 2	2 19 9	22 13 11	0 12 11	2 15 11	26 2 9	6 15 6	32 18 3
1891	12 17 10	3 3 4	2 7 11	18 9 1	0 13 3	5 12 8	24 15 0	6 16 7	31 11 7
1901	9 2 1	5 3 4	2 6 8	16 12 1	0 14 5	4 3 1	21 9 7	7 6 6	28 16 1
1911	12 7 3	5 17 1	3 18 6	22 2 10	1 6 7	4 8 9	27 18 2	11 13 5	39 11
1912	11 2 10	6 15 6	4 2 6	22 0 10	1 6 11	4 13 9	28 1 6	13 0 2	41 1 8
1913	11 16 11	6 16 0	3 17 7	22 10 6	1 9 1	4 15 8	28 15 3	13 1 2	41 16 5
1914-15	10 19 0	5 6 6	4 3 3	20 8 9	1 2 0	3 4 8	24 15 5	12 18 3	37 13 8
1915-16	12 8 1	10 14 11	4 0 9	27 3 9	1 7 6	3 18 11	32 10 2	13 6 5	45 16 7
1916-17	16 19 11	3 17 4	4 19 5	28 16 8	1 12 3	4 16 10	35 5 9	14 6 6	49 12 3
1917-18	16 17 0	7 2 3	5 10 7	29 9 10	1 13 10	5 9 1	36 17 9	15 6 9	52 4 6
1918-19	17 13 5	6 4 10	5 12 7	29 10 10	1 17 8	3 19 5	35 7 11	16 13 2	52 1 1
1919-20	19 15 9	6 13 3	5 15 8	32 4 8	3 16 2	4 14 2	40 15 6	19 5 8	60 1 2
1920-21	9 14 7	15 9 8	7 17 4	33 1 7	1 19 2	4 17 6	39 18 3	20 12 8	60 10 11
1921-22	11 15 2	9 10 5	6 1 4	27 6 11	1 14 2	4 10 10	33 11 11	21 19 4	55 11 3
1922-23	16 18 6	9 16 0	6 3 9	32 18 3	2 4 3	4 15 11	39 18 5	23 14 10	63 13 3
1923-24	18 0 1	9 6 0	5 11 6	32 17 7	1 18 1	5 7 2	40 2 10	25 3 8	65 6 6
1924-25	20 8 9	12 15 6	6 7 3	39 11 6	2 4 7	5 4 7	47 0 8	26 4 1	73 4 9
1925-26	18 8 10	9 0 6	6 8 0	33 17 4	2 8 10	5 7 6	41 13 8	28 4 4	69 18 0
1926-27	20 7 4	9 8 3	6 4 4	35 19 11	2 12 4	5 5 3	43 17 6	29 15 0	73 12 3

The value of production per head from the pastoral industry was considerably greater in 1871 and 1881 when sheep-raising was the staple industry of the colony and pastoral output represented nearly half the

total value of production than in subsequent years when the population had entered into other activities and the export trade in wheat, butter, etc., was developed.

The development in the manufacturing industries in 1871 and in 1881, as measured by the value of output per head of population, was not so great as the figures appear to indicate. The production included the output from several classes of machines used in connection with the agricultural industry and not, strictly speaking, factories; and most of the industries were subsidiary to agricultural and pastoral activities, viz., boiling-down works, fellmongering, woolwashing, grain-mills, chaffcutting, soap and candle works.

The following statement shows, in regard to the principal commodities, the average annual production, absolute and per head of population, during the three-year periods ending June, 1923, and 1927, in comparison with the three pre-war years, 1911-13, which were also years of high production:—

Product	Average Annual Production (000 omitted).			Average Production Per Head of Population.		
	1911-13.	1921-23.	1925-27.	1911-13.	1921-23.	1925-27.
Wool (as in the grease) ... lb.	370,221	315,341	423,643	212·4	148·0	184·2
Meat, Frozen (Exported)—						
Beef ... .. lb.	11,120	10,271	8,599	6·4	4·8	3·7
Mutton ... .. "	63,828	41,525	31,087	36·6	19·5	13·5
Leather ... .. "	13,373	19,013	21,058	7·7	8·9	9·2
Butter ... .. "	79,198	86,222	106,854	45·4	40·5	46·5
Cheese ... .. "	5,845	6,324	6,968	3·4	3·0	3·0
Bacon and Ham ... .. "	15,940	18,642	22,878	9·1	8·8	9·9
Wheat ... .. bush.	31,865	42,353	47,038	18·3	19·9	20·5
Maize ... .. "	4,691	3,813	3,695	2·7	1·8	1·6
Potatoes ... .. cwt.	1,824	1,046	1,025	1·0	·5	·4
Hay ... .. "	18,612	23,100	19,344	10·7	10·8	8·4
Coal ... .. ton.	9,664	10,485	11,136	5·5	4·9	4·8
Coke ... .. cwt.	9,217	16,257	20,867	5·3	7·6	9·1
Gold ... .. oz	200	32	19	·1	·0	·0
Silver ... .. "	2,117	940	20	1·2	·4	·0
Silver-lead-ore, etc. ... cwt.	7,167	3,299	5,615	4·1	1·6	2·4
Zinc ... .. "	10,290	5,796	5,143	5·9	2·7	2·2
Timber, Sawn ... .. sup. ft.	169,078	157,899	171,656	97·0	74·1	74·6
Fish, Fresh ... .. lb.	15,499	20,558	20,006	8·9	9·7	8·7
Rabbit Skins (Exported) ... "	5,305	6,747	11,239	3·0	3·2	4·9
Iron, Pig ... .. cwt	771	5,373	9,004	·4	2·5	3·9
Steel ... .. "	...	2,887	6,802	...	1·4	3·0
Portland Cement ... .. "	2,374	3,778	6,291	1·4	1·7	2·7
Beer and Stout ... .. gal.	22,253	24,845	25,830	12·8	11·7	11·2
Tobacco ... .. lb.	6,370	12,211	14,283	3·7	5·7	6·2
Biscuits ... .. "	24,175	39,244	42,646	13·9	18·4	18·5
Boots and Shoes ... .. pairs	3,752	4,174	4,654	2·2	2·0	2·0
Bricks ... .. No.	366,985	339,721	404,139	210·5	159·4	175·7
Candles ... .. lb.	5,511	4,596	3,675	3·2	2·2	1·6
Electricity ... .. units	165,249	386,742	700,563	94·8	181·5	304·7
Gas ... .. 1,000 cub. ft.	4,878	8,465	10,024	2·8	4·0	4·4
Jam and Preserved Fruit ... lb.	27,767	30,396	32,159	15·9	14·3	14·0
Soap ... .. "	31,670	37,085	48,363	18·2	17·4	21·0
Sugar, Refined ... .. cwt.	1,834	2,873	2,920	1·1	1·1	1·3
Meat, Preserved ... .. lb.	25,501	4,320	5,602	14·6	2·0	2·4
Tweed and Cloth ... .. yd.	1,170	2,313	2,102	·7	1·1	·9

The statement shows that the annual production of most of the commodities in the list has increased considerably since 1911-13, exceptions being frozen and preserved meats, metals, maize, and potatoes. In some cases, however, the increase has not been proportionate to the growth of population, e.g., wool, cheese, coal, timber, fish, bricks, jam.

## INDUSTRIAL HISTORY OF NEW SOUTH WALES.

An account of the Industrial History of the State up to 1899 appears in the "Wealth and Progress of New South Wales, 1897-8," and is continued on a broader basis in the "Official Year Book, 1921." The following account of recent developments brings the matter up to the later months of 1927.

1921-22.

The year 1920 was the culminating point of the trade boom, which had assumed new vigor after the close of the war, and the process of deflation began in 1921. In older countries, where the economic situation was more complex, the transition was sudden, and marked by serious disturbances in industry and commerce; but in New South Wales a policy of gradual deflation was pursued, and readjustments to meet new conditions proceeded without undue dislocations. Although unemployment increased and some establishments worked part-time, the shortage of work was not generally acute for any lengthy period. At the census in April, 1921, when the position was at its worst, the unemployed in the State numbered 61,640, equal to 7 per cent. of the total breadwinners; but of these only one-half were out of work through scarcity of employment. Financial losses in some businesses were severe, but conditions remained calm, and there was no appreciable increase in the number or magnitude of bankruptcies—convincing proof of an efficient commercial and banking organisation, and of the financial strength of the community. On the whole, production increased in volume, and, as this increase more than counteracted the decline in prices, the value of production was greater in 1920-21 than in any previous year. The propitious seasons which followed the breaking of the drought in June, 1920, stimulated production, and helped to improve the difficult situation which was arising out of the general fall in prices and the decay of the unreal prosperity which had been engendered by war conditions.

The decline first affected the State through a fall in the prices realised for pastoral products and metals, of which New South Wales is a seller, and for manufactured goods, of which it is a buyer. The smaller and slower realisations on all primary products, except wheat, caused a reduction in the national income during 1921, while, at the same time the knowledge that the level of prices was falling produced a spirit of caution among the buying public. Although exports declined heavily, imports, in fulfilment of long-standing orders, grew to unprecedented heights in 1920-21. Commercial houses were faced with the troublesome problem of realising on large stocks of high-priced goods on falling markets in order to meet extraordinary commitments oversea, while the spending power of the public was weakening.

As the violent developments oversea dominated the local situation, the whole industrial organisation of the State felt the influence of price variations. Prices fell steadily for two years, and in the early part of 1922 had reached a point approximately 30 per cent. below the highest point reached in 1920, but still 50 per cent. above the level prevailing in 1913. Bank advances had reached their maximum in March quarter, 1921, and deposits in the following quarter; thereafter both receded gradually. Deposits reached their lowest point by December, 1921, and advances six months

later. A decline was apparent also in the business of the clearing-house, the total in 1921 being more than 7 per cent. less than in 1920, while in the early months of 1922 there was a further decline. The spirit of caution in spending had its counterpart in saving, and a new growth of deposits occurred in the savings banks. Inclusive of interest added to accounts these increased by £7,460,900 in 1920-21—nearly double the increase in any preceding year. The diminution in earning power was exhibited in the smaller earnings of public companies. There was a decrease in the average rate of dividends paid, and some companies arranged to return portion of their capital to shareholders.

As the result of recommendations made by the special tribunal set up in February, 1921, to consider applications for a reduction in hours of work, a 44-hour working week was proclaimed in respect of many of the important industries regulated by awards of the State courts. This matter, the question of unemployment, and of reduction in the costs of production, became topics of much discussion. A joint economic conference of representative organisations of employers and employees assembled in Sydney in 1922 to consider the problems, but failed to agree on general principles, and disbanded without formulating concrete proposals for the betterment of conditions. The price of coal and its cost of production were the subject of a subsequent conference, but agreement was not reached.

In October, 1921, the Board of Trade reconsidered the living wage, and declared in favour of a reduction from £4 5s. to £4 2s. per week, but the determination was not put into effect immediately, and the average effective wage ruling during the year 1921 was 10·9 per cent above that of 1911. In May, 1922, the Board gave the matter further consideration, and declared another reduction to £3 18s. per week, which was put into operation after the election of a new Government. During all these readjustments the industrial situation remained calm, and in 1921 strikes were in extent far below the average of the previous eight years. Some industries, however, principally the metal and metalliferous mining enterprises, were dislocated by a fresh cause—the absence of profitable markets—and a number of establishments and mines suspended operations pending an improvement in markets or a reduction in costs of production.

With the advent of favourable seasons in June, 1920, the outlook for primary industries improved. The harvests of 1920-21 and of 1921-22 were unusually large, especially in the former year, and high prices were realised for wheat; the market for butter improved after a severe decline toward the end of 1921, and production increased to over 100,000,000 lb. in 1921-22; the sheep flocks recovered rapidly from the effects of the drought of 1920, and prices rose as the demand increased, so that the clip of 1921 was practically disposed of by the end of July, 1922. The trials of the readjustment period found organisations of producers, brought into being largely by the problems of recent years, ready to take combined action in their own interests. The disturbed state of markets led to a continuance of the wartime expedient of "pooling" produce for market, and co-operation among producers made considerable headway. Although wool reverted to a free market in 1921, control of the realisation of surplus wool from previous years was handed over to a growers' company specially formed for the purpose. The wheat-growers by ballot emphatically favoured a "voluntary pool" in connection with the harvest of 1921-22, and more than half of that harvest was entrusted to the new organisation. Butter was controlled in large part by producers on co-operative principles, and a "fruit pool" was

formed by the Commonwealth Government to handle fruit for canning. By these means primary producers were able to exercise more control in the marketing of their products and to obtain better prices.

The general decline of prices, wages, and employment had a marked effect on the housing problem. Owing to high costs, building activity decreased during 1921, although housing needs had not been fully met; but the increase in rents, the fall in wages, and the slackness of employment, led to such economy in housing accommodation that, towards the middle of 1922, the effective demand for houses became less intense. At the same time reduced costs led to an expansion of building operations.

Although local rates of interest remained unchanged at a high level, monetary conditions overseas improved. Public loans were negotiated on improved terms in London. A loan of £5,000,000 issued at 95, bearing interest at a nominal rate of  $4\frac{1}{2}$  per cent. per annum, and an actual rate of £4 17s. 3d. per cent, was raised by the Government of New South Wales in 1922. The extent of the improvement is apparent from the rise in the price of Consols, which had been quoted at 44 and rose to  $58\frac{1}{2}$  in May, 1923, while New South Wales 3 per cent. stocks recovered from 58 to 82. The recovery of trade was facilitated also by a marked improvement in the exchange between London and New York.

Following upon a political crisis in December, 1921, general elections were held in March, 1922, and a change of Government was effected. The policy of the new administration included the abolition of all restrictions on trade and industry, reintroduction of a 48-hour working week, and land settlement.

#### 1922—1923.

The depression which followed the post-war boom had passed its worst phase by the middle of 1922—nearly two years after the fall in values had commenced. More stability appeared in foreign markets, which influenced local prices through imports and exports alike. An improvement in primary production in 1921-22 increased the effective purchasing power of the State, and it was strengthened as time passed by the rising value of wool and the increasing production of butter.

In the latter part of 1922 the level of commodity prices in New South Wales assumed temporary stability at about 60 per cent. above the level of 1914, but a rise in 1923 established a new level 67 per cent. above that of 1914. Trade rapidly adjusted itself to the new basis, wages and profits became steady with a tendency to rise, the velocity of exchange increased, and employment improved, but a cautious spirit continued in investment.

An improvement in the rates of exchange with America, toward the end of 1922, facilitated trade, but the continental exchanges, notably with ex-enemy countries, and with France and Belgium, receded further from parity. Trade with the principal ex-enemy countries was resumed on 1st August, 1922, and elaborate legislative provision was made to prevent the sale of imported goods produced under the advantage of depreciated exchanges at prices ruinous to the competition of local manufacturers. During 1922-23 the value of imports of machinery and textiles amounted to nearly £16,500,000, but despite the increased value of wool exported the aggregate value of exports declined, owing to the smallness of the wheat crop. The revival in overseas trade, which was already occurring as



exchanges improved, was stimulated also by a reduction of freights on ocean cargoes. This revival was evident in the steady increase in shipping after the war until, in 1922, the tonnage of vessels entering the ports of the State was equal to that of 1913, when it had reached a maximum.

It is probable that the return of prosperity deferred the fall in the rates of interest which probably would have accompanied a decline in profits. As it was, money accumulated rapidly in trading-banks at fixed deposit and Government stocks and other stable investments came into demand to such an extent that within twelve months their prices on the Stock Exchange rose by 7 per cent. The strength of the demand for well-established investments was indicated early in 1923 when a 5½ per cent. loan of £1,000,000 at par issued by the Rural Bank attracted applications for four times the amount required. At the same time a Commonwealth loan of £5,000,000 at 5 per cent. for ten years, issued at 96 in London, was fully subscribed.

The tendency to revert to normal conditions in trade and finance was accompanied by a decrease in speculative enterprise. In 1922 the volume of company promotion was not greater than before the war. However, building operations in the metropolis, which had slackened owing to high costs, increased very rapidly during the latter part of 1922, and the total value of buildings completed during the year (£8,755,000) was greater than in any previous year. The amount of building in other parts of the State was comparatively small. In regard to public works, the construction of the city and suburban electric railway was re-commenced in February, 1922, after an interval of four and a half years, and Parliamentary sanction was given in November to the erection of a bridge across Sydney Harbour.

Despite the building activity in the metropolitan area, the house shortage remained, and rents continued to rise throughout 1922. The continued decline in prices, however, was such that the cost of living decreased, and the reduction of the living wage to £3 18s. became operative in the latter part of 1922, but no actual reduction ensued in the standard of living from this cause, as the average effective wage-rate of the year remained 14 per cent. above that of 1911. However, it was reflected in the deposits in Savings Banks, of which the total showed very little increase after June, 1922, while the average amount per depositor declined slightly. In May, 1923, in consequence of a slight rise in prices, the living wage was increased by 1s. per week to £3 19s. These adjustments of wages proceeded concurrently with reversion to the 48-hour working-week in most industries where hours had been reduced in 1921, but comparatively little industrial dislocation resulted.

#### 1923-1924.

The steady improvement in the economic position was continued in 1923-24, and though markets proved buoyant, the stability of prices was maintained. The dislocation of business passed away and unemployment decreased steadily. Wages, after a decline in 1922, advanced slightly in 1923, and although there was a rise in the cost of living, the index number of the average effective wage of the year remained 7 per cent. above the level of 1911. The living wage was fixed at £4 2s. in September, 1923, and remained unaltered throughout 1924. Concurrently the earnings of public companies increased, and although the unusually high profits of 1920-21 were not reached, the improvement over 1921-22 was very pronounced. There was a slight diminution in the return from gilt-edged securities, but the value of industrial stocks rose appreciably.

In the latter part of 1923 a rapid transformation occurred in the banking position. Deposits in ordinary trading banks fell from an average of £93,000,000 in June quarter to £89,000,000 in December quarter, while advances rose from £84,000,000 to £89,100,000. But an increase in deposits in March quarter and a decrease in both advances and deposits in June quarter, 1924, restored the position to normal. The operations of local banks and the provision of credit were hampered considerably by the accumulation of large Australian balances in London, which, in view of the restrictions upon the movement of gold, could be transferred and applied to local requirements only with very great difficulty. Indeed, the cost of exchange placed a heavy impost upon the marketing of Australian products abroad, it being estimated that this cost in the early part of 1924 amounted in some cases to 3 per cent. of the value of the produce. While it was recognised that the situation was to some degree remediable only by reversion to the free movement of gold, several schemes to ameliorate the position were proposed. The situation had become acute by the middle of 1924 and credits for developmental and other purposes not providing a speedy turnover were closely restricted.

The general volume of business as indicated by the returns of the banks' clearing-house expanded continuously and complaints were made frequently that the amount of currency was not sufficient to permit the convenient conduct of business. Indeed, the ratio of bank deposits to inter-bank clearings showed a steady increase, indicating a gradual acceleration in the velocity of exchange. Nevertheless, the issue of Australian notes was not increased, it being held that such a step would tend to cause inflation.

The main factor in the business operations of the year was the high value of wool, for although the quantity sold at Sydney auctions in 1923-24 was less by 44,000,000 lb. (as in grease) than in 1922-23, the value, £21,500,000, was greater by £2,500,000. The average price realised for greasy wool was approximately 150 per cent. higher than in pre-war years.

But the other rural industries were adversely affected by bad seasons and low prices, so that the returns from them contributed little to the improvement of economic conditions. Still, the manufacturing industry continued to expand, and operations in the building trades were very active both in the construction of dwellings and in the erection of large structures in Sydney. However, most of the activity in secondary industries was in the metropolitan area.

Although industrial conditions were not wholly unfavourable to the promotion of sectional interests by direct action, the sphere of industry was unusually peaceful. In 1923 there was not one strike or lock-out of considerable magnitude in non-mining industries and the mining industry itself was disturbed by only one strike of importance. It is noteworthy that wages had become a subsidiary cause of strikes, being responsible for only one-fifth of the dislocations of the past five years. Disputes connected with trade union principles were responsible for nearly half the total time lost. Disputes as to working conditions involved more workers than any other single cause, and caused more than one-quarter of the total dislocations, while disputes as to hours of employment involved the loss of as many working days as those concerning wages.

Active steps were taken by persons interested in farming to promote organisations to improve the conditions of rural life and to render rural industries more attractive. The fruitgrowers, especially those producing citrus fruits, resorted to co-operation with a view to effecting economies

in the distribution of their product, grading it, and developing new markets. Agricultural bureaux continued to flourish and gradually extended their operations in co-operative buying. A scheme of stabilisation in connection with the dairying industry was formulated on a federal basis.

A decline in the meat industry led to action being taken by the State in association with the other States and the Commonwealth, with a view to providing a new stimulus to the industry through a Meat Industry Encouragement Act, which gave power to a federal organisation to impose a levy upon pastoralists to defray expenditure for the advancement of meat production. At the close of 1923 the law of co-operation was completely amended and modernised, and a legal basis was provided for rural credits and community settlement.

In addition, a new policy of rural development was put into operation. Executive sanction was given in a general way to measures for improving the conditions of rural life. The problem of closer settlement was approached from a new angle, and many large landholders were given facilities for subdividing their holdings and selling them in smaller areas. An agreement was made whereby the Victorian Government undertook the extension of five lines of railway into the south-western parts of the State, whereby considerable new settlement was promoted. By an agreement with the Governments of the Commonwealth and Queensland, authority was given to construct a standard gauge railway connecting Grafton and Brisbane.

The question of establishing new States in various parts of New South Wales, which had been a source of agitation for years, was referred to a Royal Commission for inquiry and report. This Commission reported that the creation of the proposed new States was not desirable at that time.

#### 1924-25.

In the latter part of 1924 there occurred a pronounced change in the seasonal factors which exercise a dominant influence upon the productivity of the rural industries of the State, and, as these factors continued to operate very favourably, the season 1924-25 proved to be one of the most bountiful in the history of New South Wales. The production of butter far exceeded all previous records, and for wheat and wool, the two largest of the staple products, there was a largely augmented yield as well as a considerable improvement in market prices. As a consequence, the value of production from these three items, which represents nearly two-thirds of the value of production from rural industries, increased by approximately £16,260,000, of nearly 40 per cent.

Such a development naturally provided a powerful stimulus to the whole commerce and trade of the State, a direct consequence being an increase in exports. The value of goods shipped oversea reached the record of £60,580,000, and exceeded the average for the three preceding years by one-third. The total national income also was increased considerably. Direct evidence of the increase in 1923-24, when the seasonal and market factors operated less favourably than in 1924-25, was given by the fact that, although the rate of tax on the incomes of individuals was decreased by from 10 to 25 per cent., the net yield of the income tax remained practically undiminished. In 1925-26 the rate of tax remained unaltered, but the statutory deduction was raised from £250 to £300, and certain additional deductions were allowed. Nevertheless the yield of the tax, which was imposed on income derived in 1924-25, increased by more than 11 per cent., indicating a marked expansion in the amount of taxable

income. This expansion was the more remarkable because the number of incomes taxed decreased from 123,600 to 86,400. At the same time there was a pronounced increase in the deposits in trading banks, especially in the deposits bearing interest. The amount of deposits exceeded by far any total previously attained, and the excess of deposits over advances during the first half of 1925 was more than £13,000,000—a margin greater than had been recorded at any time since the early years of the war. Although a decrease of £1,250,000 occurred in savings bank deposits in the latter half of 1924 (apparently through withdrawals for investment in Government loans) this was all regained in the first half of 1925, and an additional sum of £500,000 was placed to the credit of depositors apart from interest added to accounts by the bank.

The volume of business as indicated by inter-bank clearings had been increasing steadily since 1922, but in 1924-25 there was an acceleration in expansion. The monetary value of clearings represented an increase of £55,000,000, or nearly 7 per cent. more than in 1923-24. The condition of trade and industry also showed sustained improvement and, while the ratio of profits distributed by public companies increased slightly, there was a substantial rise in the proportion of profits placed to reserve. This proportion had been increasing steadily since 1922, and had the effect of strengthening resources and stimulating expansion in industrial and commercial enterprises. Unfortunately a serious break occurred in the prices of wool and wheat in the early part of 1925, and for a time markets were in a stagnant condition. The resultant uncertainty caused a check to the rising prosperity and the year did not bring a complete realisation of the sanguine hopes with which it commenced. One effect of this check was apparent in the reduction in the ratio of trading bank deposits to inter-bank clearings, in the first half of 1925, as compared with the latter half of 1924. Nevertheless, the total volume of inter-bank clearings for the first half of 1925 was greater than at any previous time, and the ratio of deposits to clearings exceeded that of any half-year except that which immediately preceded it.

Industrial conditions throughout the year were, on the whole, very favourable. Outside the mining industry there was very little industrial dislocation, except for a strike of seamen which commenced in June, 1925. Unemployment, especially in country districts, was not extensive, but toward the middle of the year there was a small increase in unemployment in the metropolitan area, due to depression in the engineering trades and to the strike of seamen. The early closing of the wool-selling season also contributed to unemployment in both the metropolitan area and country districts.

Nevertheless there was a considerable increase in the total amount of wages paid in the principal industries, despite a small decline in the average nominal rate of wages. In 1924 a rise of 3 per cent. occurred in the effective rate because the cost of living remained stationary at a level slightly lower than that of the previous year. The effective wage for 1924 was 10 per cent. above the level prevailing in 1911 and 16 per cent. above the average for 1913.

Although minor fluctuations occurred in prices—principally through seasonal causes and special factors affecting individual commodities—the general body of prices proved stable. The cost of living, which had declined appreciably after a rise in 1923-24, remained steady until April, 1925, at about 50 per cent. above the level of 1914, and the index number of wholesale prices continued throughout the year approximately 65 per cent. above the average of 1914.

There were, however, several important minor fluctuations. The prices of agricultural produce and meat (more particularly of mutton) rose appreciably, but the prices of wool, dairy produce, and building materials decreased. The outstanding market change of the year occurred in the price of wool, which, from an average of 23½d. per lb. (greasy) in 1923-24, had risen to 28½d. per lb. at the largest sale of the season in December, 1924. Thereafter a sudden and unexpected decline set in, and despite curtailment of offerings, the average price fell rapidly to 18d. per lb. at the closing sale in April, when sales were suspended for the rest of the financial year. Notwithstanding the collapse of the market from boom prices, the average price obtained at the closing sale was 100 per cent. higher than that prevailing before the war, and the average price realised for all greasy wool sold during the year was 25½d. per lb., or 9 per cent. more than the average of the previous year. The total amount received for wool sold in Sydney during 1924-25 was £21,124,000, and there still remained unsold at the end of the year 171,700 bales. When auctions were resumed in July, 1925, the prices realised were slightly higher than at the sales in April.

These violent market fluctuations and the disorganisation caused in marketing the wool clip led wool-growers to give renewed consideration to the creation of an organisation to market wool on co-operative lines. While a representative conference of wool-growers rejected the first scheme submitted to them, they appointed a special committee to evolve a scheme for the control of the sale of wool by the graziers through an expert committee. In taking this step the wool-growers were following the example set by producers in other branches of primary production. The board for the encouragement of the meat industry entered actively upon its duties during the year, and boards to control the marketing overseas of butter, cheese and dried fruits were set up under authority of Federal laws. These boards consisted mainly of representatives of producers. An Export Guarantee Act was passed also to provide means whereby the Commonwealth Government might advance up to 80 per cent. of the value of produce exported overseas through such boards. Although these arrangements were under Government auspices, they were made on the representations of organisations of producers, who desired to obtain co-ordination of effort more quickly and more effectively than was possible through purely voluntary organisation.

The marketing difficulties with which producers had to contend had been accentuated by the continued adverse movement of exchange with London due to the heavy flow of exports and the favourable prices realised. Australian funds had steadily accumulated in London since 1922, and in the latter half of 1924 reached such a large aggregate that the banks temporarily lost control of the exchanges, and for a time the cost of transferring funds to Australia exceeded 5 per cent. This constituted a heavy burden on the returns received by exporters of Australian produce, notwithstanding that it caused a corresponding reduction in payments for goods imported. In October the Commonwealth Bank made available temporarily additional currency where needed and agreed with the associated banks to inaugurate a scheme for the partial pooling of exchange facilities. By these means a measure of stability was brought about. Further relief was afforded from December onwards, when, as a result of the appreciation of the English pound in terms of the dollar and the continuance of the premium on the Australian pound in terms of the English pound, it became profitable to import gold to Australia from the United States and other countries where there was no embargo on the export. The first shipment of gold was received in January, and during the first four months of 1925 no less than £6,000,000

worth of gold was imported into New South Wales from oversea. Although these measures eased the situation, it was not until the removal of the embargo on the export of gold from the United Kingdom and from Australia simultaneously at the end of April that the exchanges were restored to virtual parity. At the same time a considerable reduction was made by the banks in the margin between their buying and selling rates of exchange. These developments afforded substantial relief to Australian exporters, and, insofar as the conditions of markets caused the benefit to be transferred to the producers in the form of higher prices, a stimulus was given to production for export. The saving on exchange was particularly valuable in the beef export trade, which had been struggling against adverse market conditions since 1921, because costs of marketing absorbed a very high proportion of the value of frozen beef in London.

While the exchange difficulties continued it was frequently urged that the troubles were accentuated by public borrowings abroad, but, although this was true in the sense that it applied to all transactions requiring the transmission of funds from London to Australia, there remained the fact that from the time when the dislocation in exchanges commenced in the middle of 1922 until the end of 1924 the net amount of public loans raised abroad by Australian Governments was £47,800,000, and the amount transmitted abroad as interest and other charges on the public debt was £68,300,000, so that actually the net result of transactions in connection with the public debt tended to relieve the tension of the exchanges. Nevertheless, endeavours were made to restrict Government borrowings on the London market, and the only new loan placed abroad during the year by the Government of New South Wales was one for £6,500,000 in May, 1925, at a price yielding £5 1s. 9d. to investors. There were, however, other reasons for the State refraining from borrowing abroad, principal among which was the temporary depletion of the London lending market. In addition, an endeavour was made to limit borrowing on local markets, and for its loan expenditure for 1924-25 the State relied to a great extent on the very favourable state of the ledger balances.

The difficult position in respect of public borrowing brought about by the state of the exchanges, the depletion of London lending funds, and the desire, as far as possible, to leave local supplies of money for investment in industrial expansion led to concerted action being taken by the Governments of the States and Commonwealth through a joint Loan Council to restrict all borrowings. Where it was found necessary to borrow locally, joint loans were floated in order to avoid such competition as would cause an increase in the rate of interest. In furtherance of this policy, a joint loan was raised in Australia in September and October, 1924, for the sum of £10,300,000, from which New South Wales received approximately £2,900,000. The actual yield to investors in this loan, calculated on the latest date of repayment, was £6 4s. per cent. A loan for £5,400,000, yielding £6 2s. 9d. was raised under the same arrangement in March, 1925, but in this New South Wales did not participate. Early in 1925 the customary rate at which advances were made was reduced by the ordinary trading banks to 6½ per cent. Evidence that loanable funds were accumulating locally during the first half of 1925 was afforded by the increase in fixed deposits in trading banks, and by a steady increase in the market prices of Government securities on the Stock Exchange. It was calculated that, between February and June, the average yield to the investor in eight typical Government stocks decreased from about 6 per cent. to 5½ per cent. In July a joint States and Commonwealth loan for £20,000,000 (in which again New South Wales did not participate) was floated simultaneously in

London and New York at a price yielding approximately £5 1s. 9d. per cent. to investors, and, following upon the success of this loan, the Commonwealth conversion loan of approximately £67,000,000 of 4½ per cent. tax-free war loans was placed on the local market at a price calculated to yield 5½ per cent. to investors, subject to Federal income-tax. Throughout the year the rate of interest on deposits fixed for two years was maintained by the banks at 5 per cent.

In view of the exigencies of the financial situation opportunity was taken to reorganise the Commonwealth Bank of Australia by placing it under the control of a board of experts, entrusting to it the control of the issue of Australian notes, and conferring on it some additional functions of a central bank in respect of the settlement of inter-bank balances.

Near the close of the financial year the State Parliament expired by effluxion of time, and at the elections held at the end of May, 1925, there was a change of Government, and a Labour Ministry assumed office upon a policy which included restoration of the 44-hour working week, the granting of pensions to widows, and a body of industrial legislation.

#### 1925-26.

Although the rainfall in the north-western pastoral areas and in the agricultural districts was not so bountiful as in the preceding season, conditions were on the whole very favourable to rural industries. The wool production increased by 9 per cent., and the total exceeded 400,000,000 lb. The output of the butter factories exceeded 100,000,000 lb. for the second year in succession, and was greater than for any previous season except that which immediately preceded it. The wheat crop was equal to the average.

Ample rains fell in the first nine months of 1926, and gave promise of a maintenance of production at the high level that had been reached in dairying and agriculture, and of a large increase in the wool clip. The stability of prices at comparatively favourable levels stimulated confidence in the future.

The factory returns for 1925-26 showed that appreciable expansion had taken place in their operations, and, in conjunction with other data, indicated that secondary industries had shared in the general increase in business activity. Constructional work in the building trade also increased, a gratifying feature being a pronounced expansion in country districts.

With this sound industrial foundation it is not surprising that prosperity was reflected almost generally throughout those statistics which provide an indication of business conditions and of the economic well-being of the population.

Though the cost of living increased between the early part of 1925 and the middle of 1926, the increase was due mainly to the rise in prices for butter and wheat from which the rural industries were benefiting in oversea markets, also to a rise in the prices of eggs and milk. As the periodical declaration of the living wage was delayed pending a fuller investigation of the standard of living, wages lagged slightly behind the rising cost of living, but the average effective wage still remained above the level of 1911.

Deposits in savings banks showed larger increases than had been apparent for several years, and the increase in the number of depositors was accelerated. Unemployment diminished. The marriage rate, which is regarded as an index of prosperity, rose appreciably, and the steady gain

of population by migration continued. Industrial dislocations due to disputes were of small extent outside the mining and shipping industries. But a protracted dispute concerning a reduction in wages in British over-sea ships held up a large part of the oversea shipping trade during the third quarter of 1925, and many coastal and interstate vessels were idle during part of August and September through a dispute as to working conditions. Disputes in the coal-mining industry led to a number of small dislocations during 1925 and in the first half of 1926 considerable time was lost owing to dislocations.

The outstanding developments of the year, however, were the fall in interest rates, the continued increase in profits of public companies, the steady rise in the prices of stocks and shares, the rapid increase in bank deposits, the expansion of transactions represented by bank clearings, the maintenance of confidence on the part of the investing public indicated by the tone of the Stock Exchange, and the large supply of money for investment at reduced rates of interest.

The sharp decline which had occurred in the yield to investors in Government stocks on the Stock Exchange during the first half of 1925 became general in nearly all shares in 1925-26. The average yield from fifty-five typical stocks and shares fell from 6·1 per cent. at the end of March, 1925, to 5·6 per cent. at the beginning of July, 1926, when the average yield to investors in Government stocks was 5·2 per cent., as compared with 6 per cent. at the beginning of February, 1925. These developments being accompanied by general increases in the earning power of public companies, taken as a whole, gave evidence of healthy financial conditions. Concurrently the rapid increase in deposits in trading banks continued, and the record of £130,000,000 was reached in June quarter, 1926, the total amount having grown by successive annual increases of £9,100,000 and £9,300,000. A significant feature of this growth was that, despite a large falling off in the volume of money available from the sale of primary products, the aggregate bank deposits not only maintained the large increase that occurred in 1924-25, but expanded more than in that year of un-excelled bounty. Added to this, the amount of inter-bank clearings showed an increase of nearly £53,000,000, or more than 6 per cent., over 1924-25.

Offsetting in some measure these favourable developments was a decline in the value of merchandise exported oversea from £60,500,000 in 1924-25 to £50,800,000 in 1925-26. This decrease was due mainly to the diminution in the wheat crop, and in a smaller degree to a reduction in the export of butter and lead. Although the price of wool had declined, the value of the exports was maintained by a carry-over of approximately one-sixth of the clip of the previous year, and despite the decline from the high level reached in 1924-25, the value of exports of merchandise in 1925-26 was 15 per cent. greater than the average of the three years ending in June, 1924. The imports of merchandise oversea in the year 1925-26 showed a continuance of the steady increase that had been proceeding during the previous two years. An outstanding feature of the oversea trade of the State was the movement of large quantities of gold. In 1925-26 gold specie to the value of £3,100,000 was exported to America, whence a large quantity had been imported in the previous year to meet the special exchange difficulties that had existed in the early part of 1925. These difficulties having been satisfactorily overcome, it became unnecessary to retain gold in excess of normal requirements, and the large export resulted.

Changes of far-reaching importance were made in the industrial system during the year. The State scheme of industrial arbitration was completely remodelled, and an Industrial Commission, with exclusive and final



jurisdiction over industrial matters, was appointed, with subsidiary conciliation committees to deal with groups of industries, thereby replacing the Court of Industrial Arbitration and the Board of Trade.

As from 1st January, 1926, the ordinary working hours in all industries, except coal-mining and the rural industries, were fixed at forty-four per week, though it was held subsequently by the High Court of Australia that the Act was not applicable to workers operating under Federal awards. Toward the middle of the year the Commonwealth Arbitration Court commenced a general inquiry into the matter of working hours, for the purpose of deciding a claim for a forty-four hour week lodged by the Amalgamated Engineering Union.

These fundamental changes were supplemented by the introduction of a scheme of widows' pensions as from 10th March, 1926, and by an Act extending the scope and increasing the amount of compensation payable to the victims of industrial accidents. The new Act came into force from 1st July, 1926, and the operations of the Government Insurance Department were extended to embrace the transaction of business with the general public covering liabilities for the compensation of workers under this Act and at common law. The premium rates announced at the commencement of the Act were much above those charged previously, but, as new experience was gained, confidence increased and very substantial reductions were effected.

Continued activity was displayed by primary producers in dealing with the problem of marketing. The number of rural co-operative societies increased steadily. A far-reaching scheme was introduced in regard to oversea export and the limitation of interstate competition in butter. The initial success of this scheme encouraged the formulation of similar plans in regard to cheese, and steps were taken to organise more closely the marketing of bacon. The wheat pool practically ceased to function, as it received only three-quarters of a million bushels of grain. This result was probably due in some measure to the favourable prices offering for wheat, and the tardiness of the realisation and payments under the conditions which had governed previous pools. Owing to the objections of landholders affected by the compulsory levy, the Australian Meat Council and its subsidiary bodies ceased to function, but steps were taken to bring about a new organisation to improve methods of marketing meat.

In September, 1926, a conference of producers and consumers was convened at Bathurst by the Government with a view to disseminating education on the problem of marketing, to discuss the spread of prices between producer and consumer, and to formulate improved schemes of marketing products. The conference agreed upon a number of important resolutions, which were taken into consideration by the Government when legislating with the object of promoting co-operation between producers and consumers for the marketing of primary products.

#### 1926-27.

The course of industrial history in the year may be considered in two parts, the first terminating and the second commencing with the advent of a period of dry weather early in 1927. With this change of weather conditions was associated a deterioration of business conditions, partly as a consequence, but partly of independent origin, and the year did not close quite so propitiously as it opened.

In the latter half of 1926 activity on the Stock Exchange increased, and the steady rise in quotations that had set in early in 1925 was strongly maintained. All classes of stocks except Government bonds advanced in

price, and the contrast served to illustrate the great buoyancy of shares in financial and other business enterprises. This development was accompanied by a continued rise in the rates of net profit earned and of dividends declared by public companies, but the movement in prices was such that the yield to investors from many classes of stock diminished. This rise on the Stock Exchange was due to the weight of money seeking investment, and further evidence of the accumulation of loanable funds was present in the rapid growth of fixed deposits at credit of private customers in trading banks.

Although adverse seasonal factors had appeared in October and November, 1926, all parts of the State except the southern and far western districts received bountiful rains in December. As the growing periods of the season's wool and wheat had practically finished before the dry conditions set in, the effects were felt only in a small diminution in butter production and in the yield of wheat. However, dry conditions again appeared in the summer and autumn of 1927 over a considerable part of the hinterland and over the whole State from April until the end of September, 1927, becoming severe in July. The effect of this marked change in the seasonal factors made itself felt in the outlook for production in 1927-28 and prevented the moulding of financial and business policies on the assumption of continued expansion. The autumn and winter lambing proved small, a reduced clip of wool was anticipated for 1927-28, and the sowing and germination of wheat was retarded.

As the financial position was sustained by the proceeds of realisation of the record wool-clip and of the large wheat harvest of 1926-27, the reaction was at first only slight. Until after the middle of 1927 the growth of bank deposits and of advances was maintained with no abnormal movement, and there was only a slight fall in the high prices that had ruled on the Stock Exchange. However, as money was diverted to meet the exigencies of the pastoral season, the expansion in the volume of business became less regular. These developments, however, were probably not unconnected with a slight decline in the net earnings of companies which declared their profits in the first half of 1927, though it is probable that the reduction was mainly due to factors external to New South Wales, such as the severe drought in Queensland.

But, in general, the proceeds of the year's activities were eminently satisfactory, and despite some shrinkage in the various sources of prosperity, conditions were outwardly very prosperous.

The national income, which had increased rapidly since 1920-21, continued to expand, the increase for the year 1926-27 being approximately 4 per cent., making a total of 30 per cent. in the aggregate and 20 per cent. in the average amount per head in six years. The volume of primary production far exceeded that of any previous year and provided abundant employment. This, coupled with the favourable prices realised, made it inevitable that business activity should intensify. Bank clearings, which had reflected an increase of over 30 per cent. in interbank cheque transactions from 1921 to 1926 showed a further growth of 5 per cent. in 1926-27. The value of merchandise exported rose by nearly £2,000,000, and the value of imports increased by over £5,000,000, one-fourth of this latter increase being on account of machinery and implements. In addition, building activity continued to increase, a healthy feature being a marked expansion in the country districts.

Returns of unemployment, so far as available, showed considerable diminution, and stoppages to industrial processes through industrial disputes

also decreased. Although the State basic wage was not varied between August, 1925, and June, 1927, and then only slightly, there was a considerable increase in the minimum rate used in Federal awards, and the average rate of wages paid to male adults increased steadily until, at the close of 1926, it exceeded £5 per week for the first time on record. Concurrently, there was a marked increase in the number of savings bank accounts and in the amount of deposits. Though the cost of living had risen in 1926, there was an appreciable reduction in 1927, contributed to by a slight fall in rents. This latter development was due to the improved supply of houses consequent on the steady expansion of building operations and was doubtless partly due to the fact that favourable conditions had placed an increasing proportion of home-seekers in possession of the amount of deposit necessary for the acquisition of a home by instalment purchase. This development in turn exercised an important effect in increasing the number of small property owners and stimulated the saving of capital in small amounts from many incomes which otherwise would have provided little or no permanent accumulation.

The principle of the 44-hour working week was extended to a number of industries operating under Federal awards, and a further important social and economic development was the introduction in 1927 of a form of child endowment in conjunction with the State basic wage. The rate which formerly had been intended to provide the needs of life on a minimum scale for man, wife and two children—and as such was the minimum rate payable to adult males employed under State awards—was declared at £4 5s. in June, 1927, without any children in the family unit, and was supplemented by the provision of endowment where required to raise the family income to a maximum of the basic wage plus 5s. per child per week. This provision applied to wage-earners and non wage-earners alike.

While action was continued by the Federal Government in promoting the marketing of primary products abroad, more especially of dried fruits and wine, the State, as a result of opinions expressed at the producers' conference in 1926, enacted a law to provide for the more effective marketing of any primary product, except wool, in respect of which producers desired the benefit of the new law. This action, together with the growing spirit of co-operative endeavour, is gradually increasing the economic organisation of the primary industries of the State.

The maintenance of favourable business conditions throughout the year was facilitated by the stability of the general level of prices and by the effectiveness of the steps taken to maintain foreign exchanges in a steady and satisfactory position.

The continuance of bountiful seasons had, not unnaturally, been accompanied by "boom" tendencies in certain directions, and the effect of these, though never very apparent, became more noticeable in 1926-27. There had been a pronounced increase of building activity in the city since 1923-24, but notwithstanding the stimulus given by extensive demolitions for city improvements, the demand for new premises did not always keep pace with the supply. Again, city land values rose at a rapid rate, the average increase over all land in the city proper being approximately 40 per cent. in the three years ended 1927. There was, in addition, a very large and increasing volume of sales of individual properties at greatly enhanced prices, accompanied by considerable speculation. On the Stock Exchange values had risen to high levels, which it was apparent could be maintained only if a large amount of funds continued to be available for this class of investment, and if earnings and dividends of companies were maintained at the abnormally high rates that had been reached.

A measure of artificial stimulus was given by a large increase in the annual loan expenditure on account of the various Governments. Furthermore, a system of instalment purchase (based largely on cash orders) introduced from abroad and applied to the acquisition of both necessities and luxuries had been extensively used, and the volume of business had thereby received temporary stimulus, placing a measure of encumbrance on future income and causing a feeling of uneasiness as to the possible outcome of the system should a dry season or a depression of trade occur. In one or two instances the financial methods adopted were comparable with those of the speculative land companies which grew up before the financial crisis of 1893, the system being to offer high rates of interest for fixed deposits and to utilise these deposits in extending credit at very remunerative rates of interest through instalment purchase of goods.

Though the year had been a period of great prosperity and progress, signs of retardation were apparent at its close.

#### 1927-28.

Into a situation, already fraught with a small element of danger, there were intruded the effects of a severe though short period of dry weather over nearly the whole of the State from April to September, 1927. When the seasonal position became acute in July and the ratio of advances to deposits was decreased, there was a noticeable reaction on the Stock Exchange, business conditions generally became less buoyant, and unemployment increased.

But the financial situation, though depressed, did not become strained, and though, doubtless, the drought was the proximate cause of the unemployment and the short business depression which followed, it was evident that factors other than these were operating to produce the phenomenon of extensive unemployment at the culmination of a period of marked industrial activity.

For although the advent of widespread rains during October and November brought an assurance of favourable seasonal conditions, the money market continued tight, and a measure of business depression set in accompanied by a growth of acute unemployment.

Except for the temporary modification produced by the opening of relief works over the Christmas period, this unemployment increased steadily until towards the middle of 1928, when it assumed larger proportions than at any time since 1921. On the other hand, there were favourable trends in several important respects, and the year 1927-28 was one of peculiar contrasts.

Despite the continued strong growth of deposits in trading banks, the margin of deposits over advances was maintained at a much higher level during 1927-28 than for three years previously, and as the capital of the banks had been heavily increased by large issues of shares in the first half of 1927, it was apparent that the banking situation was relatively strong, and that the financial stringency of 1927-28 was due rather to the imposition of restrictions on unhealthy activities and the husbanding of resources against possible contingencies than to depletion of resources. It is possible also that the banks, having underwritten the issue of a large Federal conversion loan maturing in December, 1927, found it necessary to conserve their funds to meet requirements.

Though general business activity, as reflected in the inter-bank clearings, failed to increase in the high ratio that had been maintained in the five preceding years, there was nevertheless a slight increase in 1928 over the records that had been reached in 1927. Company profits taken on the whole

showed some diminution, but, towards the middle of 1928, share prices and the volume of business on the Stock Exchange improved. In point of fact, after the middle of 1928 shares of banks and of well-established trading and manufacturing companies rose to a higher level than had been attained prior to the decline of 1927. The yield from investments declined mainly because of the rise in prices of securities, and rates of interest tended to fall. For instance, the price of Government 5½ per cent. stocks sold over the Treasury counter was raised from £98 10s. to £100, and current reports from the Stock Exchange indicated that there was a large volume of money available for investment.

The growth in trading bank deposits continued unabated, although there was an appreciable slackening in the rate of addition to savings bank balances. Company flotations and building activity also continued on the large scale of previous years.

The production of wool, though 10 per cent. less than in the preceding year, was still 10 per cent. greater than had been attained on any other previous year; the production of wheat was 20 per cent. below the average by reason of the drought, but slaughtering activities and the output of butter remained at high levels.

Generally speaking, while there was no noteworthy expansion of business or industrial activity during the year, neither was there any marked degree of recession from the high standard attained in preceding bountiful years, except in the mining industry.

A close survey of material conditions does not reveal any factor likely to be sufficiently potent in its operation to cause the increase of unemployment and the depression which occurred. There seems little doubt, however, but that the adverse seasonal factor in 1927 operated to cause a degree of uncertainty in the outlook—even apprehension of a protracted drought—and that this uncertainty (though removed by the early advent of abundant rains) produced some pessimism, which reacted adversely on business enterprise and strengthened the influence of latent factors which, otherwise, might have had less effect than they really had.

For instance, it seems certain that (as had happened at an earlier date in other parts of the world) the end has come to the artificial stimulus given to business by the rapid extension of instalment purchase through such devices as the "cash order," and there had ensued a period of some slackness due to the temporarily diminished purchasing power of a community.

In addition, the anticipation of increases in the tariff, which had been under consideration for nearly a year, had led to a large increase in the volume of imports of certain goods—notably iron, steel, and knitted goods—and certain industries temporarily suspended part of their operations. This gave rise to some further uncertainty of outlook, which was again increased by the difficulties experienced by certain companies in the motor trades and by a suspicion—justified by later events—that certain companies were over-trading in luxury goods on insecure credit.

These factors, combined with those previously mentioned, had tended to produce a mild boom, and a climax was reached in the third quarter of 1927. The difficult position was accentuated by the uncertain seasonal outlook and by the need of the banks to accumulate funds in anticipation of the large Commonwealth conversion loan which they had underwritten for redemption in December.

All these occurrences had an undoubted influence on the events which followed. There had been also a succession of changes in the conditions of employment during 1926 and 1927, the last, introduced in July, 1927, being a modification of the principle of the basic wage through the introduction of family endowment financed by a tax on wages.

The growth of unemployment set in definitely in August or September, 1927, and save for modification during the Christmas period, rose to a maximum about the middle of 1928. Except as regards the mining industry—which was affected as to both coal and metals by world-wide causes—there does not appear to have been sufficient decline in industrial production nor depression in business to account for any appreciable part of the pronounced growth in unemployment. The causes of this increase seem to have been psychological rather than material, and the downward trend seems to be explainable rather by the intrusion of factors unrelated to the volume of business and industrial activity than to any inherent weakness in the general economic condition of the State, always excepting, of course, the mining industry.

The immediate causes of the unemployment appear to have been a possible measure of shortening of staff in face of the uncertain seasonal outlook in the latter part of 1927, dislocation in certain industries consequent on the sudden increase in volume of imports, and the rapid decline of the coal-mining industry. These occurrences alone could scarcely have been sufficient to produce the depression, but their effects were apparently intensified by the continued operation of causes which had tended to reduce the volume of employment in relation to production. These factors were the long-continued decrease in the volume of rural employment notwithstanding the expansion of output—a trend related to a general movement, viz., the continued changes in the processes of trade and industry due to the rapidly increasing use of machinery, particularly in rural industries, the rapid substitution of the more efficient motor for horse transport, and changes in industrial processes such as the partial substitution of concrete for bricks in building.

Added to these were the facts that conditions governing employment were rapidly changing, and that immigration from overseas had increased. It would appear that, at the same time, there had been a considerable accession of unemployed from neighbouring States which had been visited by depression during the period that employment in New South Wales had remained plentiful.

Once started to operate, the influence of these forces could not be suddenly arrested, and their adverse effects were increased by the steady extension of the depression in the coal trade, which alone produced unemployment or intermittent employment for a large proportion of the employees in the industry. Related in some measure to this was the continued depression in the iron and steel industry, which was affected during the year by competition from accumulated imports.

It was evident from the facts that the causes of the business depression were mainly adventitious, and that production had been maintained at a high level, that a crisis was not likely to develop, and that recovery could not be long delayed.

In point of fact, the indications are that the "depression" was really a slackening of the rate of business and industrial expansion and not a decline, while the unemployment which occurred was due largely, though not entirely, to non-recurring causes and to a measure of increase in the available labour supply at a time when technical improvements and industrial changes caused the absorptive capacity of industry to expand at a rate rather slower than the growth of productive activity.

The commencement of a recovery became evident after the middle of 1928 in the rapid improvement of the money market, in the decrease in unemployment, and in the favourable seasonal outlook, though, as was inevitable, certain depressing influences continued to operate during the early stages of the recovery.

Viewed generally, the economic position of the State has gained immeasurably in strength in the course of the present century. Contrasted with the situation which prevailed when pastoral pursuits were the only considerable rural employment, the volume of primary production of the State has become far less dependent on the vagaries of the seasons. Wheat-growing and dairying, with their accompanying export trades, have been developed, and now occupy important positions in the economy of the State; minor agricultural activities (notably on irrigation areas) are increasing, and poultry-farming also with a growing export trade, is expanding. Beyond this, the sheep and wool industry, which has always been the most important rural activity, has risen to a point of productivity far in excess of that of previous years, and means of diminishing the losses consequent on dry seasons have been very much improved. More important still, there has been a rapid development of secondary industries, especially since 1925, under the stimulus of the favourable local markets created by the widespread prosperity in primary industries and by the policy of protection. Manufacturing is now the most important individual industrial activity in the State, and constitutes a most important factor in maintaining the economic equilibrium of the State.

In October, 1927, a general election was held, and a composite Ministry was formed from the National and Country parties to carry on the functions of the State Government.

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