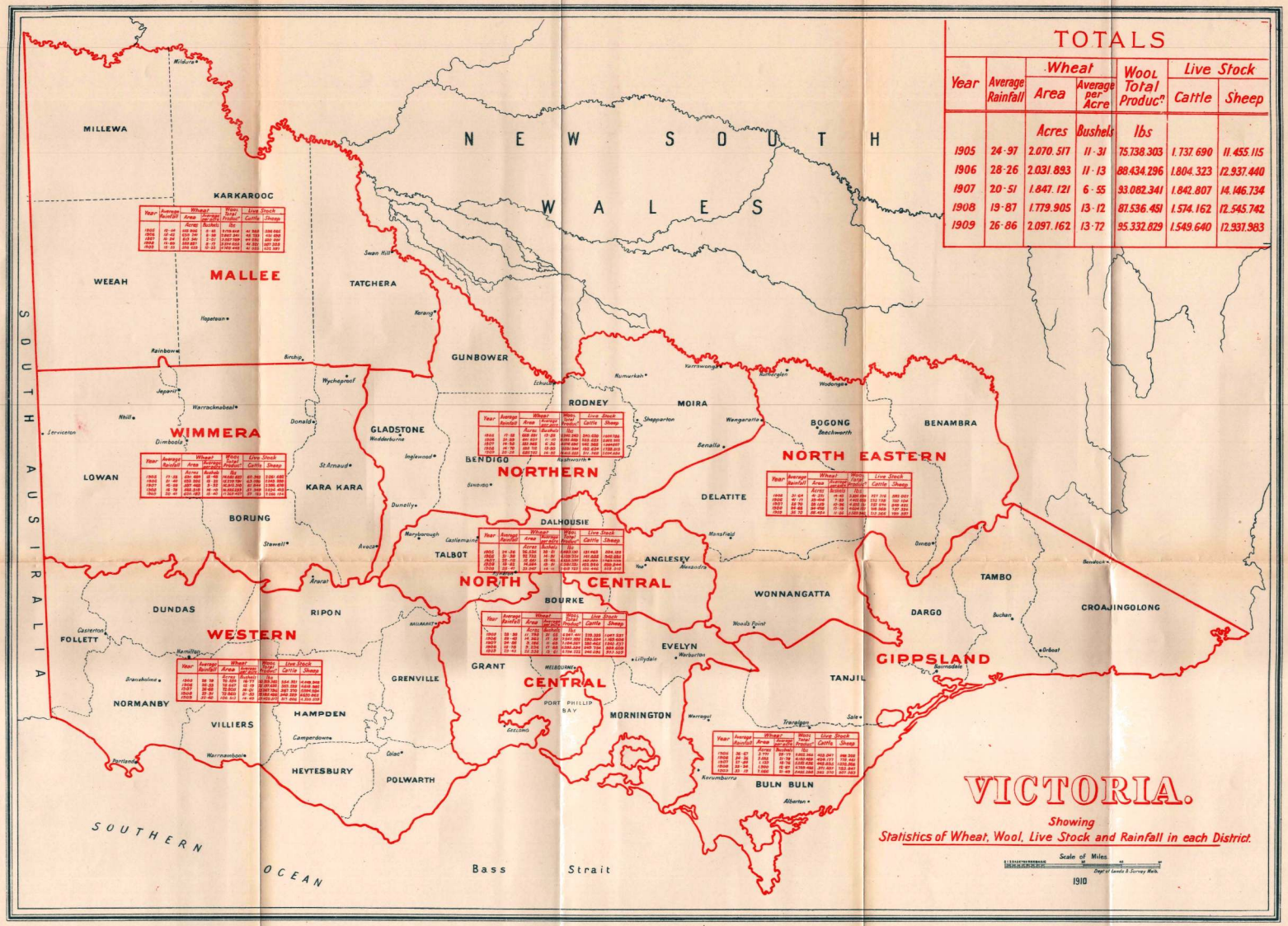
TOTALS
Year | Average Rainfall | Wheat: Area (Acres) | Wheat: Average per Acre (Bushels) | Wool Total Product (lbs) | Live Stock: Cattle | Live Stock: Sheep
1905 | 24·97 | 2.070.517 | 11·31 | 75.138.303 | 1.737.690 | 11.455.115
1906 | 28·26 | 2.031.893 | 11·13 | 88.434.296 | 1.804.323 | 12.937.440
1907 | 20·51 | 1.847.121 | 6·55 | 93.082.341 | 1.842.807 | 14.146.734
1908 | 19·87 | 1.779.905 | 13·12 | 87.536.451 | 1.574.162 | 12.545.742
1909 | 26·86 | 2.097.162 | 13·72 | 95.332.829 | 1.549.640 | 12.937.983
NEW SOUTH WALES
SOUTH AUSTRALIA
SOUTHERN OCEAN
Bass Strait
PORT PHILLIP BAY
MILLEWA
KARKAROOC
MALLEE
WEEAH
TATCHERA
GUNBOWER
RODNEY
MOIRA
BOGONG
BENAMBRA
WIMMERA
GLADSTONE
BENDIGO
NORTHERN
NORTH EASTERN
LOWAN
KARA KARA
DELATITE
BORUNG
DALHOUSIE
TALBOT
ANGLESEY
NORTH CENTRAL
BOURKE
WONNANGATTA
TAMBO
DUNDAS
RIPON
DARGO
CROAJINGOLONG
FOLLETT
WESTERN
EVELYN
GIPPSLAND
GRANT
CENTRAL
GRENVILLE
TANJIL
NORMANBY
HAMPDEN
MORNINGTON
VILLIERS
HEYTESBURY
POLWARTH
BULN BULN
VICTORIA.
Showing
Statistics of Wheat, Wool, Live Stock and Rainfall in each District.
Scale of Miles
1910

PRODUCTION.

LAND SETTLEMENT, ETC.

The return for 1909 received from the Lands Department shows that of the total area of the State (56,245,760 acres) 28,535,703 acres are held privately, 23,441,417 acres being alienated in fee simple, and 5,094,286 acres in process of alienation. Crown lands have a total area of 27,710,057 acres, and comprise roads in connexion with lands alienated and in process of alienation, 1,679,478 acres; agricultural college and water reserves, 440,663 acres; State forests and timber reserves (under *Forests Act* 1907), 3,999,482 acres; permanently reserved for public purposes, 1,592,400 acres; other reserves, including State Forests and Timber Reserves (under Land Acts), 1,325,105 acres; unsold land in towns, &c., 1,660,998 acres; in occupation under grazing area leases, 3,087,173 acres; Mallee pastoral leases, 718,249 acres; all other licences and leases, 874,537 acres; and areas remaining for disposal as tabulated on page 558, 12,331,972 acres. **Private and Crown lands.**

During the year 1900, 494,752 acres, including land selected in previous years, were alienated in fee simple; 406,145 acres were alienated in 1901; 523,574 acres in 1902; 510,080 acres in 1903; 584,010 acres in 1904; 907,339 acres in 1905; 344,519 acres in 1906; 181,050 acres in 1907; 137,023 acres in 1908; and 150,948 acres in 1909; the purchase money being £526,650 in 1900; £438,363 in 1901; £555,538 in 1902; £542,011 in 1903; £613,511 in 1904; £934,386 in 1905; £375,296 in 1906; £208,619 in 1907; £176,335 in 1908; and 188,017 in 1909. The Crown lands absolutely or conditionally sold during the last ten years were 232,783 acres in 1900; 523,464 in 1901; 306,806 in 1902; 347,813 in 1903; 263,180 in 1904; 226,197 in 1905; 179,755 in 1906; 197,545 in 1907; 220,435 in 1908; and 264,572 in 1909. **Alienation of land, 1900 to 1909.**

The pastoral occupation of Crown lands on 31st December, 1909, was as follows:— **Pastoral occupation of Crown Lands.**

Number of Licences and Leases	21,194
Area (acres)	16,384,395
Annual Rental	£54,195

From the period of the first settlement of the State to the end of 1909 the amount realized by the sale of Crown lands was £32,509,706, or about £1 7s. 9d. per acre. It must, however, be remembered that payment of a considerable portion of this amount extended over a series of years without interest, upon very easy terms. **Total amount realized by sale of Crown Lands.**

Lands remaining for disposal.

The following table shows the whole of the unalienated lands of the Crown remaining for disposal:—

CROWN LANDS REMAINING FOR DISPOSAL ON THE 31ST DECEMBER, 1909.

Location.	Classification.					Total.
	Agricultural and Grazing.			Auriferous.	Pastoral.	
	First.	Second.	Third.			
County.	acres.	acres.	acres.	acres.	acres.	acres.
Buln Buln	3,955	35,837	37,696	4,764	..	
Croajingolong	..	2,000	506,320	14,150	549,200	
Dargo	..	..	71,440	96,600	256,100	
Tambo	..	..	217,900	3,800	375,450	
Tanjil	1,000	5,280	66,250	69,500	370,000	
Wonnangatta	..	..	120,928	..	947,600	
Bogong	974	9,500	147,275	135,028	191,300	
Benambra	..	..	148,558	78,313	419,547	
Delatite	638	25,828	207,106	68,678	180,300	
Moira	..	..	7,150	..	..	
Anglesey	26	3,910	49,026	9,422	..	
Bourke	..	3,239	100	..	..	
Dalhousie	20	829	2,465	2,842	..	
Evelyn	635	24,484	..	8,691	..	
Mornington	..	23,356	34,911	..	..	
Bendigo	242	2,417	8,101	10,467	..	
Rodney	..	320	2,000	..	..	
Borung	55	1,993	43,791	13,638	3,219	
Gladstone	185	1,244	4,815	57,024	..	
Lowan	75	177	47,067	..	11,024	
Kara Kara	27	2,608	2,244	20,318	..	
Talbot	261	485	215	75,356	..	
Tatchera	..	70	..	..	..	
Heytesbury	..	860	169,680	..	..	
Polwarth	1,000	10,670	38,980	..	..	
Grant	..	75	27,560	21,550	..	
Grenville	..	..	..	29,660	..	
Ripon	..	..	11,235	8,185	..	
Normanby	..	285	76,493	..	..	
Dundas	425	40	32,138	..	..	
Villiers	..	..	238	..	..	
Follett	..	..	12,615	..	..	
Totals	9,518	155,507	2,094,297	728,286	3,303,740	6,291,348
Throughout the State ..	Swamp or reclaimed lands					961
,, ,, ..	Lands which may be sold by auction					16,573
The north-western portion of the State	Mallee lands (such as are suitable to be eventually classed 1st, 2nd, or 3rd class for selection) ..					6,023,090
Total area remaining for disposal						12,331,972

For the purposes of administration, the State is divided into seventeen districts, in each of which there is a land office under the management of a land officer. These offices are situated at Melbourne, Ararat, Alexandra, Bairnsdale, Ballarat, Beechworth, Benalla, Bendigo, Geelong, Hamilton, Horsham, Omeo, Sale, Seymour, St. Arnaud, Stawell and Warracknabeal, and the officers stationed at these centres are in a position to point out the exact localities of available lands to intending selectors. Pamphlets with fuller details are obtainable from the Crown Lands Enquiry Office, Melbourne.

Any person of the age of 18 years is eligible to take up or select under the Land Acts the area prescribed in accordance with the classification of the land—less the area of previous selections.

Land Acts.

The present system of disposing of the Crown land of Victoria dates from the passing of the *Land Act* 1884 and the *Mallee Pastoral Leases Act* 1883, which, with subsequent amendments, were consolidated by the *Land Act* 1890. This Act was in turn amended by the Land Acts 1891, 1898, 1900, and 1900 (No. 2); and by the *Settlement on Lands Act* 1893, and the *Mallee Lands Act* 1896. These Acts were all consolidated into the *Land Act* 1901, which, again, has been amended by the Land Acts of 1903, 1904, 1905, and 1909. With the *Land Act* 1898 (Part III.) was introduced a system by which the Government was enabled to repurchase private lands for closer settlement, and the subject is dealt with on page 565.

The *Land Act* 1901 (consolidated) embodies the provisions for the classification of Crown lands, and the various means, as set forth in the succeeding paragraphs, under which lands may be acquired.

The *Land Act* 1903 introduced important amendments in regard to the valuation of unalienated Crown lands.

The *Land Act* 1904 deals principally with procedure.

The *Land Act* 1905 deals with procedure and the conditions upon which bee range areas may be declared and bee farm site licences granted. Three bee farm licences, and an area of ten acres in the whole, is the limit allowed to any one person or company. All licences are issued for one year, but are renewable up to seven years.

The *Land Act* 1909 also deals with procedure: gives power to defer selectors' rents for a period up to 3 or 5 years after the first payment; and provides for revaluation of certain lands selected during the previous 6 years.

Agriculture and grazing lands.

The Crown lands termed Agricultural and Grazing lands are arranged in three classes—first, second, and third.

The lands of the first class, comprising 9,518 acres, are situated principally in the county of Buln Buln, are heavily timbered, and consist for the most part of good chocolate soil of volcanic origin, and the grey soil of the coal-bearing country. The second-class lands, embracing 155,507 acres, are fairly distributed throughout the State, and comprise silurian and granite ranges, and lower lands of tertiary formation. A large portion of these lands have chiefly a grazing value, though parts, comprising creek flats and gullies, are suitable for cultivation; while large areas are specially suitable for vineyards and orchards. The area of third class lands, which like the second class lands are to be found in almost every county in the State, is very extensive, amounting to 2,094,297 acres.

A grazing lease may be obtained of an area not exceeding 200, 640, or 1,280 acres of first, second, or third class lands respectively, for any term expiring not later than 29th December, 1920. Upon expiration of the lease the retiring lessee shall be paid for his improvements by the incoming tenant at a valuation limited to 10s.,

7s 6d., or 5s. per acre for the three classes respectively. The annual rent of a grazing area is not less than 3d., 2d., or 1d. per acre according to the value of land. The lessee of a grazing area may select thereout an agricultural or grazing allotment.

Agricultural and grazing allotments.

A person desirous of selecting and obtaining the freehold may do so by either taking up a grazing area lease and selecting thereout, as just described, or by obtaining direct an agricultural or grazing allotment without first taking up a grazing area lease. The purchase money is fixed at not less than 20s., 15s., or 10s., per acre according to the value of the land, and is payable by even annual instalments, extending in the case of a residential selector over a period of 20 or 40 years at his option; but in the case of a non-residential selector over a period of 20 years only. The land is occupied during the first six years under *licence*, and during the remainder of the term under lease. During the period of the licence the land must be kept free from vermin and enclosed with a fence, and certain improvements must be made. After the expiration of the six years' licence, the selector, if all conditions have been complied with, can either purchase his holding by paying up the balance of the purchase money, the six years' instalments (licence-fees) already paid being credited as part payment, or obtain a lease extending over 14 or 34 years, as the case may be, at the same annual rental, which is also credited to him as part payment of the fee-simple.

Perpetual leases.

Instead of selecting by way of licence and lease under which the freehold is obtained a person may acquire a similar area of agricultural and grazing lands under perpetual lease. The annual rental is 4 per cent. of the unimproved value of the land, which is fixed at £1, 15s., or 10s. per acre for first, second, or third class lands respectively. The rent is subject to revision every ten years, but must not exceed 4 per cent. of the unimproved value of the land. Residence on or within five miles of the land for six months during the first year, and eight months during each of the four following years, is necessary; but if one-fourth of the allotment be cultivated during the first two years, and one-half before the end of the fourth year, the residence covenant will not be enforced.

Mallee Lands.

The "mallee country"—so named from the scrub found growing there—occupies about 11,000,000 acres in the north-west portion of the State. The soil is light chocolate and sandy loam, and in its virgin state is covered with mallee scrub, interspersed with plains lightly timbered with box, she-oak, and pines. Since the introduction of the "mallee roller" and the "stump-jump" plough, it has been possible to clear off the scrub at a moderate cost. With the extension of railway facilities and by the utilization of some of the surplus waters of the Murray for irrigation there will be great scope for successful settlement in this country. There are now 6,023,090 acres included in the general list of unalienated lands, portions of which, as opportunity offers, may become classified as first, second, or third class lands for selection. The terms of purchase by licence

and lease are similar to those in respect of agricultural and grazing allotments previously described, viz., for first, second, and third class land, not less than £1, 15s., and 10s., respectively, payable during either 20 or 40 years. Larger areas may be held, however, the maximum being 640 acres, 1,000 acres, and 1,280 acres respectively. In the case of Mallee Perpetual Leases the rental must not exceed 1¼ per cent. of the unimproved value, and if one-fourth of the area be cultivated within four years and one-half by the end of the sixth year, or improvements be effected to the extent of 10s., 7s. 6d., or 5s. per acre, according to the classification, residence is unnecessary.

Auriferous lands.

The "auriferous lands" comprise 728,286 acres, and are distributed over twenty counties in various parts of the State. Any portions which are found to be non-auriferous, or which can be alienated without injury to mining interests, may be reclassed as Agricultural and Grazing lands for selection. These lands are for the most part suitable for fruit culture and grazing. Annual licences are issued for areas of auriferous lands not exceeding 20 acres on payment of a yearly licence-fee of 5s. for areas of 3 acres or under, of 10s. for areas from 3 to 10 acres, and of 1s. per acre for areas over 10 acres. The licensee has the right to use the surface of the land only; cannot assign or sublet without permission; and must either reside on the land or within four months enclose same with a fence and cultivate one-fifth of the area. He must post notices on the land, indicating that it is auriferous; and miners must be allowed free access to any part of the land not occupied by buildings. If at any time the mining objections be removed a licensee who has complied with conditions may surrender the licence—credit being given for all rent paid, occupation, and improvements effected—and obtain a selection licence which enables the freehold to be obtained. Holders of miners' rights, issued under the Mines Acts 1890 and 1897, are entitled to occupy for the purpose of residence or business a maximum area of one acre or a lesser area fixed by local mining by-laws. The fee is £5 per annum for a business licence, and 2s. 6d. for a miner's right, and a habitable dwelling must be erected on the area within four months. After being in possession for two and a half years, and having erected buildings or other improvements, the holder may apply for leave to purchase his allotment at a price to be determined by the Board of Land and Works.

Swamp or reclaimed lands.

The total area of swamp or reclaimed lands amounts to 961 acres. The most important of these are situated at Koo-wee-rup, Moe, and Condah, which have been reclaimed at considerable cost to the Crown. These lands are divided into allotments not exceeding 160 acres. When the value of an allotment has been determined, it may be disposed of in one of four ways, viz., under a 21 years' lease; under perpetual lease, at a rental of 4 per cent. on the value of the land; under a conditional purchase lease, payment extending over 31½ years by 63 half-yearly instalments, including 4½ per cent. interest on the balance of the unpaid purchase money; or by public auction, on terms similar to those explained in the following paragraph.

Lands for sale by auction.

Country lands specially classed for sale by auction (not including swamp or reclaimed lands) comprise 16,573 acres. Any land in a city, town, or borough, areas specially classed for sale, isolated pieces not exceeding 50 acres, and sites for church or charitable purposes of not more than three acres, may be sold by auction. The terms are cash, or a deposit of one-eighth of the purchase money and the balance in from six to 20 half-yearly instalments with interest at 4 per cent. per annum. There are stringent provisions prohibiting agreements which would prevent fair competition.

Pastoral lands.

The "pastoral lands" unalienated comprise 3,303,740 acres, and are situated in the counties of Wonnangatta, Croajingolong, Benambra, Tambo, Tanjil, Dargo, Bogong, Delatite, Lowan, and Borung. Generally speaking these lands are difficult of access, and large portions are in high altitudes, where cultivation is impossible and grazing impracticable except during the summer months. Areas which are found suitable may as occasion requires be reclassed Agricultural and Grazing lands for selection.

Annual grazing licences.

Annual grazing licences may be issued to enter with cattle, sheep, or other animals upon reserves, "pastoral lands," "Mallee lands," or other Crown lands, not required in the meantime for other purposes. The licence may be renewable for a period not exceeding seven years, subject to cancellation at any time during the period. Any fencing erected by a licensee may be removed by him.

Other lease purchases &c.

Leases up to 21 years at an annual rental of not less than £5, and annual licences at various rates are issued for different purposes, such as sites for residences, gardens, inns, stores, smithies, butter factories, creameries, brickmaking, &c. Licensees of sites for residences, gardens, inns, stores, smithies, butter factories, or similar buildings, who have been in possession of land for five years (if the land is outside the boundaries of a city), may purchase at a price to be determined, in which case any rents previously paid will be credited towards purchase money.

Village settlement.

Chiefly with a view to providing an outlet for the unemployed labour of the State, an Act (the *Settlement on Lands Act* 1893, No. 1311) was passed on 31st August, 1893, providing for the establishment of three descriptions of rural settlements, viz.:—Village Communities, Homestead Associations, and Labour Colonies, and certain lands were set apart in connexion therewith.

The Homestead Associations were originally combinations of not less than six persons who desired to settle near each other. These Associations, however, having proved unsuccessful, the part of the Act relating to them was repealed in 1904.

The area originally made available for Village Communities and Homestead Associations was 156,020 acres in 85 different localities in the State. A large portion of this area was, however, found to

be unsuitable for Village Settlement purposes, and has been withdrawn from the operation of the Act. No further lands have been made available and the Act is now inoperative for new holdings. The area which a settler could acquire, viz., 20 acres, was amended by the *Land Act* 1904 to an area not exceeding £200 in value as the maximum. The area now occupied is 39,278 acres, and this is divided amongst 1,415 settlers, giving an average of 28 acres each.

These figures do not apply to a considerable number of settlers who have surrendered their Village Settlement leases and become selectors under the *Land Act* 1901.

The total amount of monetary aid afforded to settlers by way of loans was £67,379, and no advances have been made since 1903. At 30th June, 1910, £35,234 of the amount advanced had been repaid by the settlers.

"Transfer of Land Act."

The "Torrens System," whereby persons acquiring possession of land may receive a clear title, was introduced into Victoria in 1862. The system was originated previously in South Australia by the late Sir R. R. Torrens, and has been the means of simplifying procedure in connexion with the transferring of land. It gives a title to the transferee free of any latent defect and cheapens the cost of dealing in real estate by reason of the simplicity of the procedure. All land parted with by the Crown since 1862 is under the operation of the Transfer of Land Act, and the Crown grant issues through the Titles Office; but to bring under the Act land that was parted with prior to that year, application must be made accompanied by strict proofs of the applicant's interest in the property. During 1909 there were submitted 702 applications to have brought under the Act land amounting to 96,658 acres in extent, and to £1,194,282 in value, whilst the land actually brought under the Act during the year by application was 84,559 acres, valued at £1,148,152. Up to the end of 1909, there had been brought under the Act 2,584,314 acres valued at £51,988,733. The number of certificates of title issued in 1909 was 11,891.

Assurance fund.

When application is made to have land brought under the Transfer of Land Act, a contribution to the assurance fund of ½d. in the £1 on the value of the land is levied on the applicant, to assure and indemnify the Government in granting a clear title against all the world, as some other person may have a latent interest in the property, and it may be necessary for the Government to recompense such person out of the fund for the loss of his interest. Since 1884-5 the assurance fund has been reduced by £75,073 which amount was advanced towards the purchase of land adjoining the Titles Office, the fund receiving interest thereon at 4 per cent. per annum from the general revenue. The amount paid up to 30th June, 1909, as compensation and for judgments recovered, including costs, was £6,563, representing 33 claims.

Closer Settlement.

Closer Settlement.

The increasing demand for small farm holdings, coupled with the necessity for retaining within the State persons trained in agricultural pursuits, who might otherwise transfer their activities to adjoining States, has led up to the establishment of a vigorous policy of repurchase of private lands by the Crown for the purposes of closer settlement. The operations of the State Rivers and Water Supply Commission, and the extension of channels into new districts suitable for irrigation, has given considerable impetus to irrigation farming in Victoria, and in order that the advantages of irrigation may be fully utilized, the Closer Settlement Board and the State Rivers and Water Supply Commission have joined forces in making available a large number of holdings for both irrigation and dry farming purposes. The Honorable the Minister for Lands (Mr. H. McKenzie), and the Chairman of the Water Supply Commission (Mr. Elwood Mead), have recently proceeded to Europe and America for the purpose of bringing under the notice of prospective emigrants the advantages afforded, and the opportunities for settlers in Victoria. It is anticipated that the results of their important mission will be made evident within the next twelve months, by a large increase in the number of applicants for farm allotments.

It is recognised that in order to expedite settlement and permit a farm allotment to become income producing without delay, some assistance in the direction of erecting a dwelling and outbuildings, as well as in the preparation of the land prior to seeding, should be carried out by the State Departments concerned. Accordingly, arrangements are being made, whereunder residences may be erected for settlers, and be ready for early occupation; also a portion of the land resumed within the irrigation area is being graded and made ready for seeding lucerne. Assistance of this character will be treated as an advance, to be repaid by the settler over a term of years.

The Closer Settlement Act provides that any tenant of Crown lands may obtain an advance from the Board to the amount of 60 per cent. of the value of the permanent improvements effected by him, the limit of such advance being £500.

This provision insures that a settler who may in the early days of his occupation have to expend a large proportion of his capital in the carrying out of necessary improvements, may not be handicapped in the struggle to develop the property later on.

Authority is also given to the Closer Settlement Board to approve of a provisional agreement to purchase a property, not exceeding £2,500 in value, at the request of a suitable applicant. If the price asked by the vendor is indorsed by the Board, the cash value is paid over, and the applicant becomes a conditional purchaser subject to all the terms and conditions of the Closer Settlement Act.

Advances may also be made to Crown tenants under the Wire Netting Act, which enables settlers in rabbit-infested areas to procure netting upon easy terms.

The following *resumé* of the legislation connected with Closer Settlement reflects the progressive experience gained from time to time, so that the most recent Act bearing upon the whole subject may fairly be claimed to be based upon thoroughly sound lines, dictated and confirmed by experience.

Part III. of the Land Act of 1898 authorized the purchase of private lands suitable for closer settlement. That part, with several subsequent amendments of minor importance, became Part IV. of the Consolidated Act of 1901, since superseded by the Closer Settlement Act of 1904. Under this Act the Minister was empowered, after a favorable report and valuation by independent valuers had been obtained, to enter into a provisional contract for the purchase of land, copies of which contract and report were to be laid before Parliament, and if the Legislative Assembly by resolution declared it expedient to acquire such land, a Bill for the purchase thereof was introduced. The price to be paid by settlers for the land so acquired was fixed so as to cover cost of purchase, survey, and subdivision, value of land absorbed by roads and reserves, cost of constructing roads, cost of clearing, draining, fencing, and other improvements which the Board of Land and Works might effect prior to disposal in farm allotments, and any other incidental expenses. Any person aged 21 (not a holder of rural land valued at £1,250, and who would not, by reason of the grant, become a holder of land exceeding such value) could be granted one farm allotment under conditional purchase lease. The purchase money, with interest at 4½ per cent., had to be paid by 63 or a lesser number of half-yearly instalments, two of which were required to accompany the application. The conditional purchase lease issued was for a term not exceeding 31½ years, and contained, so far as consistent, the usual conditions of perpetual leases, also the following:—(*a*) Improvements to the value of 10s. per acre; or, if the Board so determined, to the value of 10 per cent. of the purchase money, before the end of the third year; and to the same extent, in addition, before the end of the sixth year; (*b*) Personal residence or residence by wife or child over eighteen years of age for eight months during each of the first six years; (*c*) Not to transfer, assign, mortgage, or sublet within first six years; and any other conditions prescribed by the regulations. The fee-simple could be acquired after the first six years, if the conditions were complied with, on payment of the balance of principal. Forfeiture for non-payment of an instalment, could be prevented by payment thereof, with a penalty of 5 per cent. within three months, or of 10 per cent. within six months. Any tenant of land acquired by the Crown from his landlord could be granted a prior right to conditional purchase of any area not exceeding £1,250 in value, or £2,000 if there were a homestead. Power was given to close unused roads, and portions of the land acquired could be used for experimental farms.

On 30th November, 1904, an Act was passed, further providing for the acquisition and disposal of land for closer settlement. It provides for administration by a Board consisting of three persons appointed by the Governor in Council, and intrusted with power to acquire, either by agreement or compulsorily, blocks of private land in any part of the State for the purposes of closer settlement. Such land acquired by the Board is to be purchased by money the proceeds of the sale of debentures or stock under this Act; or, with the consent of the Treasurer, of Victorian Government Stock. The Governor in Council may for the purposes of the Act increase the amount of the Victorian Government Stock by a sum not exceeding £500,000 in any one financial year; or, instead of increasing the Victorian Government Stock, may issue debentures for the whole or any portion of such sum. The principal and interest on all stock and debentures issued are to be a charge on the Closer Settlement Fund created from all moneys received by the Board, and the fund heretofore known as the Farm Settlements Fund transferred to the Board. This Act limited the power to raise money to five years, but by the Act passed on 4th January, 1910, the time was extended to nine years from the passing of the original (1904) Act.

Acquisition and Administration.

The Minister administering the Act may authorize the inspection of private land, and the Board is to affix its value when deemed suitable. If the Minister agrees with the Board's valuation he may direct the Board to acquire the land either by auction or other sale of the estate, by purchase or exchange of land equivalent at a price not exceeding the Board's valuation, or by an offer to the owner. Should the owner decline the Board's offer, then by resolution of both Houses of Parliament the whole or any part of the land may be acquired by the Board by compulsory process. The Governor-in-Council may by notification in the *Government Gazette* declare the land acquired, and thereupon it becomes Crown land. The owner may within a time specified claim exemption of land up to the value of £10,000. The amount of compensation to be paid to the owner is determined by a Judge of the Supreme Court.

The Board may dispose of all lands acquired, by conditional purchase lease as farm allotments, as allotments for workmen's homes, or as allotments for agricultural labourers at fixed prices, the farm allotments to consist of an area of land not exceeding £2,500 in value (except in cases of homestead allotments when the value of land held may be increased to £4,000), the workmen's homes allotments not to exceed £100 in value, and the agricultural labourers' allotments not to exceed £200 in value. No lease of an allotment shall be granted to any person who is already the holder of land of the value of £2,500 (township land excepted), or who would thereby become the holder of land exceeding the value of £2,500, and not more than one allotment is to be held by one lessee. Conditional purchase leases are to be issued for such a term of years as may be agreed upon by the lessee and the Board, and provision is made for payment of the

value of the allotment, and interest at a rate of not less than 4½ per cent. per annum, by not more than 63 half-yearly instalments. The leases provide for the destruction of vermin and the eradication of noxious weeds, for fencing and its maintenance, and other improvements of a permanent character; for personal residence on the estate; also that the lessee shall not transfer, assign, mortgage, sublet, or part with possession of the whole or any part of the allotment within the first six years of the lease, save in certain circumstances. A Crown grant may be acquired at any time after twelve years on payment of the balance of purchase money. In the case of workmen's home allotments, the lessee must within four months be in actual residential occupation of the allotment; and within one year from the date of the lease he must fence the allotment and erect a dwelling house of the value of at least £50, and not more than one dwelling house and one place of business shall be erected upon any one allotment. The condition regarding improvements to be made on agricultural labourers' allotments is that the lessee must within one year erect a dwelling house of a value of £30 upon the allotment, and within two years fence the allotment.

Closer Settlement Act 1906.

Under the provisions of the *Closer Settlement Act* 1906, a lessee unable to pay his instalments, may, if the Board is satisfied that he has complied with the conditions of his lease, be granted suspension of payments up to 60 per cent. of the value of his improvements, and on payment of interest thereon at 5 per cent. the arrears may be paid over a definite time, or the lease may be extended for a corresponding period.

Closer Settlement Act 1907.

A further privilege is granted, by an amending Act passed in 1907, to lessees who may have spent all their capital in improving their holdings, and have not availed themselves of the provision to suspend their payments. The Board is empowered to grant advances to such lessees up to 60 per cent. of the value of existing improvements, in order that they may carry on farming pursuits, or to enable further improvements to be effected. Such sums advanced with interest at 5 per cent. are repayable by half-yearly instalments extending over sixteen years.

Closer Settlement Act 1909.

Under the *Closer Settlement Act* 1909, Section 8 of the original Act was so amended that the power to raise money for the purposes of the Act was extended for a further period of twelve months. Provision was made governing the payment of instalments, and conditions of forfeiture were added. The latter were of such a nature that if a lessee paid the whole or any portion of any amount owing to the Board subsequent to a breach of any covenant or condition of the lease, such payment should not be deemed a waiver of such breach, also that lessees, on payment of a fine of 5 per centum, might secure, at the discretion of the Board, prevention of forfeiture.

Closer Settlement Act 1909 (No. 2).

The principal features of this Act relate to extension of the powers of the Lands Purchase and Management Board; the power conferred to acquire land in irrigation districts for future settlement

on the recommendation of the State Rivers and Water Supply Commission; the acquisition of land by compulsory purchase, and the compensation payable in connexion therewith; extension of powers in regard to suspension of payment of instalments of purchase money and interest by lessees, and in regard to advances to settlers; and the provision to borrow £500,000 a year for the purposes of closer settlement for a further term of three years.

Estates purchased.

The following is a complete statement of all estates acquired by the Closer Settlement Board for the purposes of closer settlement at 30th June, 1910, including the estates acquired under the provisions of the Small Improved Holdings Act, the administration of which has been transferred to the Board.

CLOSER SETTLEMENT ESTATES AT 30TH JUNE, 1910.

Estates.	Area.*	Purchase Money.	Price Paid Per Acre.	No. of Lessees.			Area Vacant and Available.
				Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	
	acres.	£	£ s. d.				acres.
Wando Vale ..	10,446	63,985	6 2 6	66	..	..	..
Walmer ..	13,769	44,751	3 5 0	42	..	..	..
Whitfield ..	4,247	36,096	8 10 0	36	..	..	..
Brunswick ..	91	2,644	29 0 0	..	54	..	..
Eurack	5,109	53,640	10 10 0	46	..	..	..
Footscray ..	31	2,486	80 0 0	..	84	..	..
Dal Campbell ..	45	2,358	52 8 0	..	62	..	..
Springvale ..	3,396	25,895	7 12 6	21	..	..	..
Memsie	10,028	57,159	5 14 0	43	..	..	..
Richmond Vale ..	1,851	11,000	8 11 6	12	..	..	185
Overnewton ..	11,336	71,492	6 4 6	70	..	..	..
Wyuna	23,016	120,876	5 5 0	124	..	11	..
Restdown ..	17,894	60,391	3 7 6	54	..	..	..
Strathkellar ..	10,227	74,150	7 5 0	56	..	6	..
Bona Vista ..	2,060	28,832	14 0 0	32	..	4	..
Cadman's ..	18	844	50 0 0	..	42	..	..
The Willows ..	400	5,131	12 16 0	4	..	..	..
Ercildoune ..	1,200	12,199	10 2 6	11	..	..	..
Greenvale ..	304	7,298	24 0 0	6	..	..	..
Lara	8,329	45,825	5 10 0	34	..	7	..
Tandarra ..	4,558	21,083	4 12 6	18	..	..	..
Dura	337	3,200	9 13 4	8	..	..	..
Exford	8,054	64,039	8 0 0	46	..	6	..
Colbinabbin ..	19,164	110,198	5 17 6	85	..	..	..
Pirron Yaloak ..	1,058	23,796	22 7 6	12	..	..	..
Numurkah ..	2,360	18,901	8 0 0	14	..	1	..
Allambee ..	5,023	31,779	6 6 4	24	..	..	1,233
Pender's Grove ..	233	23,292	100 0 0	..	37	16	70
Phœnix ..	23	968	40 0 0	..	47	..	..
Keayang ..	1,494	14,966	10 0 0	12	..	..	..
Werneth ..	6,588	31,043	4 15 0	21	..	..	..
Staughton Vale ..	9,857	66,466	6 15 0	47	..	..	..
Glen Huntly ..	74	6,858	94 0 0	..	135	..	7
Hogan's ..	444	6,197	14 0 0	9	..	..	..
Balure	183	1,463	8 0 0	10	..	..	..
Wein Wein Gurk ..	3,021	8,684	2 17 6	13	..	..	..
Inverary ..	1,260	7,548	6 0 0	24	..	..	..
Springs	398	2,290	5 15 0	8	..	..	..
The Heart ..	3,793	56,322	14 12 2	43	..	..	..
Cohuna ..	5,111	51,136	10 0 1	45	..	..	930

* The area given is that to the nearest acre, and in some cases includes Crown lands transferred to the Board without purchase.

CLOSER SETTLEMENT ESTATES AT 30TH JUNE, 1910—*continued.*

Estates.	Area.*	Purchase Money.	Price Paid Per Acre.	No. of Lessees.			Area Vacant and Available.
				Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	
	acres.	£	£ s. d.				acres.
Mooralla ..	17,199	60,197	3 10 0	25	..	..	1,808
Maribyrnong ..	1,112	10,842	9 15 0	12	..	2	..
Kenilworth ..	18,440	55,321	3 0 0	21	..	16	3,650
Shepparton ..	3,221	49,022	15 4 10	63	..	19	103
Doogalook ..	4,640	29,002	6 5 0	13	..	..	1,316
Allendale ..	1,108	9,728	9 1 0	7	..	..	..
Warrnambool ..	46	1,188	25 10 8	..	25	..	..
Maddingley ..	13	1,300	100 0 0	..	8	5	..
Leongatha ..	53	1,325	25 0 0	3	..	..	..
Mortlake ..	2,350	10,945	4 13 1½	8	..	20	..
Dowling Forest ..	225	1,350	6 0 0	..	15	1	..
Geelong ..	3	300	100 0 0	..	9	..	¼
Bellarine ..	204	5,457	26 15 0	} Occupied by probationary tenants.			
Daylesford ..	70	2,958	42 5 2				
Highton ..	425	11,032	26 0 0				
Belmont ..	113	3,161	28 0 0				
Mordialloc ..	460	7,850	17 1 6				
Thomastown ..	581	11,200	19 5 6				
Wangaratta ..	796	9,683	12 3 4				
Warragul ..	98	2,060	21 0 0				
Geelong (Newtown)	157	1,955	12 9 1				
Werribee Park ..	23,214	302,319	13 0 0	Being subdivided			
Werribee Police Paddock	60	†	..	Survey proceeding			
Condah ..	157	1,725	11 0 0	Waiting drainage works			
Bamawn ..	4,611	42,675	Various ..	Waiting construction of water channels			
Swan Hill ..	2,540	25,485	Various ..	Survey proceeding			
Meadowbank ..	313	9,086	30 0 0	Survey proceeding			
Mackey ..	1,078	20,626	19 2 8	} Not yet made available.			
Macorna (Sec. 6)	240	2,876	12 0 0				
Cornelia Creek ..	37,413	177,712	4 15 0	} Not yet paid for			
Kennedy's ..	2,457	16,892	6 17 6				
Rochester ..	12,292	100,026	8 2 9				
Cohuna ..	4,607	43,776	9 10 0				
Koonong Wootong‡	10,181	103,330	10 3 0				
Total ..	347,307	..	..	1,248	518	114	..

* The area given is that to the nearest acre, and in some cases includes Crown lands transferred to the Board without purchase.
† Crown lands.
‡ This estate is the only area so far acquired under the compulsory clauses of the Act.

Altogether the Board has 74 properties, with a total area of 347,307 acres, but of these 13 estates, with an area of 99,163 acres, were not available for occupation at 30th June last. Of the remaining 61 estates, 52, having a total area of 245,240 acres, were occupied by 1,880 conditional purchase lessees, and contained 9,302 acres, representing 33 farm, 104 workmen's homes, and 47 agricultural labourers' allotments, which were vacant and available for occupation. Nine estates, with an area of 2,904 acres, were occupied by probationary tenants, to whom, if approved, will be granted conditional purchase leases.

Extent of Closer Settlement.

The extent of the settlement effected by the Board at 30th June, 1908, 1909, and 1910 respectively, is summarized in the next statement.

CLOSER SETTLEMENT HOLDINGS OCCUPIED AND VACANT.

	At 30th June.		
	1908.	1909.	1910.
In occupation—			
Number of Holdings ...	1,655	1,792	1,880
Area ... acres	188,787	196,573	235,938
Resident Population ...	5,660	5,608	6,360
Vacant and available for occupation—			
Area..... acres	...	...	9,302
Allotments—			
Farm	189	42	33
Workmen's Homes ...		106	104
Agricultural Labourers ...	...	...	47

The sum of £450,336 had been repaid to the Closer Settlement Fund up to 30th June, 1910, and of this amount £232,080 has been transferred from that fund to revenue to meet interest due to stockholders: £196,968 has been drawn from the same fund for redemption and cancellation of stock and for capital expenditure, the balance to the credit of the fund on 30th June, 1910, being £21,288. The balance of unredeemed stock is now £1,903,870.

Up to the 30th June, 1910, 633 applications for advances aggregating £58,857 had been approved, and the money advanced upon the improvements actually effected by the lessees which were valued at a bedrock estimate of over £100,000.

Production on Closer Settlement Estates.

The next table summarizes the extent of production on the farm holdings of closer settlement estates:—

PRODUCTION ON CLOSER SETTLEMENT ESTATES: 1904-5 TO 1909-10.

	1904-5.	1906-7.	1907-8.	1908-9.	1909-10.
Number of estates	4	18	25	33	35
Number of farm holdings ..	..	647	869	1,035	1,160
Area of estates .. acres	33,571	117,482	166,434	189,814	198,718
Area under crop .. „	8,238	19,085	34,167	49,223	67,682
Area in fallow and sown grasses „	2,773	13,585	13,017	16,553	20,140
Persons employed, male No.	270	728	1,025	1,185	1,308
Persons employed, female „	160	388	593	703	766
Area under cereals .. acres	7,567	14,120	22,964	29,920	48,246
Area under root crops „	132	422	435	473	510

PRODUCTION ON CLOSER SETTLEMENT ESTATES: 1904-5 TO 1909-10 —*continued.*

—		1904-5.	1906-7.	1907-8.	1908-9.	1909-10.
Produce—						
Wheat	bushels	139,300	120,939	139,665	355,722	603,278
Oats			88,789	111,105	270,658	228,959
Other cereals ..			17,312	19,366	41,717	42,788
Hay	tons	2,298	5,511	9,072	26,130	30,337
Stock—						
Horses	No.	885	2,593	3,624	4,396	5,138
Cattle	„	4,212	10,245	14,257	13,699	13,892
Sheep	„	11,511	35,686	46,570	43,968	47,464
Pigs	„	1,692	1,585	1,768	2,185	3,283
Hams and bacon ..	lbs.	14,966	28,418	30,233	30,593	27,204
Wool	„	61,949	152,474	252,047	197,655	179,547
Stock slaughtered ..	No.	1,701	2,216	4,111	6,059	7,090

The area of the estates given in the above table includes the acreage for which freehold has been obtained, and to which the statistics in the table do not relate, as it has passed from the control of the Lands Purchase Board. In 1909-10 the area of freehold included in the area of estates was 6,509 acres, consequently the other information in the table for that year applies only to a total area of 192,209 acres.

Small improved holdings.

Under the *Closer Settlement Act* 1909 (*No.* 2) the administration of the *Small Improved Holdings Act* 1906 was placed in the hands of the Closer Settlement Board, subject to the Minister. The particulars of estates dealt with under the latter Act are shown in the table on page 568 relating to closer settlement estates at 30th June, 1910.

WATER SUPPLY AND IRRIGATION.

Victorian Waterworks.

Victorian Waterworks are all controlled by official bodies, either State or local, and the following table summarizes those waterworks on which the Government has expended or advanced moneys. It is

practically a summary of all waterworks in the State, although there are minor works constructed by municipalities out of municipal funds.

WATERWORKS—CAPITAL EXPENDITURE AND ADVANCES BY STATE TO 30TH JUNE, 1909.

Controlling Bodies.	Purposes of Supply.	Storage Capacity of Reservoirs.	Capital Expenditure and Advances by State.
		Gallons.	£
State Rivers and Water Supply Commission—			
Coliban System	Domestic and Mining	8,825,037,000	1,245,984
		Cubic feet.	
Goulburn-Waranga ...	Irrigation, &c. ...	8,600,000,000	1,183,532
		Acre feet.	
Kow Swamp Works ...	" " ...	40,860	188,407
Loddon River Works ...	" " ...	14,000	156,408
Wimmera Works	Stock and Domestic	...	59,279
Broken River Works ...	" " ...	...	14,853
North-west (Kerang) Lakes	" " ...	91,830	10,008
White Cliffs and Nyah Pumping Schemes ...	Irrigation, &c. ...	...	12,114
Irrigation and Water Supply Districts (20)	" " ...	...	1,019,354
Waterworks Districts (7) ...	Stock and Domestic	...	571,632
First Mildura Irrigation and Water Supply Trust ...	Irrigation	...	64,209
		Gallons.	
Waterworks Trusts (83) ...	Stock and Domestic	1,917,087,500	952,486
*Geelong Water Supply Works	Domestic	570,780,000	456,700
Municipal Corporations (32)...	Stock and Domestic	1,643,091,000	685,901
Abolished Irrigation and Water Supply Trusts (8)	Irrigation	...	31,952
Miscellaneous Expenditure ...	... ...	...	199,800
Melbourne and Metropolitan Board of Works	Domestic	6,533,000,000	3,891,555
Total	... ...	...	10,744,174

* Sold to Geelong Municipal Waterworks Trust on 25th January, 1908, for £265,000.

Of the expenditure given in the case of the Melbourne waterworks, only £1,688,663 represents State moneys, this being the unredeemed balance of the outstanding debt taken over by the Melbourne and Metropolitan Board of Works on 1st July, 1891. Further particulars relating to the Melbourne and Metropolitan Board of Works will be found on page 273, Part V., of this work.

The succeeding table summarizes the amounts disbursed on State works and those granted and lent to local bodies by the State on account of waterworks. In addition to free grants large sums have been written off the liabilities of the local bodies. Advances and expenditure for waterworks.

CAPITAL EXPENDITURE AND LOANS FOR WATERWORKS.

—	Expenditure and Advances by State.	Interest Capitalized.	Free State Grants.	Capital Written Off.	Payments towards Redemption.	Amount standing at Debit, 30th June, 1909.
	£	£	£	£	£	£
State Works	2,867,787	..	2,798*	..	..	2,867,787
Irrigation and Water Supply Districts (20)	988,981	..	30,373	575,152	7,735	406,094
First Mildura Irrigation and Water Supply Trust ..	64,209	..	..	..	..	64,209
Waterworks Districts (7) ..	540,160	..	31,472	169,927	12,474	357,759
Waterworks Trusts (83) ..	916,272	6,871	36,214	130,989	60,878	731,276
Geelong Water Supply Works	456,700	..	..	..	..	456,700
Municipal Corporations (23)	676,358	43,633	..	165,870	92,240	461,881
,, ,, (9)	9,543	346	..	..	9,889	..
Melbourne and Metropolitan Board of Works ..	2,389,934	..	..	..	701,271	1,688,663
Abolished Trusts (8) ..	31,709	..	243	31,679	30	..
Miscellaneous	199,800	..	..	..	..	199,800
Total	9,141,453	50,850	101,100	1,073,617	884,517	7,234,169

* Originally grants to Waterworks Trusts, the works on which spent having been taken over by the State.

In addition to the capital written off, as shown above, arrears of interest amounting to £579,786 have also been written off certain liabilities to the State, viz., £342,773, from the liabilities of what were originally Irrigation and Water Supply Trusts, £85,556 from the liabilities of Waterworks Trusts, and £151,457 from the liabilities of Municipal Corporations. Thus the total amount actually written off the liabilities of the Trusts (Irrigation and Waterworks) and Corporations is £1,653,403. Interest outstanding at 30th June, 1909, amounted to £42,939, viz., £16,975 against the First Mildura Trust, £16,130 against Waterworks Trusts, and £9,834 against Municipal Corporations.

STATE RIVERS AND WATER SUPPLY COMMISSION.

The *Water Act* 1905, which came into operation on 1st May, 1906, is "An Act to consolidate and amend the laws relating to the conservation and supply of water, to declare the law relating to certain rights in natural waters, the property in the beds and banks containing the same, and for other purposes." This Act is administered by the State Rivers and Water Supply Commission, consisting of three Commissioners, whose functions thereunder were principally administrative and advisory—the general construction of works on the part of the State being imposed on the Department of The *Water Act* 1905.

Water Supply. All State waterworks were vested in the Commission, and the property powers and duties vested in or imposed upon the Commissioners of Irrigation and Water Supply Trusts, with the exception of the First Mildura Irrigation and Water Supply Trust, were transferred to and vested in the Commission. The powers and duties of the Commission under this Act embrace the making and levying of rates and charges for the supply of water; the carrying out of surveys necessary to ascertain the nature and extent of the water supply and water storage resources of the State; determining the means and cost of improving such resources, and of improving and extending works for the conveyance and distribution of water throughout the State, and deciding as to the areas capable of being profitably supplied with water from such works; determining the extent, character, and quality of lagoon, swamp, and marsh lands within the State, the cost of works for their drainage and improvement, and the benefits to be derived from such improvement; preparing proposals for the construction of works of water supply or reports upon proposed works of water supply; the systematic gauging and recording of the volume and flow of rivers and streams, and of the volume of lakes and lagoons within the State, and the effect of climatic conditions thereupon; boring and other explorations for ascertaining the existence and location of subterranean waters, and the character and quality thereof; recording, publishing, and making available for general information the results of all such surveys, gaugings, borings, and other explorations; instructing the occupiers of lands in irrigation and water supply districts in the best methods of irrigated culture, and of the utilization of water as applied to agriculture, also in general rural economy; ascertaining and recording from time to time the extent of land under irrigation in the several irrigation and water supply districts, and the nature of the crops grown in and the products of such districts; and promoting the discussion of matters of general interest among the settlers in the irrigation and water supply districts by public conferences.

The *Water Act* 1909.

Comprehensive amendments were made in the *Water Act* 1905 by the enactment of the *Water Act* 1909. The latter Act extends the authority of the State Rivers and Water Supply Commission by giving it the general construction of works formerly intrusted to the Department of Water Supply, so that the duties of the Commission are now constructive as well as administrative and advisory. This extension of authority has been effected by making the Department of Water Supply a part of the Water Commission, and by imposing on the Commission all the duties formerly performed by the Water Supply Department. These include in addition to those of construction the oversight of loans to Water Works Trusts.

A change in the basis of the compulsory charge for water is another of the important amendments. Under the 1905 Act the charge for irrigation water was based on land values, being one-fifth of the net annual value of land commanded by irrigation works, from which one-half to three-fourths of the water allotted was supplied

as a right. Under that Act the price of water varied with the quantity allotted as a right and with the price of land. Under the new Act (1909) the charge for water is based on the cost of supplying it, and includes 4 per cent. on the capital debt for interest, 2 per cent. on the original capital debt for liquidation or redemption fund, and in addition to these two the sum required to pay operation and maintenance expenses.

Water will be sold by measure, and the price of an acre foot of water will be fixed, so that if all the water assigned is sold it will meet the entire running expenses of the district. From one-half to three-fourths of the water assigned will be apportioned as a right, and the charge for this right will be made compulsory. The remainder of the water will be sold on demand or under contract.

Surplus or flood water supplied outside of the irrigation season will be sold at a less rate.

For several years the Commission has experienced great difficulty in inducing land-owners in waterworks districts to build storage tanks or dams of sufficient size to hold the year's supply, which are now required in the interests of economy, and which will be still more necessary as the year's supply from present works is extended. The new Act provides that where land-owners neglect or refuse to build tanks of sufficient capacity the Commission may build them and collect the cost of same from the land-owners.

Another of the amendments provides for temporary diversions of water. Under the old Act there was provision for granting licences or permits up to fifteen years, but the preliminary steps were expensive. The new Act contains a simpler procedure for yearly permits.

The various waterworks and districts vested in the Commission and their capital debit at 30th June, 1909, are set forth in the following statement:—

WATERWORKS UNDER CONTROL OF STATE RIVERS AND WATER SUPPLY COMMISSION.

(*a*) *Free Head-works.*	Capital Debit at 30th June, 1909.
	£
Broken River Works	14,853
Goulburn River Works	740,903
Kerang North-west Lakes Works	10,008
Kow Swamp Works	188,407
Loddon River Works	156,408
Lake Lonsdale Reservoir	50,526
Lower Wimmera Compensation Works	8,753
Long Lake Pumping Works	27,898
Total—Free Head-works	1,197,756

WATERWORKS UNDER CONTROL OF STATE RIVERS AND WATER SUPPLY COMMISSION—*continued.*

(*b*) *Waterworks Districts.*	Balance at Debit, 1st July, 1908.	Capital Expenditure since 1st July, 1908.	Balance at Debit, 30th June, 1909.	Capital Debit at 30th June, 1909.
	£	£	£	£
Birchip	5,923	3,797	9,720	
Western Wimmera	74,948	3,911	78,859	
Wimmera United	109,588	387	109,975	
Wycheproof	8,875	45	8,920	
Karkarooc	..	1,713	1,713	
Long Lake	15,656	7,070	22,726	
Sea Lake	67,803	12,424	80,227	
Coliban System	1,239,524	6,460	1,245,984	
Miscellaneous	12,184	5,537	17,721	
Total	1,534,501	41,344	1,575,845	1,575,845
(*c*) *Irrigation and Water Supply Districts.*	Balance at Debit, 1st May, 1906.	Capital Expenditure since 1st May, 1906.	Balance at Debit, 30th June, 1909.	
	£	£	£	
Bacchus Marsh	5,257	759	6,016	
Campaspe	8,710	5,881	14,591	
Deakin	33,477	35,410	68,887	
Rodney	70,417	59,168	129,585	
Swan Hill	4,800	13,771	18,571	
Benjeroop and Murrabit ..	5,672	715	6,387	
Cohuna	56,733	10,423	67,156	
Dry Lake	719	..	719	
Gunbower West	5,889	127	6,016	
Kerang East	7,023	560	7,583	
Koondrook and Myall	3,336	2,408	5,744	
Macorna North	10,394	340	10,734	
Marquis Hill	5,399	124	5,523	
South Kerang	618	181	799	
Wandella	9,714	430	10,144	
East Boort	6,517	..	6,517	
Leaghur and Meering	2,422	..	2,422	
North Boort	2,058	..	2,058	
Tragowel Plains	34,870	..	34,870	
Twelve-Mile	1,772	..	1,772	
Total	275,797	130,297	406,094	406,094
Irrigation Areas.				
Nyah	..	6,688	6,688	
White Cliffs	..	5,426	5,426	12,114
(*d*) *Waterworks Trust District.*	Balance at Debit, 1st May, 1906.	Capital Expenditure since 1st May, 1906.	Capital Debit at 30th June, 1909.	
	£		£	
Loddon United Waterworks Trust	19,617	..	19,617	
Grand Total				3,191,809

The receipts and disbursements of the State Rivers and Water Supply Commission during the year ended 30th June, 1909, were as follows:—

STATEMENT OF RECEIPTS AND EXPENDITURE, 1908-9.

Works.	Receipts.	Expenditure.			Excess.	
		Total from Annual Votes.	On Capital Works from Annual Votes.	Net Expenditure on Management and Maintenance.	Revenue over Net Expenditure.	Net Expenditure over Revenue.
	£	£	£	£	£	£
Coliban	38,864	14,956	3,728	11,228	27,636	..
Goulburn	142	2,006	..	2,006	..	1,864
Loddon River ..	7	169	..	169	..	162
Kow Swamp ..	338	1,368	..	1,368	..	1,030
Broken River ..	7	209	..	209	..	202
North-West Lakes ..	184	352	..	352	..	168
Lake Lonsdale ..	141	167	..	167	..	26
Lower Wimmera ..	..	120	..	120	..	120
Irrigation Districts ..	35,906	26,401	865	25,536	10,370	..
Waterworks Districts ..	24,020	18,134	545	17,589	6,431	..
Licences, Diversions, Pumping	760	400	..	400	360	..
Demonstration plots ..	28	1,034	..	1,034	..	1,006
	100,397	65,316	5,138	60,178	44,797	4,578
Not Earning Revenue.						
Nyah and White Cliffs Irrigation Areas ...	...	321	..	321	...	321
Pyramid Creek ...	...	457	...	457	...	457
River Gauging and Surveys	...	3,405	...	3,405	...	3,405
New Projects ...	...	828	...	828	...	828
Loan Works—Services on account of, defrayed from vote ...	...	2,047	...	2,047	...	2,047
Total ...	100,397	72,374	5,138	67,236	44,797	11,636

NOTE.—This table does not take into consideration the question of interest on capital expenditure or capital debit.

The extent to which the different crops were watered, and the actual areas irrigated in the different districts of the State during the year 1908-9, are set forth in the next statement. Areas irrigated.

Irrigation—Areas of Crops Watered, 1908-9.

Districts.	Area under Irrigation (Acres).						
	Cereals.	Lucerne grown for Pasture and Hay.	Sorghum and other Annual Fodder Crops.	Pastures.	Vineyards, Orchards, and Gardens.	Fallows, &c.	Total.
Supplied from Goulburn State Works.							
Rodney	1,350	14,696	612	10,933	3,196	5,363	36,150
Echuca and Waranga	857	3,232	315	5,753	100	1,323	11,580
Total	2,207	17,928	927	16,686	3,296	6,686	47,730
Supplied from Kow Swamp State Works.							
Dry Lake	30	..	..	450	5	..	485
Gunbower West	722	346	303	859	33	5	2,268
Kerang East	1,169	196	534	3,355	15	74	5,343
Macorna North	1,792	112	1,069	6,407	..	..	9,380
Marquis Hill	574	43	272	1,749	..	..	2,638
South Kerang	212	113	64	307	..	..	696
Wandella (portion of)	1,606	111	534	2,443	1	73	4,768
Total	6,105	921	2,776	15,570	54	152	25,573
Supplied from Loddon State Works.							
Wandella (portion of)	668	368	87	2,185	..	..	3,308
East Boort	2,076	..	207	858	40	..	3,181
Leaghur and Meering	724	24	103	807	..	..	1,658
North Boort	895	..	109	450	9	15	1,478
Tragowel Plains	10,515	263	604	7,230	96	86	18,794
Twelve-Mile	608	98	144	908	..	..	1,758
Total	15,486	753	1,254	12,438	145	101	30,177
Supplied from other State Works.							
Bacchus Marsh	..	292	11	..	4	18	325
Benjeroop and Murrabit ..	1,028	298	153	1,544	36	..	3,059
Campaspe	330	226	30	428	8	..	1,022
Cohuna	6,496	2,099	2,428	12,759	167	36	23,985
Koondrook and Myall	1,361	147	269	3,585	29	..	5,391
Swan Hill	3,231	2,216	313	1,400	57	7	7,224
Western Wimmera	1	49	36	60	914	1	1,061
Total	12,447	5,327	3,240	19,776	1,215	62	42,067
Lands supplied from Kerang North-west Lakes	1,253	170	512	2,596	..	90	4,621
Lands supplied directly from Kow Swamp State Works ..	1,275	1,048	486	2,097	9	25	4,940
First Mildura	300	620	..	..	10,980	..	11,900
Supplied from Coliban State Works	39	217	447	278	1,944	138	3,063
Private Diversions in Kerang District	3,306	270	532	2,679	10	..	6,797
Grand Totals, 1908-9 ..	42,418	27,264	10,174	72,120	17,653	7,254	176,873
Grand Totals, 1907-8 ..	54,930	32,185	13,896	108,871	15,694	6,436	232,012
Increase (+) Decrease (−) ..	−12,512	−4,931	−3,722	−36,751	+1,959	+818	−55,139

The areas irrigated in 1908-9 amounted, in the aggregate, to only 76 per cent. of the areas so treated in 1907-8. An analysis of the areas watered reveals that, during 1908-9, 41 per cent. of the total was devoted to pastures, 24 per cent. to cereals, 15 per cent. to lucerne, 10 per cent. to vineyards, orchards, and gardens, 6 per cent. to annual fodder crops, and 4 per cent. to fallows, &c. The area of country lands within the State artificially supplied with water for domestic and ordinary use and for watering stock is about 10,800,000 acres. The extent of land under irrigated culture for all kinds of crop is 176,873 acres, besides which about 40,000 acres have been watered by unauthorized diversions. The number of separate towns supplied, exclusive of Melbourne and suburbs, is 122, the population served being about 270,000.

Waterworks Trusts.

The extent of Government assistance to the Waterworks Trusts which are not under the control of the State Rivers and Water Supply Commission, and their financial position are exhibited below.

WATERWORKS TRUSTS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1909.

Waterworks Trusts.	Cost of Works at 30th June, 1909, defrayed from—		Capital Indebtedness.				Interest Outstanding at 30th June, 1909.
			Increased by Interest Capitalized.	Reduced by—		At 30th June, 1909.	
	Free State Grant.	Loan Advances made by State.		Amounts Written Off.	Payments towards Redemption.		
	£	£	£	£	£	£	£
Alexandra	..	3,509	..	..	144	3,365	67
Avenel	..	2,284	..	..	169	2,115	42
Avoca	2,662	8,709	..	2,494	535	5,680	114
Bairnsdale	..	40,439	..	23,439	490	16,510	328
Ballan	..	1,100	..	..	237	863	17
Benalla	..	15,579	..	..	2,834	12,745	253
Bet Bet Shire	1,384	5,694	..	..	1,142	4,552	91
Boort	28	1,150	..	150	47	953	19
Bright	..	2,990	..	..	286	2,704	101
Broadford	..	5,836	..	..	..	5,836	197
Carisbrook	..	8,400	..	2,400	285	5,715	114
Carrum	..	25,733	..	7,732	50	17,951	1,165
Charlton	2,840	7,877	..	887	22	6,968	233
Cobram	..	4,500	..	..	185	4,315	86
Dandenong	..	19,128	..	5,128	500	13,500	198
Daylesford Borough	..	24,206	2,794	3,139	1,519	22,342	443
Donald	3,058	8,166	..	1,166	323	6,677	133
Donald Shire	1,691	4,353	..	..	1,136	3,217	64
Echuca Borough	..	13,150	..	..	1,297	11,853	926
Elmore	..	4,000	..	..	358	3,642	72
Euroa	..	17,242	..	..	1,365	15,877	315
Gisborne	..	4,668	..	..	878	3,790	75
Hamilton	..	38,201	..	..	1,543	36,658	727
Healesville	..	4,661	..	..	499	4,162	83
Heathcote	..	7,394	..	..	432	6,962	138
Horsham Borough	..	17,713	..	7,712	546	9,455	188
Kara Kara Shire	1,522	8,203	..	..	360	7,843	156
Kerang	88	4,000	..	..	144	3,856	77
Kerang Shire	213	1,200	..	..	49	1,151	23
Kilmore	..	14,148	..	..	1,902	12,246	243
Koroit	..	5,502	..	2,047	328	3,127	62
Korumburra	..	11,492	..	..	1,079	10,413	..
Kowree	292	2,707	..	..	128	2,579	51

WATERWORKS TRUSTS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1909—*continued.*

Waterworks Trusts.	Cost of Works at 30th June, 1909, defrayed from—		Capital Indebtedness.				Interest Outstanding at 30t June, 1909.
			Increased by Interest Capitalized.	Reduced by—		At 30th June, 1909.	
	Free State Grant.	Loan Advances made by State.		Amounts Written Off.	Payments towards Redemption.		
	£	£	£	£	£	£	£
Kyabram	..	2,327	..	..	115	2,212	44
Kyneton Shire ..	..	30,358	..	..	12,403	17,955	350
Lancefield ..	..	7,082	..	..	431	6,651	267
Lawloit	1,302	12,095	..	..	575	11,520	229
Leongatha ..	..	7,503	..	..	96	7,407	147
Lilydale	..	6,384	..	..	58	6,326	126
Loddon United* ..	4,122	21,334	..	1,717	..	19,617	531
Longwood	..	2,400	..	550	88	1,762	35
Lowan Shire ..	1,258	11,680	..	..	557	11,123	221
Macedon	..	2,632	..	..	186	2,446	48
Mansfield	..	7,931	..	..	808	7,123	..
Maryborough ..	..	76,257	..	9,200	3,303	63,754	..
Mooroopna ..	..	3,054	..	1,400	92	1,562	31
Murchison	..	2,800	..	..	41	2,759	65
Nagambie ..	..	2,775	..	..	363	2,412	48
Nhill	799	10,068	..	2,482	357	7,229	144
Numurkah Shire ..	1,278	23,694	..	1,376	2,822	19,496	388
Omeo	..	3,982	..	..	363	3,619	145
Pyramid Hill ..	..	2,137	..	..	..	2,137	127
Riddell's Creek ..	..	4,050	..	497	140	3,413	64
Rochester	..	1,600	..	..	134	1,466	29
Romsey	..	4,700	..	..	884	3,816	76
Rushworth	..	4,500	..	..	119	4,381	87
Rutherglen	..	16,485	..	..	714	15,771	313
Seymour	..	27,959	..	..	1,731	26,228	521
Shepparton Urban ..	24	19,530	..	2,416	1,626	15,488	307
Shepparton Shire ..	110	17,123	..	1,376	1,195	14,552	289
St. Arnaud Borough	57	40,723	4,077	15,077	1,212	28,511	1,142
Stawell Shire ..	545	1,370	..	250	1,120	..	..
Sunbury	..	16,497	..	..	..	16,497	802
Swan Hill ..	231	3,988	..	..	139	3,849	77
Swan Hill Shire† ..	6,421	36,043	..	36,043	..	..	..
Tallangatta ..	..	4,206	..	..	21	4,185	83
Tatura	..	3,017	..	650	281	2,086	41
Traralgon	..	13,698	..	..	27	13,671	257
Tungamah Shire ..	4,130	12,241	..	..	609	11,632	231
Upper Macedon ..	..	2,290	..	..	305	1,985	39
Violet Town ..	..	4,750	..	..	186	4,564	91
Wangaratta ..	..	9,889	..	..	210	9,679	192
Warracknabeal ..	262	4,518	..	..	457	4,061	80
Warragul	..	3,447	..	..	..	3,447	10
Warrnambool ..	..	38,500	..	..	1,882	36,618	730
West Charlton ..	..	2,822	..	..	13	2,809	56
Winchelsea Shire ..	..	5,486	..	..	184	5,302	194
Wodonga	..	7,722	..	..	366	7,356	146
Woodend	..	7,662	..	..	2,142	5,520	110
Yarram	..	2,082	..	..	25	2,057	41
Yarrawonga Urban ..	1,897	8,800	..	..	1,374	7,426	147
Yatchaw	..	6,262	..	1,661	219	4,382	87
Yea	..	3,885	..	..	93	3,792	141
Total ..	36,214	916,272	6,871	130,989	60,878	731,276	16,130

* The property of this trust has been taken possession of by the State Rivers and Water Supply Commission, as provided by section 278 of the *Water Act* 1905.

† This trust was abolished under the provisions of the *Water Act* 1905.

The free State grant to Waterworks Trusts for the construction of headworks was originally £100,000, but owing to the transfer of works, portion of the grant now appears against Irrigation districts and other State works.

The following return contains full particulars of the receipts and expenditure of the Waterworks Trusts during the year ended 31st December, 1909 :—

WATERWORKS TRUSTS—RECEIPTS AND EXPENDITURE, 1909.

Waterworks Trusts.	Receipts from—				Expenditure on—				
	Water Rates.	Sale of Water.	Other Sources.	Total.	Maintenance and Management.	Salaries and Wages.	Interest and Redemption.	Other Services.	Total.
	£	£	£	£	£	£	£	£	£
Alexandra	552	5	7	564	58	240	157	16	471
Avenel	173	..	1	174	123	34	100	3	260
Avoca	961	22	2	985	136	127	603	..	866
Bairnsdale	1,198	208	22	1,428	478	284	753	3	1,518
Ballan	247	8	1	256	121	33	39	7	200
Benalla	1,057	499	43	1,599	537	372	583	5	1,497
Bet Bet Shire ..	301	64	1	366	158	23	208	36	425
Boort	338	29	..	367	222	26	87	26	361
Bright	267	106	1	374	103	73	184	1	361
Broadford § ..	..	..	..	..	..	..	..	..	..
Carisbrook	285	9	2	296	27	77	131	10	245
Carrum	2,394	..	..	2,394	84	317	2,000	..	2,401
Charlton	567	19	17	603	94	88	480	34	696
Cobram	387	..	12	399	56	142	203	1	402
Dandenong ..	718	41	11	770	29	140	686	11	866
Daylesford Borough ..	1,218	568	186	1,972	580	135	1,021	9	1,745
Donald	487	203	29	719	143	190	305	2	640
Donald Shire ..	371	..	1	372	44	52	213	2	311
Echuca Borough ..	1,919	8	12	1,939	811	515	685	24	2,035
Elmore	295	231	..	526	203	113	167	6	489
Euroa	755	250	8	1,013	67	83	459	4	613
Geelong Municipal ¶ ..	11,465	4,279	534	16,278	2,190	1,554	16,445	14	20,203
Gisborne	346	..	10	356	29	58	173	..	260
Hamilton	2,481	355	62	2,898	368	362	1,670	71	2,471
Healesville	380	156	46	582	283	53	285	22	643
Heathcote	376	97	13	486	57	105	318	17	497
Horsham Borough ..	1,614	371	155	2,140	931	501	436	18	1,886
Kara Kara Shire ..	738	..	6	744	147	15	409	15	586
Kerang	1,036	..	7	1,043	507	231	176	52	966
Kerang Shire† ..	..	..	..	..	..	..	..	..	..
Kilmore	527	361	4	892	43	226	560	10	839
Koroit	508	314	..	822	184	172	257	..	613
Korumburra ..	477	191	86	754	112	182	496	27	817
Kowree	304	..	4	308	20	55	118	1	194
Kyabram	337	133	2	472	100	160	103	17	380
Kyneton Shire ..	1,252	807	43	2,102	435	300	1,862	5	2,602
Lancefield	249	98	..	347	22	42	303	..	367
Lawloit	1,279	..	24	1,303	310	332	529	15	1,186
Leongatha	554	33	14	601	21	95	338	7	461
Lilydale	385	50	3	438	47	116	329	2	494

(For footnotes see end of table.)

WATERWORKS TRUSTS—RECEIPTS AND EXPENDITURE, 1909—*continued.*

Waterworks Trusts.	Receipts from—				Expenditure on—				
	Water Rates.	Sale of Water.	Other Sources.	Total.	Maintenance and Management.	Salaries and Wages.	Interest and Redemption.	Other Services.	Total.
	£	£	£	£	£	£	£	£	£
Loddon United‡ ..	..	..	..	..	..	..	..	..	..
Longwood	166	..	3	169	55	34	80	3	172
Lowan Shire ..	1,334	..	17	1,351	696	330	508	16	1,550
Macedon	161	..	2	163	12	37	110	..	159
Mansfield	478	136	4	618	28	190	490	..	708
Maryborough ..	2,431	1,018	33	3,482	292	312	2,915	8	3,527
Mooroopna ..	356	39	4	399	90	174	107	2	373
Murchison	247	204	2	453	94	144	211	3	452
Murtoa	357	10	..	367	221	67	..	3	291
Nagambie	323	48	1	372	92	107	110	6	315
Nhill	958	20	18	996	831	50	173	25	1,079
Numurkah Shire ..	2,073	320	45	2,438	1,289	532	926	32	2,779
Omeo	310	13	11	334	161	37	165	2	365
Pyramid Hill ..	252	9	4	265	83	55	111	..	249
Riddell's Creek ..	230	..	7	237	29	63	139	3	234
Rochester	490	19	1	510	306	186	67	29	588
Romsey	284	..	9	293	51	43	175	..	269
Rushworth ..	558	20	5	583	195	156	200	23	574
Rutherglen ..	1,688	60	11	1,759	697	218	721	2	1,638
Seymour	578	1,077	49	1,704	522	205	1,049	24	1,800
Shepparton Urban ..	1,533	264	45	1,842	627	422	1,062	27	2,138
Shepparton Shire ..	1,261	35	15	1,311	878	251	665	24	1,818
St. Arnaud Borough..	1,781	33	49	1,863	399	159	1,300	15	1,873
Stawell Shire† ..	..	..	..	..	..	..	..	..	..
Sunbury *	..	..	..	..	..	..	..	..	..
Swan Hill	620	17	19	656	439	276	184	11	910
Tallangatta ..	425	64	45	534	175	128	287	9	599
Tatura	346	68	9	423	119	149	95	..	363
Traralgon§ ..	744	130	8	882	50	51	535	15	651
Tungamah Shire ..	1,632	44	81	1,757	309	458	532	46	1,345
Upper Macedon ..	207	..	52	259	39	152	91	1	283
Violet Town* ..	..	..	..	..	..	..	..	..	..
Wangaratta ..	1,344	329	69	1,742	480	409	442	..	1,331
Warracknabeal ..	863	89	35	987	673	177	184	14	1,048
Warrnambool ..	2,433	398	150	2,981	888	537	1,917	..	3,342
West Charlton ..	245	..	..	245	23	23	127	..	173
Winchelsea Shire ..	320	..	1	321	186	57	101	2	346
Wodonga	425	188	7	620	25	137	336	2	500
Woodend	232	370	10	612	46	119	252	18	435
Yarram	201	43	..	244	261	18	95	1	375
Yarrawonga Urban ..	682	159	..	841	265	280	339	..	884
Yatchaw	265	..	..	265	42	42	200	10	294
Yea	320	161	13	494	151	165	172	5	493
Total ..	67,951	14,900	2,203	85,054	21,699	14,573	51,044	874	88,190

* The control and management of the works of this trust have been taken over by the State Rivers and Water Supply Commission by virtue of the provisions of section 154 of the *Water Act* 1905.

† This trust is inoperative.

‡ The property of this trust has been taken possession of by the State Rivers and Water Supply Commission, as provided by section 278 of the *Water Act* 1905.

§ This trust had no ordinary revenue and expenditure in 1909.

¶ Year ended 30th June, 1909.

Municipal Waterworks.

Of the waterworks controlled by Municipalities, the most important are those at Ballarat, vested in the Ballarat Water Commission, and having reservoirs with a storage capacity of nearly 842

million gallons. Other important reservoirs in this group are those supplying Beechworth, Clunes, and Talbot, the respective storage capacities being 191, 225, and 200 million gallons. The following return shows the financial position existing between the State and corporations on account of these Waterworks :—

WATERWORKS OF MUNICIPAL CORPORATIONS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1909.

Local Bodies.	Cost of Works to 30th June, 1909, defrayed from Loan Advances made by State.	Capital Indebtedness.				Interest outstanding at 30th June, 1909.
		Increased by Interest capitalized	Reduced by—		At 30th June, 1909.	
			Amounts written off.	Payments towards Redemption.		
	£	£	£	£	£	£
Arapiles Shire ..	3,600	..	..	967	2,633	53
Ararat Borough ..	49,935	..	18,266	1,570	30,099	602
Ballarat Water Commission	309,300	41,869	2,111	42,244	306,814	7,227
Beechworth Shire ..	30,426	1,256	5,958	4,091	21,633	..
Bet Bet Shire ..	1,000	..	985	15	..	..
Birchip Shire ..	2,669	..	..	308	2,361	72
Borung Shire ..	9,059	..	..	1,198	7,861	119
Castle Donnington (Swan Hill) Shire ..	4,309	..	..	545	3,764	56
Chiltern Shire ..	4,500	508	508	727	3,773	75
Clunes Borough Water Commission ..	70,195	..	62,395	371	7,429	148
Creswick Borough ..	3,500	..	..	3,500	..	39
Dimboola Shire ..	2,566	..	..	331	2,235	34
Dunolly Borough ..	2,190	..	..	813	1,377	27
Inglewood Borough ..	5,150	..	..	1,525	3,625	80
Karkarooc Shire ..	15,440	..	..	1,400	14,040	211
Kerang Shire ..	2,313	..	..	229	2,084	31
Korong Shire ..	1,565	..	..	406	1,159	23
Ripon Shire ..	3,000	..	..	1,306	1,694	34
Stawell Borough ..	108,506	..	61,661	3,987	42,858	852
Talbot Borough ..	15,000	..	13,986	60	954	19
Tarnagulla Borough ..	800	..	..	147	653	13
Wimmera Shire ..	28,890	..	..	26,225	2,665	53
Wycheproof Shire ..	2,445	..	..	275	2,170	66
Total ..	676,358	43,633	165,870	92,240	461,881	9,834

The corporations of Echuca Borough and Ballan and Melton Shires also have waterworks, the first purchased from the State, and the other two constructed out of Shire funds.

In addition to the above, £9,889 (including £346 capitalized interest), was paid towards redemption by other municipal corporations, the balance of their liabilities to the State being transferred to Waterworks Trusts.

Abolished Trusts.

The irrigation and water supply trusts specified below were abolished, and the liabilities in respect of amounts due and owing to the Crown by such trusts on account of principal sums advanced by way of loan, and accrued unpaid interest thereon, were cancelled by provision in the *Water Act* 1905.

IRRIGATION AND WATER SUPPLY TRUSTS ABOLISHED AND LIABILITIES CANCELLED.

Name of Trust.	Cost of Works.			Written off.		
	Advances.	Grants.	Total.	Capital.	Interest.	Total.
	£	£	£	£	£	£
Dookie	630	..	630	630	171	801
Emu Valley ..	8,166	..	8,166	8,166	2,907	11,073
Harcourt	1,142	..	1,142	1,112*	335	1,447
Lerderderg ..	447	..	447	447	169	616
Millewa	973	..	973	973	582	1,555
Pine Hills	2,051	243	2,294	2,051	1,065	3,116
Torrumberry North ..	12,300	..	12,300	12,300	5,812	18,112
Werribee	6,000	..	6,000	6,000	3,752	9,752
Total ..	31,709	243	31,952	31,679	14,793	46,472

* £30 paid to Redemption Fund by Trust.

The Dookie works are now used solely for the supply of water to the Dookie Agricultural College, and the Emu Valley and Harcourt Works have been attached to the Coliban scheme.

Mildura irrigation settlement.

A full account of the history of the Mildura Irrigation Settlement from its inception will be found in the *Victorian Year Book*, 1904.

The settlement was established in 1887, and the following figures, showing the population at various periods since 1891, are a fair indication of its prosperity :—

POPULATION OF MILDURA, 1891 TO 1909.

1891	April (Census)	2,321	1907	September		4,355
1896	September	2,000	1908	"		4,560
1901	March (Census)	3,325	1909	"		5,180
1904	September	4,100				

The revenue and expenditure of the Mildura Irrigation Trust during the year ended 30th June, 1909, were as follows :—

REVENUE AND EXPENDITURE OF FIRST MILDURA IRRIGATION TRUST, 1908-9.

Revenue.	£	*Expenditure.*	£
Horticultural Rates ..	16,314	Wages, Salaries, &c. ..	5,919
Town Rates	1,099	Fuel	11,322
Miscellaneous	2,641	Interest	2,571
		Other Expenditure	7,252
Total	20,054	Total	27,064

Export of canned and dried fruits.

The chief industry of the settlement is the production and preserving of fruits, and the succeeding tables which show the development of the export trade in Victorian dried and canned fruits are therefore of interest in this connexion :—

EXPORTS OF CANNED AND DRIED FRUITS PRODUCED IN VICTORIA, 1896 TO 1909.

Year.	Canned Fruits.	Dried Fruits.	
		Raisins.	Other.
	£	£	£
1896	3,904	835	1,777
1900	20,396	10,150	5,121
1905	36,427	47,131	9,677
1906	39,804	47,114	9,662
1907	48,718	123,679	18,257
1908	44,714	84,627	23,721
1909	49,368	76,470	31,859

DESTINATION OF EXPORTS OF CANNED AND DRIED FRUITS PRODUCED IN VICTORIA, 1909.

Country to which Exported.	Canned Fruits—Value.	Dried Fruits.			
		Raisins.		Other.	
		Quantity.	Value.	Quantity.	Value.
	£	lbs.	£	lbs.	£
New South Wales ..	22,451	2,088,299	45,129	419,776	9,062
Queensland	10,573	742,730	16,632	567,283	14,959
South Australia ..	1,686	34,179	859	15,711	340
Western Australia ..	6,871	149,756	3,481	66,340	1,722
Tasmania	3,399	291,932	6,605	174,830	4,190
Other Countries ..	4,388	345,235	3,764	136,994	1,586
Total ..	49,368	3,652,131	76,470	1,380,934	31,859

The trade with the other States is rapidly growing, the value of the exports having amounted to £147,959 in 1909, £125,026 in 1908, £128,762 in 1907, £91,177 in 1906, and £87,391 in 1905. The oversea trade increased from £5,403 in 1906 to £61,892 in 1907, but in 1909 it amounted to only £9,738.

Meteorological Records.

The following table shows the average yearly amount of rainfall deduced from all available records to December, 1909, and the rainfall during 1907, 1908, and 1909, in each of the 26 basins or regions constituting the State of Victoria:—

RAINFALL—YEARLY RECORDS AND AVERAGES.

Name of Basin.	Rainfall.			
	Yearly Average, to Dec., 1909.	During 1907.	During 1908.	During 1909.
	Inches.	Inches.	Inches.	Inches.
Glenelg and Wannon Rivers ..	27·73	24·54	24·94	31·73
Fitzroy, Eumerella, and Merrie Rivers	30·65	28·12	29·40	33·44
Hopkins River and Mt. Emu Creek	25·55	23·10	21·56	27·52
Mt. Elephant and Lake Corangamite	24·98	23·66	20·17	28·53
Otway Forest	37·87	34·26	35·76	40·50
Moorabool and Barwon Rivers ..	25·12	23·80	17·49	28·72
Werribee and Saltwater Rivers ..	24·08	20·20	15·62	24·45
Yarra River and Dandenong Creek	35·48	31·45	25·86	36·91
Koo-wee-rup Swamp	35·24	31·67	24·50	36·37
South Gippsland	40·08	36·06	28·07	42·11
Latrobe and Thomson Rivers ..	36·06	34·55	24·87	40·91
Macallister and Avon Rivers ..	23·27	17·46	14·25	26·73
Mitchell River	28·18	19·10	18·07	27·73
Tambo and Nicholson Rivers ..	26·00	17·54	19·98	26·08
Snowy River	33·36	23·59	30·23	32·52
Murray River	20·25	15·26	17·12	21·77
Mitta Mitta and Kiewa Rivers ..	35·79	27·05	29·75	38·91
Ovens River	36·59	29·62	27·75	38·00
Goulburn River	26·07	21·69	20·19	28·94
Campaspe River	24·17	20·57	17·00	27·33
Loddon River	18·79	15·10	14·65	22·35
Avon and Richardson Rivers ..	16·11	14·16	15·20	20·31
Avoca River	17·02	13·68	14·67	20·84
Eastern Wimmera	21·53	18·59	19·13	24·25
Western Wimmera	19·58	18·53	18·46	22·41
Mallee Country	13·55	11·16	13·95	16·67
Weighted Averages ..	24·17	20·51	19·87	26·86

The rainfall recorded for each quarter in 1909, and the quarterly averages up to 1909 deduced from all available records, are as follows :—

RAINFALL—QUARTERLY RECORDS AND AVERAGES.

Name of Basin.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.	
	Amount, 1909.	Average to 1909.	Amount, 1909.	Average to 1909.	Amount, 1909.	Average to 1909.	Amount, 1909.	Average to 1909.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
Glenelg and Wannon Rivers	3.61	3.59	11.43	8.74	10.65	9.28	6.04	6.12
Fitzroy, Eumerella, and Merrie Rivers ..	4.52	4.76	12.57	9.57	10.19	10.03	6.16	6.29
Hopkins River and Mt. Emu Creek ..	4.27	4.09	9.65	7.80	8.93	7.66	4.67	6.00
Mt. Elephant and Lake Corangamite ..	5.02	4.26	9.73	7.33	9.03	7.43	4.75	5.86
Otway Forest	5.82	6.16	15.22	11.97	12.17	11.87	7.29	7.87
Moorabool and Barwon Rivers	5.15	4.39	10.01	7.25	9.40	7.27	4.16	6.21
Werribee and Saltwater Rivers	5.40	4.61	8.19	6.63	7.60	6.38	3.26	6.46
Yarra River and Dandenong Creek ..	7.13	6.79	12.37	10.08	10.32	9.51	7.09	9.10
Koo-wee-rup Swamp	6.21	6.70	11.29	10.14	11.75	9.89	7.12	8.51
South Gippsland	7.17	7.10	14.06	11.57	13.55	11.85	7.33	9.56
Latrobe and Thomson Rivers	6.25	6.85	12.41	9.69	14.20	10.43	8.05	9.09
Macallister and Avon Rivers	6.24	5.04	8.17	5.82	8.36	5.62	3.96	6.79
Mitchell River	7.40	6.79	8.28	7.46	8.22	6.76	3.83	7.17
Tambo and Nicholson Rivers	7.14	6.45	8.31	6.12	6.75	5.90	3.88	7.53
Snowy River	9.30	7.42	10.30	9.17	8.61	8.46	4.31	8.31
Murray River	3.65	3.71	9.32	6.11	6.96	5.82	1.84	4.61
Mitta Mitta and Kiewa Rivers	6.96	6.19	16.14	10.64	12.10	10.74	3.71	8.22
Ovens River	6.41	5.95	16.46	11.33	12.38	11.31	2.75	8.00
Goulburn River	4.90	4.11	12.19	8.06	9.32	7.90	2.53	6.00
Campaspe River	4.43	3.59	10.67	7.42	10.01	7.66	2.22	5.50
Loddon River	3.30	2.95	8.56	5.96	8.57	5.54	1.92	4.34
Avon and Richardson Rivers	2.86	2.31	7.59	5.37	7.95	4.83	1.91	3.60
Avoca River	2.75	2.36	8.08	5.50	7.99	5.24	2.02	3.92
Eastern Wimmera	3.14	2.77	8.43	7.04	9.77	6.93	2.91	4.79
Western Wimmera	2.14	2.13	8.02	6.65	8.78	6.61	3.47	4.19
Mallee country	2.28	1.91	6.29	4.56	6.25	4.13	1.85	2.95
State	4.58	4.10	9.66	7.19	9.03	7.22	3.59	5.66

RAINFALL IN REGIONS, DURING EACH QUARTER, 1907, 1908, AND 1909.

Percentage above the average, + (plus); below the average, — (minus).

Regions.	First Quarter.			Second Quarter.			Third Quarter.		
	1907.	1908.	1909.	1907.	1908.	1909.	1907.	1908.	1909.
	%	%	%	%	%	%	%	%	%
Western Districts	—45	—17	—4	— 7	—14	+28	— 3	— 4	+16
Cape Otway Forest	—45	—19	— 6	—19	+ 1	+27	— 3	+11	+ 2
Counties surrounding Port Phillip Bay	—53	—37	— 6	—18	—27	+23	— 8	—17	+18
South Gippsland	—54	—37	—1	—12	—26	+21	*	—11	+14
Basins of the Latrobe, Macallister, and Mitchell Rivers	—57	—38	+6	—11	—50	+57	—16	— 7	+26
Basins of the Tambo and Snowy Rivers	—49	—30	+19	— 7	—40	+22	—51	+35	+ 6
All Northern Areas between the Ranges and the Murray, East of the Campaspe River	—38	—29	+12	—29	— 8	+48	—16	—17	+21
All Northern Areas between the Ranges and the Murray, West of the Campaspe River	—38	—42	+17	—16	— 5	+36	— 3	+ 7	+51

* Very slightly *above* average.

Rainfall in Regions, during each Quarter, 1907, 1908, and 1909—*continued.*

Percentage above the average, + (plus); below the average, − (minus).

Regions.	Fourth Quarter.			Year.		
	1907.	1908.	1909.	1907.	1908.	1909.
	%	%	%	%	%	%
Western Districts	+ 7	—17	—12	— 8	—12	+12
Cape Otway Forest	+24	—27	— 7	—10	— 5	+ 7
Counties surrounding Port Phillip Bay	+20	—42	—17	—12	—31	+ 6
South Gippsland	+ 6	—52	—23	—11	—30	+ 5
Basins of the Latrobe, Macallister, and Mitchell Rivers	— 4	—40	—23	—20	—34	+ 9
Basins of the Tambo and Snowy Rivers	—23	—26	—41	—32	—15	— 1
All Northern Areas between the Ranges and the Murray, East of the Campaspe River	— 4	—35	—51	—21	—21	+10
All Northern Areas between the Ranges and the Murray, West of the Campaspe River	—11	—13	—43	—14	— 7	+20

Averages and Extremes of Climatic Elements for the Seasons and for the Meteorological Year deduced from all Records obtained in past years at the Melbourne Observatory.

Meteorological Elements.	Spring.	Summer.	Autumn.	Winter.	Year.
Averages.					
Mean pressure of air in inches	29·965	29·924	30·081	30·080	30·013
Monthly range of pressure of air—Inches	0·891	0·798	0·808	0·986	0·871
Mean temperature of air in shade—°Fahr.	57·5	66·4	59·4	49·9	58·3
Mean daily range of temperature of air in shade—°Fahr. ..	18·8	21·5	17·7	14·1	18·0
Mean percentage of humidity. Saturation = 100	70	65	73	78	71
Mean rainfall in inches ..	7·17	5·86	6·61	5·79	25·43
Mean number of days of rain ..	37	23	30	43	133
Mean amount of spontaneous evaporation in inches ..	10·04	17·05	7·63	3·63	38·35
Mean daily amount of cloudiness—Scale 0 to 10	6·0	5·2	6·0	6·4	5·9
Percentage number of hours during which the wind blew from the various points of the compass: North ..	16·46	8·11	16·75	30·44	17·94
North-West	9·34	4·18	7·40	12·50	8·36
West ..	15·16	10·68	13·14	13·90	13·22
South-West	16·43	19·52	12·73	10·70	14·85
South ..	17·96	26·10	15·48	6·90	16·61
South-East	9·33	17·55	13·39	5·64	11·48
East ..	3·92	5·19	5·82	3·88	4·70
North-East	9·28	6·68	12·71	13·54	10·55
Calm ..	2·13	1·99	2·58	2·50	2·29
Mean number of days of fog ..	1	1	5	10	17

AVERAGES AND EXTREMES OF CLIMATIC ELEMENTS—*continued.*

Extremes.

Barometer corrected for Temperature, Sea Level, and Standard Gravity.	Inches.
Greatest monthly range ...	1·503
Smallest ,, ,, ...	0·489
Greatest yearly range ..	1·719
Smallest ,, ,, ...	1·169
Highest air pressure on record	30·762
Lowest ,, ,, ,,	28·942

Temperature of air in shade.	° Fahr.
Greatest monthly range ...	69·1
Smallest ,, ,, ...	23·4
Greatest yearly range ...	82·6
Smallest ,, ,, ...	66·0
Greatest mean daily range ...	27·8
Smallest ,, ,, ,, ...	7·7
Highest temperature on record	111·2
Lowest ,, ,,	27·0

Solar radiation—highest on record	178·5	° Fahr.
Terrestrial radiation—lowest on record ..	20·4	,,
Greatest rainfall on record	44·25	Inches.
Smallest rainfall on record	15·61	,,
Horizontal motion in miles	81,118	
Mean hourly velocity of wind	9·2	

The table below contains the values of the principal Meteorological elements for the calendar year 1909, with the corresponding averages and extremes, based on the Observatory Records for 53 years:—

METEOROLOGY, 1857 TO 1909.

Meteorological Elements.	Yearly Averages and Extremes.			
	Year 1909.	Average for 53 Years.	Extremes between which the Yearly Average Values have oscillated in 53 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ...	29·983	30·014	...	...
Highest ,, ,, ,, ...	30·551	30·606	30·762	30·081
Lowest ,, ,, ,, ...	29·195	29·215	29·983	28·942
Range (inches)	1·356	1·391	1·719	1·169
Mean temperature of air, in shade (°Fahr.)	57·7	58·3	59·7	57·6
Mean daily maximum ... ,,	66·2	67·3	69·0	65·8
Mean daily minimum ... ,,	49·2	49·3	51·2	47·2
Absolute maximum ... ,,	103·9	105·2	111·2	96·6
Absolute minimum ... ,,	32·5	30·7	33·9	27·0
Mean daily range ... ... ,,	17·0	18·0	20·3	14·6
Absolute annual range ... ,,	71·4	74·5	82·6	66·0
Solar Radiation (maximum)... ,,	167·7	161·2	178·5	108·6
Terrestrial Radiation (minimum) ,,	26·7	24·8	46·2	20·4
Rainfall (in inches)...	25·86	25·43	44·25	15·61
Number of wet days	171	133	171	102
Year's amount of free evaporation (in inches)	37·45	38·35	45·66	31·59
Percentage of humidity (saturation = 100)	66	71	...	...
Cloudiness (scale 10 = overcast, 0 = clear)	5·9	5·9	...	...
Number of days of fog	21	17	...	...

Agricultural Education.

Agricultural education.

An Act for the establishment of Agricultural Colleges was passed towards the close of 1884, and five areas were reserved as sites for colleges and experimental farms—at Dookie, Longerenong, Gunyah Gunyah, Olangolah, and Bullarto. The total area of these reserves is 13,664½ acres. Particulars are as follows:—

AREAS OF AGRICULTURAL COLLEGE AND EXPERIMENTAL FARM LANDS, 1909.

Name.	Area.	How Used.
	Acres.	
Dookie and Currawa	5,161½	College and Experimental Farm
Longerenong (Jung Jung) ...	2,386	,, ,, ,,
Gunyah Gunyah and Jumbuk ...	2,500	Let for grazing and cultivation
Olangolah	2,800	Not in use
Bullarto	817	Let for grazing
Total	13,664½	

Agricultural College, Dookie.

In order to carry out experiments, devised for the purpose of ascertaining the suitability of the Victorian climate and soil for various kinds of useful products and of obtaining data respecting the rotation of crops, but more especially for the instruction of students in agriculture, a block of 4,846 acres was reserved in 1874, at Dookie situated in the County of Moira, in the North-Eastern District of Victoria, on which to found under the direction of the Council of Agricultural Education, a State Experimental Farm. The area has been increased at different times, 272½ acres being added in 1908.

The farm has, under the provisions of the *Agricultural Colleges Act* 1884, been vested in trustees, and all moneys received from the sale of stock and produce since June, 1885, have been paid into the Agricultural College fund.

The College has accommodation for over 100 students, and there were 104 in attendance in 1909. The charges per head per annum are £25 for maintenance, £1 5s. for medical attendance and medicines, and £1 15s. for books and other school materials, or £28 in all. No charge is made for instruction.

The farm is thoroughly equipped with up-to-date buildings, improvements and appliances, and recently there have been erected a brick dining hall and kitchen, with servery, store rooms, &c., three dormitories, a horticultural building for practical demonstrations in fruit preserving, canning, &c., and stables for 40 horses. In addition to these, an enlargement of the chemical laboratory has been effected at a cost of £1,000. A line of 4-inch pipes from the Broken River

has been laid down, and water can now be pumped to the College reservoirs, insuring permanency of supply. Besides the usual sports grounds, there are rifle butts, both standard and miniature, on the estate.

The farm has 34½ acres under vines, and 20 acres under fruit trees, and in 1909 had 850 acres under cereals, hay, and green fodder. The live stock comprised 86 horses, 40 dairy cows, 66 other cattle, 1,800 sheep, and 250 pigs. The produce of the farm supplied to the College and farm for rations, &c., for the year was valued at £1,618, and the receipts comprised £2,017 from fees, and £3,645 from sale of produce, making a total of £5,253. The expenditure for the year, including that on buildings and maintenance, amounted to £14,093.

Considerable attention is paid to experimental work in connexion with cereals, the raising of new varieties of wheat suitable for the different parts of the country receiving special attention.

Experiments with new fodder and other plants of economic importance are carried out, whilst attention is also paid to the indigenous grasses. A variety of medicinal and other plants is also grown on the farm for educational purposes. There is a 4¾ acre plantation of olives, of six varieties.

Manurial tests are carried out each year, and the results are published for the benefit of farmers.

There is a good demand for seed wheat, oats, and barley from the college farm; whilst, for the commercial training of the students, a good deal of grain is marketed.

The ploughing, harvesting, and threshing are mainly carried out by the students under competent instructors. The students alone ploughed 1,000 acres last season, and cropped 850 acres, doing all the work.

Attention is being given to the breeding of draught horses and Indian remounts, several highly-bred Clydesdale mares, and a first-class stallion being used for stud purposes. Most of the horses used on the farm have been bred on it. The cattle include Ayrshires principally, also Herefords and Shorthorns. The breeds of sheep kept are Lincolns, Merinoes, Hampshire Downs, and South Downs. The raising of early lambs for the market receives considerable attention. The pigs kept are pure imported Berkshires, imported large and middle white Yorkshires, and large British Blacks. There is a good demand for them for stud purposes. The poultry industry is fostered, and pens of the best breeds are kept, a number of the birds having been imported from England.

Longerenong Agricultural College.

The Longerenong Agricultural College and Farm, under the control of the Council of Agricultural Education, is situated about 8 miles from Horsham, and 3 miles from Dooen railway station. It accommodates thirty-five resident students, and several non-resident students, the sons of neighbouring farmers, also attend classes. The farm contains 2,386 acres of land; of these about 700 acres

are only fit for grazing, being low-lying and subject to floods in winter, but the remainder is good wheat-growing land. About 500 acres are cropped each year, the staple crop being wheat, of which the average yield per acre for the season 1909-10 was 25 bushels.

A seed farm of 50 acres for the propagation and crossing of wheat and other cereals has been established for the purpose of distributing new and improved cereals to agriculturists, and experimental work is being carried on with grasses, maizes, and other fodder plants.

The orchard, containing 28 acres—5 acres of which are planted with phylloxera-resistant vines—50 acres of lucerne, and about 10 acres of summer fodder-crops, are irrigated each season by water obtained from the Western Wimmera Distributory Works.

Considerable attention has been paid to tree-planting—sugar-gums, pepper-trees, and pines of different kinds bordering the roadways, and several plantations of fair extent being established on different portions of the estate. The paddocks are watered by seven tanks, varying in capacity from 1,000 to 5,000 cubic yards, which, in dry years, are filled from the irrigation channel. The college buildings have been thoroughly renovated, and are sewered on the septic-tank principle.

There are four silos on the farm, and the live stock in 1909 comprised 35 horses, 29 dairy cattle, 38 other cattle, 1,500 sheep, and 32 pigs.

Lamb raising is one of the chief industries at Longerenong, and in 1909 the lambing averaged 76 per cent.

In 1909 the receipts comprised fees £556, and sale of produce, &c., £1,730; whilst the expenditure, including that on buildings and maintenance, amounted to £3,445. Farm produce used for College consumption was valued at £613.

Government Experimental Farming.

Wyuna Irrigation Farm.

In addition to the experimental farming carried on in connexion with the Dookie and Longerenong Agricultural Colleges, the Government has experimental farms at Wyuna, Rutherglen, and Whitfield. The Wyuna Irrigation Farm, as its name implies, is devoted chiefly to raising all kinds of fodder crops under irrigation, and carrying on dairying and experimental feeding of stock. It is situated in the Shire of Deakin, nine miles north of Kyabram, and eight miles north-east of Tongala, on the Echuca-Toolamba railway line. The average annual rainfall is about 16 inches.

Operations were started in April, 1906, and up to the present the work has been principally of a developmental character. The channels of the State Rivers Commission intersect the property, and an abundant supply of water is derived from the Waranga Basin. The farm comprises an area of 540 acres, 200 of which are timber, and the balance plain land. One hundred and fifty acres of timber

land have been cleared, cultivated, and graded, and 100 acres are permanently laid down to lucerne and provided with a system of irrigation and drainage channels. The lucerne is now permanently established, and large crops are cut, and fed to stock, or converted into hay and sold, as opportunity offers, either baled or chaffed. Considerable quantities of various seed wheats have been raised, also other cereal crops for hay and grain and ensilage, while in addition to a small orchard there are irrigated crops raised chiefly for ensilage purposes, comprising maize, sorghum, amber cane, millet, kafir corn, peas, beans, rape, mangolds, &c. The live stock consists of 7 working horses, 200 sheep, 95 dairy cows, 60 pigs, and 250 head of poultry. The principal new buildings are brick quarters for a limited number of students, a cowshed and extensive brick-paved yards, a brick dairy, a boiler house (fitted with complete L.K.G. milking machines and turbine separator), brick and iron piggeries, and four silos (capacity 520 tons). Provision is made for short terms instruction in the principles and practice of irrigation, and grading and preparing land, no fees being charged to students with farm experience. From time to time lectures on subjects of interest to farmers are delivered by the Departmental staff, and these are open to the public.

Government Tobacco Experimental Farm.

The Government Tobacco Experimental Farm is situated at Whitfield, and has an area of 113 acres. Plants of seven varieties have been grown and distributed throughout the State, and large quantities of seed have been sent to intending growers.

Experiments in connexion with the industry are being conducted at Bruthen, Orbost, Mildura, and Gapsted, and prices for Victorian leaf continue to improve. A bonus of 2d. per lb. for high grade cigar leaf, of quantities of 5 cwt. and upwards, is now payable by the Federal Government.

The introduction of the tobacco transplanting machine to the Ovens district has led to a larger area being planted, the planter from the Government farm having been lent to farmers during the past season with successful results.

The crop of three acres on the farm, consisting chiefly of pipe tobaccoes, is looking well. Experiments with fungicides on the disease known as Blue Mould go to show that formalin treatments of the soil act beneficially.

During the season 1908-9 the production of tobacco leaf increased to a total of 309,000 lbs., the production in 1901 having been only 39,000 lbs. Some cigar leaf grown at Bruthen in poor soil realized 1s. per lb., the grower also receiving the bonus of 2d per lb. paid by the Federal Government. Experiments which have been conducted at the Tobacco Farm, Whitfield, have resulted in some fine pipe-tobacco leaf being produced, the crop selling to an Adelaide buyer at 9d. per lb. Some good cigar-filler leaf has been produced, also a new variety of cigar tobacco. The Vuelta de Abayo proved suitable for this purpose. Seed has been distributed to 270 growers, and the industry introduced to several new districts.

Government Viticultural Station.

The Government Viticultural Station is situated near Rutherglen, has an area of 913 acres, and is being used as a viticultural station, model orchard, and experimental farm. The expenditure in connexion with the station, including buildings and maintenance, amounted to £3,688 in 1909.

The chief work being done at the station is in connexion with the propagation and grafting of the American and Franco-American resistant vines for the reconstitution of phylloxerated vineyards.

As is well known, the ordinary European vines rapidly succumb to an attack of phylloxera—a disease caused by a tiny insect which injures the vine roots and quickly destroys vineyards wherever it obtains a footing. Phylloxera was discovered in Victoria in 1877. By its inevitable spread it soon destroyed the vines in the districts into which it had been introduced, and other districts became infected. The seriousness of these attacks led to the trials of many methods to exterminate the pest, all of which have unfortunately proved futile. French investigators had discovered that certain American vines were able to resist phylloxera, and these are used as stocks on which to graft the desired producing kinds.

There is a number of American vines grown, but all are not equally suitable for all soils, nor adapted as graft-bearers for all European varieties, hence the work undertaken at the viticultural station is to discover the most eligible kinds. To test their adaptability to the different soils, sub-stations were founded in each viticultural district of the State, and data were carefully collected regarding the growth of each variety in the very diverse soils purposely selected for these tests. Only such as are of vigorous growth are recommended.

To ascertain the grafting affinities of each kind of stock and scion, some of each of the principal wine and table varieties were grafted on each kind of resisting stock. These were then planted out permanently and the results noted. Growers can thus readily see which stock suits a certain variety best. The grafting of those European vines of wine, table, and drying varieties that are in greatest demand, on suitable resistant stocks is carried out extensively during the season. The work is done both by hand and machines. A few rootlings are used as stocks, but the majority of the grafts are cuttings. A large number of the cuttings grown at the station are utilized in grafting chosen varieties for vignerons, who may not have the facilities or time to carry out this operation for themselves.

Large areas are devoted to the permanent growth of resistant stocks for the production of cuttings. A considerable area of more suitable land for nursery purposes has been taken up on the banks of the Murray, at Wahgunyah. Here a large irrigation plant, grafting and callusing houses, cottages, &c., have been erected. The callusing is now done in a heated compartment, and the cuttings are packed in boxes with seaweed and sawdust.

To practically prove the efficacy of resistant stocks, grafted vines have been planted on the very sites of phylloxerated vines that had to be uprooted. These are growing luxuriantly, and afford striking testimony to their resistant value, since the vines by which they were originally surrounded are all dead as the result of the pest.

The principal resistant stocks grown belong to the genera Riparia and Rupestris, with their hybrids. As its name indicates, the Riparia in its native habitat loves moist, fertile soils along water-courses. Its root system is spreading and horizontal. Placed in such conditions as it is naturally accustomed to, it grows luxuriantly, but from the character of the root system, it is susceptible to drought. The species of Rupestris that are cultivated are more erect in habit than the Riparias, which are trailing. They are generally deeper rooted plants, and hence are better able to thrive in districts with a less generous rainfall. The hybrids apparently inherit the good qualities of both parent plants, and have so far proved themselves most suitable for all conditions of soil and climate. They have also a wider range of affinity as graft-bearers.

In the vineyard attached to the station, interesting and useful experiments are being conducted in methods of pruning, cultivation, manuring, &c.

As a college for the sons of vine-growers the Viticultural Station did not become popular, but the buildings are now being filled with boys from the Neglected Children's Department, who are being trained in scientific and practical agriculture and viticulture, and are already supplving vignerons and farmers with skilled labour of a class now difficult to obtain. This work has been sufficiently long in operation to enable some idea to be formed of its value and possibilities, and the results obtained justify the brightest optimism. Many lads trained in the various rural pursuits have been sent out to employment in different parts of the State, and all are doing well.

Experimental work is carried on with manures, cereals, grasses, fodder, and reputedly drought-resisting plants. Plots of selected wheats have been grown for seed for distribution, and a model orchard has been planted. Experimental dairying and the cross-breeding of dairy strains of cattle are also carried on, with a view to investigating the possibilities of dairying in the drier districts of the State. Milking and feeding sheds with necessary silos have been erected, and dairying, as practised in dry climates, forms part of the regular instruction. Sheep are also kept, and the growth of suitable summer fodder crops is an important branch of the work.

Gunyah Gunyah, Olangolah, and Bullarto.

The Gunyah Gunyah, Olangolah, and Bullarto reserves have never been used for the purposes of colleges, but Gunyah Gunyah is let for grazing and agriculture, and Bullarto for grazing.

Endowment lands.

In addition to the college and farm lands, provision was made by the Act of 1884 to permanently reserve from sale an area of not more than 150,000 acres of Crown lands, and to vest it in trustees to be appointed, who should hold it in trust for the benefit of and

by way of an endowment for State agricultural colleges and experimental farms. The land so reserved now amounts to 144,294 acres, and is described in the following table. At present the areas are let for grazing and agricultural purposes:—

ENDOWMENT AREAS.

Parish.	Acres.	Parish.	Acres.
Ararat	1,100	Leeor	125
Ardno	210	Moyston	242
Alexandra	79	Moyston West	319
Bellellen and Illawarra	750	Mullroo and Yelta	28,600
Beveridge Island	2,732	Meering	690
Brankeet	387	Myrrhee	394
Berringama	199	Mooroopna	98
Bealiba	135	Milloo	120
Bumbang	10,000	Mirampiram	99
Byawatha	108	Moira	136
Buckrabanyule	220	Mologa	107
Bringalbart	79	Nurcoung	230
Bangerang	58	Pental Island	17,350
Broadwater	198	Pannoomilloo	100
Carraragarmungee	1,864	Peechember	50
Cudgewa	732	Purnim	3,678
Colac Colac	420	Quantong	495
Corack East	474	Quambatook	380
Charam	331	Turrumberry North	615
Carchap	99	Tullich	400
Charlton East	228	Terrick Terrick East and West	160
Dropmore and Ruffy	454	Terrick Terrick East	40
Dinyarrak	359	Tallandoon	116
Dartagook	120	Tarwin	167
Estcourt	2,831	Turrumberry	281
French Island	340	Tallygaroopna	430
Gooram Gong	582	Tragowel	250
Granya	586	Toolongrook	160
Gowangardie and Currawa	272	Wychitella	1,015
Glenpatrick	100	Walwa	200
Glynwylln	524	Windham	452
Jumbuk	2,641	Wabba	335
Kunat Kunat	700	Warrenbayne	145
Karramomus and Tamleugh	672	Wappan	293
Kerrisdale	148	Woorak	630
Kaarimba	429	Waratah	148
Knowsley	103	Wareek	100
Knowsley East	296	Warrenmang	120
Korrak Korrak	150	Wail	240
Kinypanial	80	Wonthaggi North	2,535
Koonik Koonik	37	Yarck	569
Konnepra	126	Yanac-a-Yanac	168
Kerang	90	Yeringa	160
Lindsay Island	42,000	Yeerung	1,400
Laen	887		
Longwood	242	Total	144,294
Lang Lang and Yallock	4,780		

The total annual rental of endowment areas was £7,950.

School of Horticulture.

This school is situated in Richmond Park, Burnley, and is about 3 miles from Melbourne. It may be reached by cable tram from Richmond or by Auburn horse tram, or by rail from either Burnley, Hawthorn, or Heyington stations. The site covers 33 acres of ground, and was originally part of the old police paddock. In 1890, the Government decided to start on this site an institution for the training of orchardists and small settlers, and during the past ten years much has been done to provide for the teaching of regular and casual students, and those visitors calling in search of special information.

Effective roads and culverts have been laid, model orchard blocks, gardens, and a students' training ground have been prepared, and a large variety of instructive implementa got together for use in class and field work. Domestic and farm animals of all kinds are now kept, and provide a helpful source of instruction to students.

An entirely new and complete orchard and farm equipment has been provided, including cow sheds and a modern dairy, pig styes, a poultry run, a silo, farm stock, and such other conveniences as will insure a thoroughly practical training for students. The estate includes orchard and grazing and arable land where garden and fodder crops are largely grown.

The school course includes regular lectures in agricultural and horticultural science, veterinary work, and the management of animals, dairying, pig and poultry breeding, and kindred subjects.

Practical work includes the propagation and management of orchard trees, citrus, table grapes, and bush fruits, harvesting, storing, packing, marketing, and drying fruit, vegetable culture, clearing, grading, and trenching of land, and the management of soils, manures, and drainage. The principal and his assistant carry out this programme by giving lessons daily in the class-room and field.

Previous to 1903 instruction was free, but a fee of £5 per annum is now charged. There has been a steady advance in the number of students, and there is every indication of the school's doing generally helpful work in the service of the State. The Botanic gardens surrounding the principal's residence are noted for their beauty, and the instructional character of the work in progress makes the place well worth a visit at any season. The school year extends from February to December.

Agricultural High Schools.

Agricultural High Schools have been established recently at Warrnambool, Sale, Shepparton, and Wangaratta, and it is proposed to open one at Ballarat. During 1908-9 the expenditure on these schools, including buildings, amounted to £16,243. They have been established under the following conditions :—

(*a*) At least one-half of the cost of the necessary buildings and equipment shall be contributed by local subscriptions.

(*b*) An area of land of not less than 20 acres, situated in a convenient position to the High School, shall be provided and vested in the Minister of Public Instruction.

(*c*) At least 50 students paying prescribed fees shall be guaranteed before the proposal to establish an Agricultural High School is entertained.

Pupils for these schools must be at least 14 years of age, and must have obtained the certificate of merit at the local school, or have passed the primary or some higher examination at the Melbourne University, or they must have satisfied an Inspector of Schools that they are qualified to profit by the course of study.

A local council is appointed for each school, which exercises a general oversight of the work, particularly in regard to the farm operations, and expends the maintenance allowance allotted to the school. It also nominates for free instruction students who possess the required qualifications, subject to the provision that the number of students so nominated shall not, in any one year, exceed 10 per cent. of the total number paying full fees enrolled in the school.

Agricultural and Horticultural Societies.

Agricultural and Horticultural Societies, established on the principle of voluntary membership, and having for their object the improvement of the agricultural, pastoral, and horticultural industries, exist throughout the State. Accounts of some of the more important societies will be found in previous issues of this work. Ninety-six agricultural societies furnished returns for the year 1909, and particulars are set out below.

Agricultural Societies, 1907, 1908, and 1909.

Societies.	Area of Grounds.	Number of Members.	Government Grant.	Total Receipts (including Government Grant).	Total Expenditure.	Bank Overdraft.
	Acres.		£	£	£	£
Royal	42	1,869	...	10,210	8,828	8,085
Ballarat	11	408	157	1,728	1,816	464
Benalla	13	205	48	830	866	87
Bendigo	10	317	125	1,707	1,767	60
Colac	13	293	62	929	874	201
Geelong	146	388	46	1,074	1,065	428
Hamilton	22	294	71	1,080	1,010	...
Horsham and Wimmera	28	478	53	938	944	...
North-Eastern ...	19	295	46	1,097	813	515
Ovens and Murray ...	39	316	85	1,472	1,318	15
Shepparton	23	451	88	2,649	2,520	877
Others	1,283	12,269	1,817	34,532	33,391	9,094
Total, 1909 ...	1,649	17,583	2,598	58,246	55,212	19,826
Total, 1908 ...	1,600	16,726	2,366	55,814	56,043	22,851
Total, 1907 ...	1,613	16,849	2,160	56,801	55,360	21,768

The loan liability of these societies in 1909 amounted to £4,783. The Horticultural Societies furnishing returns for 1909 numbered 31, their membership being 2,891, the receipts for the year £3,004, including Government grant £183, the expenditure £2,861, the bank overdraft £296, and the loan liability £1,364.

Department of Agriculture.

This Department is controlled by a Minister of the Crown, and has a large staff of experts, with a Director of Agriculture at the head. These are actively engaged in supervising all matters relating to the Agricultural, Pastoral, Fruit, and Dairying Industries of the State, and in giving instruction to those engaged therein. The Department publishes a monthly journal.

Inspection of Orchards, Nurseries, &c.

The orchards, nurseries, and gardens of the State are systematically inspected by the officers of the Government Entomologist. Nurseries are inspected every six months, and certified by the departmental inspector if clean and free from disease. Old, worn-out, infected orchards are destroyed.

Plants and cuttings coming from foreign parts are fumigated at the new fumigating building at Melbourne wharf, if a certificate that they have been treated at the port of shipment does not accompany the consignment. Even when they have been thus certified, the entomologist has the right of examination, and, if necessary, of ordering a second fumigation.

The fear of introducing either of the fruit flies, Tephritis tryoni and Halterophora capitata, has induced the Agricultural Department to arrange for the more thorough examination of fruit from New South Wales, Queensland, and elsewhere. The fruit-fly question is a very grave one, and should either of the above-named insects obtain a footing in Victoria, a great portion of the large and important fruit industry of our State would be practically ruined.

The number of inspectors has been increased and a house-to-house system of garden inspection in the suburbs of Melbourne inaugurated.

The matter of field inspection is now distinct from the entomologist's work, a chief inspector having recently been appointed so as to enable the entomologist to devote more time to original research and study.

Besides giving lectures and making inspections and experiments, the entomological branch of the Department of Agriculture carries on a great deal of correspondence, possesses a library of books and publications on technical matters, and controls a valuable museum of economic entomology and ornithology, from which collections are sent to exhibitions and shows of agricultural societies.

GENERAL REMARKS ON LIVE STOCK DISEASES IN VICTORIA.

No country in the world is so free from malignant infectious disorders in stock as Victoria. The State interferes in every direction to prevent the spread and importation of disease, and exercises a strict supervision over all animals slaughtered for food.

The inspection of meat products for export is carried out under stringent regulations, and by properly trained officers, and no meats are allowed to be canned unless they are of a perfectly wholesome character, and derived from animals free from disease. The premises where canning of meat is conducted are rigorously inspected, and cleanliness is a factor insisted upon in the packing operations.

The Commonwealth Government controls the inspection of all meats exported from Australia, and, in addition, Victorian State laws insist on a thorough inspection of meats for export, and all inspectors associated with the work are officials of the Crown. All countries where meats of Victorian origin are consumed are officially assured that meats canned in this State are subjected to the closest scrutiny. The State jealously guards the wholesomeness of all oversea products intended for food of man. The whole of the milk supply of the State is subjected to a strict inspection by the central government, and cleanliness in production and distribution is rigorously insisted on.

Horses.—Horses are particularly free from malignant infectious disorders. Glanders and farcy do not prevail anywhere in Australia. Tuberculosis does not occur in Victorian horses. Complaints caused by parasites that are common all the world over are occasionally encountered.

Cattle.—Rinderpest, eczema-epizootica (foot and mouth disease), Texas-fever or tick fever, a disease dependent on a malarial organism, Pyrosomum Bigeminum, and introduced into the blood of cattle by the cattle tick (Ixodes Bovis), do not exist in the State. The herds of Victoria are not seriously affected with tuberculosis. In consequence of the mildness of the climate, cattle do not require to be housed at any period of the year, and the continuous life in the open is conducive to the health of the animals, and to the suppression of the disease mentioned. Tubercle does not affect more than about 5 per cent. of Victorian cattle, and as greater care is now being exercised by stock-owners in the feeding and sheltering of milch cows than formerly, it is hoped that in a few years the percentage noted will undergo a material decline. Parasitic diseases are rare in Victorian cattle, and none inimical to human health are found.

Sheep.—Tuberculosis has never been observed in Australian sheep. Scab has been completely exterminated, and as regards other parasitic diseases no country in the world can produce so clean a bill of health for its ovines as Australia.

Swine.—Trichinosis (Trichina Spiralis) and "measles" (Cysticercus Cellulosæ), the hydatid stage of the tapeworm Tænia Solium of man, do not exist in Victoria. The conditions under which pigs are reared and kept in Victoria are conducive to their well-being and

freedom from disease. The mildness of the climate and life in the open are the great factors insuring their healthfulness. Tubercle does not exist in more than about 2 per cent. of Victorian swine.

Dogs.—Rabies (Hydrophobia) does not exist in Victoria, and there are no serious diseases prevailing in canines.

Poultry.—No serious diseases prevail in Victorian birds, and inspections of the poultry of the State are regularly conducted The industry of rearing chickens and turkeys for export is now established on a solid basis, and the wholesomeness of such products originating in Victoria cannot be questioned.

Experimental Field Work, 1908-9.

The expansion of our rural industries, and the permanent adoption of methods considered impracticable only a decade ago, suggests a review of the circumstances which have guided the Victorian farmer towards the present achievement. The Department of Agriculture has played no small part in bringing about increased production in every branch of agriculture, but its most useful teaching has perhaps been through the medium of a widely extended series of experimental plots designed upon lines which the farmer could follow with economy and profit to himself. In the wheat areas, these experimental plots preceded the grain drill and the now universal fertiliser. The demonstration of the soundness of new ideas, and the proof that wheat soils, instead of being worn out as was generally thought, were in reality unproductive only by reason of the methods in vogue ten years ago being incapable of utilizing the unlimited stores of dormant plant food, came at a period when a serious exodus of experienced farmers was threatened. Following upon the success of the field experiments came the widespread demand for grain drills and fertilizers. One has only to study the figures relating to the latter industry to realize that a new lease of life was given to Victorian farming through its agency. The new doctrine was determinedly preached by officers of the Department until the natural conservatism of the farmer was overcome. Since then, however, new problems have arisen. Altered conditions have given rise to circumstances which previously were not conspicuous. Among these may be noted the question as to whether the continuous use of phosphatic manures alone over a long term might not react injuriously upon the soil and prejudice its returns. Varieties of wheat more prolific in yield, by reason of newer origin and of more care being given to the selection of seed, are gradually superseding those of a short time ago. Rotation of crops and deep cultivation are being extensively tested throughout the State, so that, now, with a better general understanding of the underlying principles of agriculture, the danger of falling back into the errors of the past is considerably lessened. With the purpose of carrying out a series of experiments based upon scientific reasoning, and of ascertaining fundamental data concerning the response of the northern wheat

soils under a variety of conditions, a highly interesting group of experiments has been conducted during the past five years by the Superintendent of Agriculture. Areas of 10 acres have been secured in 26 representative localities in the principal wheat districts, a portion being cropped each year. Reference has already been made in previous editions of the *Year-Book* to the progress results from these fields. Summarizing these, they have so far confirmed the superiority of the superphosphate over other forms of phosphatic manures for wheat growing, also the inutility up to the present time of manures containing nitrogen and potash. The effects of sub-soiling have served to illustrate the fact that in what are known as the "Northern Plains," a deeper system of cultivation is of advantage in increasing the yield of grain. It is probable that the enhanced yield is due to the increased moisture-holding capacity and improved drainage of these stiff sour clay soils.

The benefits of green manuring and rotation of crops are not likely to be manifested until the termination of these trials in 1912; but there is already accumulating evidence that such practices lead to an increased stock-carrying capacity of the land, and a considerable amelioration of the physical texture of the soil itself. Perhaps no feature of the usefulness of these fields has been more evident during the past four seasons than the introduction and comparison of a number of varieties of wheat and oats grown side by side, under identical conditions of cultivation and manuring. It has taken only one season to reveal the unsuitability of some varieties. Others have required confirmatory trials, and a very limited number have been conspicuous successes from the commencement. Of the latter, the variety which has survived all tests from a grain-producing point of view, is "Federation." An instructive illustration of the superiority of "Federation" over such a widely-grown variety as "Dart's Imperial," is to be found in the table below:—

Season.	"Federation."			"Dart's Imperial."		
	Mallee.	Wimmera.	North Plains.	Mallee.	Wimmera.	North Plains
	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1905 ..	14.7	21.3	22.4	14.5	21.1	20 6
1906 ..	19.0	30.0	27 8	15.1	26.9	22.3
1907 ..	14.6	18.5	17.0	14.0	13.5	14.2
1908 ..	18.2	19.7	17.2	14.3	18.0	14.0
Average	16.6	22.3	21.1	14.4	20.3	17.7

During 1909, these wheat variety trials were continued upon a more extended scale. The average results of all the experimental wheat fields under the supervision of the Field Branch were:—Federation, 21.7 bushels per acre; Yandilla King, 20.0 bushels; Australian Talavera, 18.1 bushels; College Purple Straw, 16.5 bushels; Jumbuck, 15.4 bushels.

In addition to conducting the trials already alluded to, with the view of ascertaining the yielding properties of different wheats, the Department has in view the introduction of varieties having superior milling properties to those now generally in use. Up to the present time, the milling value of his wheat has not concerned the farmer very much; but if one studies the literature of other countries on this matter, it must be patent that the time is arriving when the commercial value of wheat, which is the staple food-stuff of all civilized nations, must be put upon a more logical basis. Wheat is more or less valuable according as a greater or lesser amount of flour can be made from it, and the flour has a fluctuating value in proportion to its "strength" or water-absorbing capacity and content of gluten. In order to carry out co-related investigations upon this side of the wheat industry, the Department of Agriculture is installing a miniature flour-milling plant to test all varieties grown in the State. Work of this character, although not on such comprehensive lines, is being carried out in the other States of the Commonwealth, as well as in most European countries.

The potential value of such systematic investigations to Victoria is immense. Already our exports of wheat are 50 per cent. more than our home consumption. New markets for our flour are being opened up in the East and South Africa, and, in order to permanently secure that trade, only the best quality of flour can be safely exported. If our flour is of unknown quality we stand at the mercy of our commercial rivals, whose article may be of superior bread-making capacity. It is anticipated that before next season's harvest is gathered, the Departmental mill will be available, not only as a guide to the farmer as to which is the best variety to grow, but to the miller and baker also, as a means by which they may arrive at an accurate determination of the values of flours from different wheats. A third safeguard for the wheat-growing industry will be found in the initiation of "stud" plots for breeding new varieties of cereals at Longerenong and Dookie Agricultural Colleges. The Wheat Improvement Committee, consisting of the Director of Agriculture, and Superintendent of Agriculture, the Vegetable Pathologist, and the Principal of the Dookie Agricultural College, has charge of four stations upon the Government farms at Wyuna and Rutherglen, and at the Dookie and Longerenong Agricultural Colleges, where work of this character is being actively carried on. Results are to be looked for within a year or two, and there is little doubt that the study of varieties under close scientific observation from sowing to harvesting, must lead to the establishment of sound principles for the future guidance of the Victorian wheat-grower.

In Southern Victoria, the necessities of the dairyman, the breeder of lambs for export, and the potato-grower, have not been overlooked. A series of experimental plots, embracing green fodder crops of all kinds, roots, legumes and grasses, has been instituted, the plots being generally under the auspices of an Agricultural Society or other rural body. Varieties of maize, sorghum, and millet, have been given

especial attention; and most useful work is being done in investigating the manure requirements of a variety of soils. The advantages of growing all fodder crops in drills, and the imperative necessity of cultivating between the rows, are demonstrations which must do much to extend the area of these crops. The old system of broadcasting fodder crops, to languish as the summer advances, is gradually giving way to more reasonable methods. It may also be mentioned that the maize industry is now receiving the same close attention as is being given to wheat. The establishment of "stud" plots at Orbost, Bruthen, and Colac, whereon the characteristics of a number of varieties, both for fodder and grain, are being observed, is a step in the right direction. A great number of cross fertilizations between varieties were made last season, some of which are bound to produce hybrids of superior value to the parents. Variety trials in representative potato-growing districts now offer information of value to the potato-grower as a guide to the varieties best adapted to the local soil and rainfall.

Upon the experimental market-garden at Cheltenham, vegetables of every description are being grown for market, under the supervision of a practical market-gardener. Manure tests of every description are being made, and the results carefully tabulated. Vegetable diseases and insect pests injurious to crops are also being investigated. It is intended to make the experimental garden the demonstration ground for new varieties of seeds of all kinds. Carried out upon such common-sense lines, and based upon commercial success only, the results will, in a year or two, offer much useful information to the suburban vegetable-grower.

The activities of the Field Branch have also been directed towards the utilization of soils, hitherto considered as being of too low fertility for profitable working. Fringing the coast-line of Victoria, there are enormous areas of what is called "heath land," sandy in character and clothed with low heath and ti-tree. In the Portland district, an attempt has been made to show that with drainage and suitable manuring, land of this character can be made to produce profitable crops. Millet, rape, sugar beet, potatoes, and grasses, have shown such encouraging yields that the Government has initiated a comprehensive scheme for drainage, which when completed will permit of some 20,000 acres being put under grass or crop. There is little doubt that work of this useful nature will be extended to the large areas of similar land in South Gippsland.

It will be gathered from the above brief outline that the objectives of the Departmental inquiries are all in the direction of enabling the producer to handle his soil to more advantage, and at the same time with economy. It is the true function of a Department to demonstrate sound principles in farming, and past results point to the solid advantages accruing from the advice of experienced officers. The standard of cultivation in Victoria is decidedly on the up grade, and with modern implements there is no reason why the present production in all branches should not be doubled or trebled.

Forestry.

In the *Year-Book* of 1903, an exhaustive paper setting out the history, position, and aim of forestry in Victoria, and the value of Victorian timbers from a commercial point of view, from the pen of Mr. H. Mackay, was inserted, and this was amplified by the author for the 1904 volume. The writer sets out that the true aim of forestry is the preservation of the forests by wise use. Forest areas must be maintained in a timber-yielding condition, denuded areas must be re-planted, and open plains, niggard as regards natural vesture, must be planted with suitable trees. Above all, the sylvan wealth with which nature has clothed hill, valley, and plain must be maintained and increased by correcting wasteful and inferior growth, and so regulating the yearly output of timber as to give the best yield possible without deterioration of the forest areas.

Victoria, with a total area of 56,246,000 acres, has about twelve million acres of woodland, and of this latter, over 4,600,000 acres are set aside as climatic reserves and for the production of timber. Of the State forest domain, some 3,000,000 acres are situated on the slopes of high mountain ranges, and their protection is essential for the maintenance of streams and springs; over half-a-million acres are situated in the extreme Eastern part of the State, but, owing to difficulties of transport, are not at present accessible for practical working; half-a-million acres, chiefly in the central district, which have been cut over, are closed for the protection of the young timber; while in the remaining area, over 600,000 acres, timber cutting is carried on in various parts. The bulk of the forest revenue is, however, derived from a total area of about 100,000 acres, the trees being felled on the selection system of treatment; while for the supply of mine-props and fuel, large blocks are allotted and worked as coppice, or coppice under standards, thinnings only, light or severe as the circumstances require, being taken out in many districts.

The open timber licence system has been abolished in Victoria, and strict control is enforced over the operations of timber-getters.

As is usual in newly-settled countries, little care was formerly exercised in respect to our natural forests, and, though Victoria is the best-wooded of the Australian States, the fact is due to the extent of its mountain territory and its ample rainfall. In many districts, particularly in the moister portions of the State, re-afforestation by natural process has been going on.

The timbers of commercial value in Victoria number twenty, all species of the eucalyptus family. Blackwood is a very valuable commercial timber—it is an acacia (*a. melanoxylon*). It should be added,

that a fair revenue is obtained from wattle bark, and that the State has established a number of wattle plantations, and a plantation of Valonia oak for tanning products; also that the Forest Department is selling at remunerative rates pine timber. Fruit, grown at Harcourt for export, is now packed in boxes made in Victoria from the pine timber grown in the State plantations. Alarmist statements to the effect that there is an increasing scarcity of commercial timber here are ill-founded, as large supplies of hardwood are assured for many years to come.

A new forest nursery, with provision for an annual output of from three to five million tree plants has been completed at Creswick, and the existing nurseries at Macedon and North Creswick are being remodelled. The plantations at Creswick, Lara, and Mt. Alexander are being gradually extended, and new plantations have been formed this year in the Wimmera district, in Southern Gippsland, and in coastal areas near Warrnambool and Frankston. In the past, much of this work was experimental, but the experience gained in the propagation and growing of Australian hardwoods, as well as exotic conifers, has proved of great benefit to the community. Transplants are distributed to farmers, municipalities, and State schools, the first-mentioned particularly benefiting by the planting of trees around their homesteads, the protection of homes from wind and weather adding greater comfort to the life indoors, and the shelter and shade afforded to live stock insuring healthier flocks and herds and increased returns.

In addition to the three nurseries, there are thirteen plantation trial stations, having a total area of 10,000 acres. The persons employed in connexion with the State forests and nurseries comprise administrative and professional staff, 10; protective staff, 56; and nursery staff, 17. The revenue from licences and royalties in 1908–9 amounted to £40,647. The expenditure was £27,065 17s. 5d., of which sum £7,681, or 19 per cent., was devoted to the improvement of the natural forests and the extension of plantations.

A Forests Act, conferring reasonable powers of management and control on the conservancy staff, passed by Parliament on 6th November, 1907, came into operation on 1st January, 1908. Under this law, working plans regulating the general fellings and output of timber from the reserves, are being put in force, thus maintaining the forests in a productive condition.

Agriculture, expenditure and revenue connected with.

The State has rendered substantial assistance to the various branches of the agricultural and pastoral industries during past years. The appended table summarizes for the last five years the items of State expenditure from consolidated revenue in this direction,

and shows the amount of revenue received by the Department of Agriculture, which consists chiefly of payments by exporters for packing produce for export:—

EXPENDITURE AND REVENUE CONNECTED WITH AGRICULTURE, ETC., 1904-5 TO 1908-9.

——	1904–5.	1905-6.	1906-7.	1907-8.	1908-9.
Expenditure.	£	£	£	£	£
Agricultural and Horticultural Societies, &c.	2,420	2,375	2,475	3,351	3,382
Seed Advances Act—Fees ...	9	23	67	57	...
Carriage of Agricultural Produce at reduced Rates—Allowance to Railway Department	46,280	41,787	25,000	...	...
State Forests and Nurseries	17,747	18,805	18,358	19,103	21,003
To promote the Agricultural, Dairying, Fruit, and Wine Industries	139	296	197	213	288
Stock and Dairy Supervision	...	...	5,103	8,092	} 16,596
Scab Prevention and Stock Diseases	7,190	7,319	6,790	6,323	
Development of Export Trade	34,031	34,050	37,681	32,859	24,798
Village Settlements ...	68	67	97	99	98
Labour Colonies	1,000	493	500	450	550
Viticultural Education and inspection of Vineyards	2,347	3,021	3,757	5,196	4,666
Vegetation Diseases ...	4,202	4,257	4,297	8,600	8,880
Rabbit and Vermin Extermination	16,603	16,477	16,513	17,585	22,756
Rates on Mallee Blocks ...	541	...	...	...	..
Maffra Beet Sugar Factory ...	215	214	219	222	347
Technical Agricultural Education, &c.	13,641	14,428	23,316	25,487	26,248
Publishing Agricultural Reports	2,011	2,250	2,293	1,886	2,182
Carrum Advances Act ...	512	...	...	...	...
Advances to Settlers on account of Losses by Bush Fires, &c.	...	3,486	1,568	11,614	359
Departmental and other Expenditure	8,351	10,890	11,852	12,323	13,965
Total	157,307	160,238	160,083	153,460	146,118
Revenue.					
Department of Agriculture ...	32,557	28,115	35,310	39,473	29,594

From the foregoing it will be seen that the State has rendered material assistance to all the producing industries connected with the land. In addition to the expenditure shown, various sums have

been advanced from loans and votes for the purpose of aiding closer settlement, for the resumption of mallee lands, and for relief to farmers on account of bush fires, flood losses, and purchase of seed wheat and fodder, which advances are gradually being repaid.

The loan expenditure in 1908-9 was £119,481 on account of closer settlement, £69,993 on account of small holdings, and £45,850 on account of wire netting.

Land occupied, and cultivation and live stock thereon.

Information relating to land occupied and cultivation and live stock thereon was collected in March, 1906, and March, 1910. The land privately owned was summarized according to different sized holdings, and in the instances where Crown lands were held in conjunction therewith these were, regardless of size, scheduled with the holdings to which they were attached. The particulars for 1910 are as follows:—

LAND OCCUPIED, AND CULTIVATION AND LIVE STOCK THEREON, MARCH, 1910.

Size of Holdings. (In acres.)	Privately-owned Land. Number of Holdings.	Privately-owned Land. Area occupied.	Crown Land held in conjunction with that privately owned.	Total Area occupied.	Area under— Cultivation.	Area under— Pasture, &c.
		Acres.	Acres.	Acres.	Acres.	Acres.
1 to 5 ..	3,469	10,334	30,668	41,002	3,636	37,366
6 „ 15 ..	4,420	44,810	13,247	58,057	16,306	41,751
16 „ 30 ..	4,854	107,998	82,358	190,356	35,178	155,178
31 „ 50 ..	3,866	159,155	67,217	226,372	44,272	182,100
51 „ 100 ..	6,696	514,529	248,923	763,452	128,835	634,617
101 „ 200 ..	9,208	1,389,057	528,348	1,917,405	310,579	1,606,826
201 „ 300 ..	5,422	1,362,833	459,424	1,822,257	301,370	1,520,887
301 „ 400 ..	5,904	1,998,644	1,111,022	3,109,666	473,986	2,635,680
401 „ 500 ..	2,863	1,298,733	241,206	1,539,939	317,174	1,222,765
501 „ 600 ..	2,212	1,221,823	459,916	1,681,739	319,610	1,362,129
601 „ 700 ..	2,568	1,656,850	1,138,163	2,795,013	453,050	2,341,963
701 „ 800 ..	1,249	944,343	325,423	1,269,766	239,259	1,030,507
801 „ 900 ..	1,014	867,671	179,064	1,046,735	197,293	849,442
901 „ 1,000 ..	1,173	1,123,644	467,703	1,591,347	272,677	1,318,670
1,001 „ 1,500 ..	2,583	3,175,340	1,601,051	4,776,391	748,061	4,028,330
1,501 „ 2,000 ..	1,062	1,849,446	395,788	2,245,234	339,811	1,905,423
2,001 „ 2,500 ..	514	1,153,958	467,296	1,621,254	166,520	1,454,734
2,501 „ 3,000 ..	270	750,766	913,910	1,664,676	94,535	1,570,141
3,001 „ 4,000 ..	329	1,145,013	313,530	1,458,543	149,281	1,309,262
4,001 „ 5,000 ..	150	675,665	121,539	797,204	54,330	742,874
5,001 „ 7,500 ..	161	969,101	187,402	1,156,503	50,139	1,106,364
7,501 „ 10,000 ..	78	682,878	1,210,582	1,893,460	35,240	1,858,220
10,001 „ 15,000 ..	79	977,245	121,909	1,099,154	20,385	1,078,769
15,001 „ 20,000 ..	52	904,037	14,649	918,686	13,167	905,519
20,001 „ 30,000 ..	22	564,259	508	564,767	2,952	561,815
30,001 „ 40,000 ..	15	510,762	7,580	518,342	8,324	510,018
40,001 „ 50,000 ..	5	225,438	400	225,838	579	225,259
50,001 and upwards	2	116,486	374	116,860	363	116,497
Total ..	60,240	26,400,818	10,709,200	37,110,018	4,796,912	32,313,106

LAND OCCUPIED, AND CULTIVATION AND LIVE STOCK THEREON, MARCH, 1910—*continued.*

Size of Holdings (In Acres.)	Live Stock on Land occupied.				
	Horses.	Cattle.		Sheep.	Pigs.
		Dairy Cows.	Other Cattle.		
1 to 5 ..	3,569	4,694	3,953	5,227	1,530
6 „ 15 ..	6,293	8,843	6,436	4,981	4,033
16 „ 30 ..	8,746	13,082	10,793	11,620	5,563
31 „ 50 ..	9,535	15,796	13,193	23,332	7,255
51 „ 100 ..	21,214	46,345	37,630	83,333	20,465
101 „ 200 ..	41,077	107,001	90,587	255,577	41,797
201 „ 300 ..	33,059	78,678	77,826	341,113	27,273
301 „ 400 ..	42,472	83,726	99,060	591,634	27,757
401 „ 500 ..	25,211	41,769	54,526	404,620	13,346
501 „ 600 ..	21,547	29,676	46,354	418,181	9,148
601 „ 700 ..	26,661	31,337	52,749	587,736	9,750
701 „ 800 ..	14,513	17,228	30,384	393,252	6,096
801 „ 900 ..	12,220	14,759	27,823	379,346	4,442
901 „ 1,000 ..	14,965	15,100	31,073	514,582	4,544
1,001 „ 1,500 ..	38,625	31,654	83,122	1,509,276	9,466
1,501 „ 2,000 ..	17,686	12,576	40,445	991,389	3,526
2,001 „ 2,500 ..	9,689	6,585	25,517	714,778	1,671
2,501 „ 3,000 ..	5,234	3,143	12,842	471,681	1,055
3,001 „ 4,000 ..	7,951	5,617	22,670	761,999	1,052
4,001 „ 5,000 ..	3,734	2,358	14,516	454,566	515
5,001 „ 7,500 ..	5,204	2,939	25,705	739,027	553
7,501 „ 10,000 ..	2,510	1,187	12,944	516,264	159
10,001 „ 15,000 ..	3,148	2,041	18,240	801,495	468
15,001 „ 20,000 ..	2,635	1,165	10,037	691,049	278
20,001 „ 30,000 ..	1,069	541	4,602	409,264	92
30,001 „ 40,000 ..	1,616	460	4,924	405,540	138
40,001 „ 50,000 ..	526	148	3,039	218,683	19
50,001 and upwards	542	62	1,216	89,219	28
Total ..	381,251	578,510	862,206	12,788,704	202,019

The figures are exclusive of live stock travelling, and those in cities, towns, &c.; also of 1,571 holdings containing 975,556 acres of Crown lands not held in conjunction with any private land, on which there were 37,373 acres of cultivation, 4,641 horses, 24,200 cattle, 96,662 sheep, and 3,653 pigs. The position disclosed was that 54,918 persons holding up to 1,000 acres each of private land and occupying in the aggregate 12,700,424 acres of such land, also occupied 5,352,682 acres of Crown land—a total of 18,053,106 acres, and less than half of the total area in occupation. These occupiers, however, controlled 65 per cent. of the total cultivation, and possessed 74 per cent. of the horses, 88 per cent. of the dairy cows, 68 per cent. of the other cattle, 91 per cent. of the pigs, and 31 per cent. of the sheep. To illustrate the uses to which the land was applied in 1906 and 1910, various percentages relating to holdings of different sizes are given for these years in the subsequent

table, which also shows the live stock carried by the holdings reduced to their equivalent in sheep :—

CULTIVATION AND SHEEP-CARRYING CAPACITY OF LAND IN DIFFERENT DIVISIONS, MARCH, 1906 AND 1910.

Size of Holdings of Private Land (In Acres.)	Year.	Percentage in each Division to Total of—				Live Stock Grazed reduced to Equivalent in Sheep.	
		Area Occupied.	Area under Cultivation.	Area used for Pasture, &c.	Equivalent in Sheep Grazed.	Total.	Per Acre used for Grazing, &c.
1 to 100..	1906	3·78	4·68	3·65	6·00	1,440,822	1·33
	1910	3·45	4·76	3·25	6·28	1,586,653	1·51
101 „ 320..	1906	13·02	18·81	12·20	17·73	4,259,999	1·18
	1910	13·19	17·50	12·55	17·50	4,415,168	1·09
321 „ 640..	1906	18·07	28·54	16·58	17·21	4,137,133	·84
	1910	17·58	24·65	16·53	17·00	4,290,653	·80
641 „ 1,000..	1906	12·52	17·52	11·81	11·40	2,739,991	·78
	1910	14·42	17·99	13·90	12·18	3,075,406	·68
1,001 „ 2,500..	1906	21·66	24·04	21·32	17·20	4,135,089	·66
	1910	23·29	26·15	22·87	20·10	5,074,837	·69
2,501 „ 5,000..	1906	12·15	4·31	13·27	8·30	1,994,035	·51
	1910	10·57	6·22	11·21	8·81	2,224,312	·61
5,001 „ 10,000	1906	6·04	1·06	6·74	6·52	1,566,846	·79
	1910	8·22	1·78	9·17	6·29	1,589,021	·54
10,001 and upwards	1906	12·76	1·04	14·43	15·64	3,758,546	·88
	1910	9·28	·95	10·52	11·84	2,989,460	·88
Total ..	1906	100·00	100·00	100·00	100·00	24,032,461	·81
	1910	100·00	100·00	100·00	100·00	25,245,510	·78

Horses and cattle have been reduced to an equivalent in sheep on the assumption that one head of the former will eat as much as ten, and one of the latter as much as six sheep. In this return it may be seen that 48.64 per cent. of the land occupied was in areas not exceeding 1,000 acres, and, after supplying 65 per cent. of the cultivation, contained 53 per cent. of the grazing stock ; whilst holdings of over 1,000 acres supplied 54 per cent. of the total area used for grazing, and only 47 per cent. of the stock mentioned. As many of the large areas are situated in the rich Western District, which is favoured with a good annual rainfall, it requires only the introduction of labour to utilize the capacity of these lands to carry at least as many sheep per acre as are now carried on holdings of 320 acres or under. The figures show that there is sufficient land in use in Victoria to support at least thirteen million more sheep than at present. Dairying is principally carried on in the small holdings, as much as 39 per cent. of the number of dairy cows being on holdings of from 101 to 320 acres. Naturally, pigs also are most numerous where dairying prevails, the proportion found on holdings of the acreage mentioned being

about 41 per cent. of the total in the State. Compared with 1906, the sheep-carrying capacity per acre of the total grazing area in 1910 shows a decline, and of the various sizes of holdings, those having an area of less than 101 acres and of from 1,001 to 5,000 acres are the only ones in which an improvement is apparent. The proportionate increase of pastoral areas in estates of from 5,001 to 10,000 acres is very prominent, especially as it is accompanied by a proportionate reduction in the number of live stock grazed.

Particulars of land occupied and cultivation thereon are in the following table compared with similar information for the year 1906 :—

LAND OCCUPIED, 1906 AND 1910.

Size of Holdings (in acres).	Year.	Privately-owned Land. Number of Holdings.	Privately-owned Land. Area Occupied.	Crown Land held in conjunction with that privately-owned.	Total Area Occupied.	Area under— Cultivation.	Area under— Pasture, &c.
			Acres.	Acres.	Acres.	Acres.	Acres.
1 to 100 ..	1906	19,173	721,669	554,759	1,276,428	196,580	1,079,848
	1910	23,305	836,826	442,413	1,279,239	228,227	1,051,012
101 ,, 320 ..	1906	16,121	3,459,291	937,727	4,397,018	789,330	3,607,688
	1910	17,583	3,686,498	1,209,660	4,896,158	839,664	4,056,494
321 ,, 640 ..	1906	9,319	4,497,331	1,604,280	6,101,611	1,197,536	4,904,075
	1910	9,676	4,623,839	1,900,058	6,523,897	1,182,254	5,341,643
641 ,, 1,000 ..	1906	3,876	3,164,404	1,063,166	4,227,570	735,263	3,492,307
	1910	4,354	3,553,261	1,800,551	5,353,812	863,080	4,490,732
1,001 ,, 2,500 ..	1906	3,466	5,112,200	2,200,867	7,313,067	1,009,034	6,304,033
	1910	4,159	6,178,744	2,464,135	8,642,879	1,254,392	7,388,487
2,501 ,, 5,000 ..	1906	617	2,106,732	1,996,797	4,103,529	180,884	3,922,645
	1910	749	2,571,444	1,348,979	3,920,423	298,146	3,622,277
5,001 ,, 10,000 ..	1906	220	1,567,251	471,271	2,038,522	44,347	1,994,175
	1910	239	1,651,979	1,397,984	3,049,963	85,379	2,964,584
10,001 and upwards	1906	195	4,134,067	176,916	4,310,983	43,521	4,267,462
	1910	175	3,298,227	145,420	3,443,647	45,770	3,397,877
Total ..	1906	52,987	24,762,945	9,005,783	33,768,728	4,196,495	29,572,233
	1910	60,240	26,400,818	10,709,200	37,110,018	4,796,912	32,313,106

The most noticeable alteration since 1906 is in holdings of over 10,000 acres. The number of these has decreased by 10 per cent. and the area occupied by 20 per cent., yet there has been a small increase in the cultivation. In the case of all other sizes exhibited above there has been an increase in number and, with one exception, in area, and the only holdings which do not show an increase in cultivation are those of from 321 to 640 acres in extent.

The following tables show the land in occupation in March, 1910, in districts, and the uses to which the land was applied :—

LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA, MARCH, 1910.

(Areas 1 acre and upwards.)

District.	Number of Occupiers.	Acres Occupied.				
		For Agricultural Purposes.	For Pasture.		Other Purposes and Unproductive.	Total.
			Sown Grasses, Clover, or Lucerne.	Natural Grasses.		
Central ...	14,189	433,934	184,377	2,125,578	24,914	2,768,803
North-Central	5,663	188,664	16,557	1,869,042	9,503	2,083,766
Western ...	10,518	403,844	202,505	6,035,620	62,545	6,704,514
Wimmera ...	5,641	1,330,466	1,767	4,229,368	240,641	5,802,242
Mallee ...	3,018	853,660	2,269	3,691,511	1,810,772	6,358,212
Northern ...	10,028	1,328,409	12,430	3,786,447	18,712	5,145,998
North-Eastern	4,769	157,997	3,972	3,802,714	449,499	4,414,182
Gippsland ...	7,985	137,311	564,794	3,560,588	545,164	4,807,857
Total ...	61,811	4,834,285	988,671	29,100,868	3,161,750	38,085,574
		PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.				
Central ...	...	15·67	6·66	76·77	·90	100·00
North-Central	...	9·05	·79	89·70	·46	100·00
Western ...	...	6·02	3·02	90·03	·93	100·00
Wimmera ...	...	22·93	·03	72·89	4·15	100·00
Mallee ...	...	13·43	·03	58·06	28·48	100·00
Northern ...	..	25·82	·24	73·58	·36	100·00
North-Eastern	...	3·58	·09	86·15	10·18	100·00
Gippsland ...	...	2·85	11·75	74·06	11·34	100·00
Total ...	...	12·69	2·60	76·41	8·30	100·00
		PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.				
Central ...	22·96	8·98	18·65	7·30	·79	7·27
North-Central	9·16	3·90	1·67	6·42	·30	5·47
Western ...	17·02	8·35	20·48	20·74	1·98	17·60
Wimmera ...	9·13	27·52	·18	14·53	7·61	15·24
Mallee ...	4·88	17·66	·23	12·69	57·27	16·70
Northern ...	16·22	27·48	1·26	13·01	·59	13·51
North-Eastern	7·71	3·27	·40	13·07	14·22	11·59
Gippsland ...	12·92	2·84	57·13	12·24	17·24	12·62
Total ...	100·00	100·00	100·00	100·00	100·00	100·00

It will be seen from these tables that in the Wimmera, Northern, and Mallee districts, the greatest area under cultivation and the greatest proportion of cultivation to land occupied are found. About 23 per cent. of the land occupied in the Wimmera, and about 26 per cent. of that occupied in the Northern district is devoted to

agriculture, and these districts supplied 55 per cent. of the cultivation in Victoria. In the Western, North-Central, and North-Eastern districts, the land occupied is largely devoted to grazing; and in Gippsland considerable attention has been given to the cultivation of grasses, 57 per cent. of all the sown grasses in the State being found in that district.

In the next table the distribution of cattle and sheep on pastoral lands in March, 1910, is given.

AREA OCCUPIED AND STOCK, 1910.

District.	Acres Occupied for		Number of		Stock—Equivalent of Sheep—per 100 acres used for Pasture.*
	Agriculture.	Pasture.	Cattle.	Sheep.	
Central	433,934	2,309,955	246,096	993,509	107
North-Central ...	188,664	1,885,599	100,446	978,010	84
Western	403,844	6,238,125	317,806	4,335,579	100
Wimmera ...	1,330,466	4,231,135	57,163	2,266,134	62
Mallee	853,660	3,693,780	41,025	632,987	24
Northern ..	1,328,409	3,798,877	211,368	2,024,684	87
North-Eastern ...	157,997	3,806,686	213,366	799,997	55
Gippsland ...	137,311	4,125,382	362,370	907,083	75
Total ...	4,834,285	30,089,539	1,549,640	12,937,983	74

* Reckoning six sheep as the equivalent of one head of cattle.

The area occupied does not include 3,161,750 acres regarded as mostly in an unproductuve state, and horses grazing have not been allowed for in the stock. There has been a small increase in the number of sheep—there having been 12,937,983 in March, 1910, as compared with 12,545,742 a year earlier. The advance in numbers is spread over all districts except the Western, the largest increases being in the Northern (291,169), Mallee (125,664), and Gippsland (113,236) districts, whilst the decrease in the Western district numbered 295,286. The practice among farmers of combining sheep-farming with agriculture is growing in the State with very satisfactory results. In the Mallee, the number of sheep shows an increase of 88 per cent. since 1906, and it is among the small holders that the increase is most noticeable.

Occupations of persons settled on the land—Pastoral and dairying (Census.)

The occupations of persons settled on the land are only collected in the census years in full detail.

In 1891 the number of persons engaged in pastoral and dairying pursuits was 15,296, and in 1901 it was 30,920. The full particulars for last census year are as follows:—

RETURN OF PERSONS ENGAGED IN PASTORAL AND DAIRYING PURSUITS, 1901.

Persons Following Pastoral and Dairying Pursuits.	Employers of Labour.		In Business on their own account, but not employing labour.		Receiving Salary or Wages.		Relatives Assisting.		Not at work for more than a week prior to Census.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Grazier, Pastoralist, Stock Breeder, and Relative Assisting	2,242	177	2,422	303	—	—	1,159	1,062	—	—
Station Manager, Overseer, Clerk	—	—	—	—	593	4	1	7	39	—
Stock Rider, Drover, Shearer, Shepherd, Pastoral Labourer	47	—	100	—	4,540	7	5	—	248	—
Dairy Farmer, and Relative Assisting	2,205	276	3,007	756	—	—	3,263	4,456	—	—
Dairy Assistant, Milker	—	—	—	—	3,194	386	—	—	32	3
Poultry Farmer	19	8	132	79	17	3	16	41	1	—
Stock and Brands Department Officer	—	—	—	—	18	—	—	—	—	—
Others, including Pig Farmers	3	1	10	—	34	—	2	—	2	—
Total	4,516	462	5,671	1,138	8,396	400	4,446	5,566	322	3

Total Males	23,351
Total Females	7,569
Grand Total	30,920

Occupations of persons settled on the land—Agricultural (Census).

In 1891 the number engaged in agricultural pursuits was 82,482, and in 1901 that number had increased to 95,920. The following return gives particulars of persons mainly engaged in agricultural pursuits when the last census was taken:—

RETURN OF PERSONS ENGAGED IN AGRICULTURAL PURSUITS, 1901.

Persons Following Agricultural Pursuits.	Employers of Labour.		In Business on their own account, but not employing labour.		Receiving Salary or Wages.		Relatives Assisting.		Not at work for more than a week prior to Census.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Farmer and Relative Assisting	13,267	1,099	15,096	1,693	—	—	16,361	13,238	—	—
Farm Manager, Overseer	—	—	—	—	359	6	—	—	3	—
Farm Servant, Agricultural Labourer	—	—	—	—	20,204	599	—	—	956	5
Market Gardener	859	19	1,647	32	1,518	9	576	132	22	—
Fruit Grower, Orchardist	493	44	868	91	700	43	465	172	14	—
Hop, Cotton, Tea, Coffee Grower	10	2	7	—	48	48	9	2	—	—
Tobacco Grower	10	—	25	—	24	—	1	—	—	—
Vine Grower, Vigneron	174	18	72	8	1,131	6	86	39	6	—
Sugar Planter	1	—	—	—	—	—	—	—	—	—
Horticulturist, Gardener	237	7	571	17	2,132	7	107	39	214	—
Agricultural Department Officer	—	—	—	—	41	—	—	—	—	—
Others, Threshing Machine Owners and Workers, &c.	20	1	26	—	72	2	4	3	103	—
Total	15,071	1,190	18,312	1,841	26,229	720	17,609	13,625	1,318	5

Total Males	78,539
Total Females	17,381
Grand Total	95,920

Information is obtained by the collectors of agricultural statistics each year as to the number of persons ordinarily employed upon the land occupied. For the last seven years the numbers were as follows:—

NUMBER OF PERSONS EMPLOYED UPON FARMING, DAIRYING, AND PASTORAL HOLDINGS, 1903 TO 1909.

Year.	Males.	Females.	Total.
1903	87,322	48,561	135,883
1904	90,396	51,933	142,329
1905	91,336	50,982	142,318
1906	92,652	51,993	144,645
1907	93,981	51,905	145,886
1908	94,990	52,410	147,400
1909	96,873	52,782	149,655

The number of persons ordinarily employed on any holding includes the occupier or manager, and those members of his family who actually work on it; but persons absent from their farms for the greater portion of the year following other occupations, as well as temporary hands engaged in harvesting, &c., are not included, neither are domestic servants nor cooks. It is difficult to arrive at an estimate of the extent of the temporary labour employed upon farms and pastoral holdings, and four years ago the collectors were asked to supply some information on the subject. From this and particulars available from other sources it is believed that this labour may be set down as approximately equal to about 23,000 men employed continuously throughout the year.

Wages—agricultural and pastoral.

In the following return will be found particulars of the rates of wages paid (with rations) upon farms and pastoral holdings during 1909-10. The information has been furnished by the occupiers of holdings:—

WAGES, AGRICULTURAL AND PASTORAL, 1909-10.

Occupations.	Range.	Prevailing Rate.
Ploughmen	20s. to 30s. per week ..	22s. 6d. per week
Farm labourers	15s. to 30s. „ ..	20s. „
Threshing machine hands ..	6d. to 1s. per hour ..	8d. per hour
Harvest hands	5s. to 8s. per day ..	6s. per day
Milkers	10s. to 20s. per week ..	15s. per week
Maize pickers (without rations)	5d. to 6d. per bag ..	5d. per bag
Hop pickers „ „	2½d. to 4d. per bushel ..	3½d. per bushel
Married couples	20s. to 40s. per week ..	30s. per week
Female servants	8s. to 20s. „ ..	10s. „
Men cooks	15s. to 30s. „ ..	20s. „
Stockmen	£52 to £78 per annum ..	£52 per annum
Shepherds	£39 to £68 „ ..	£45 „

WAGES, AGRICULTURAL AND PASTORAL, 1909-10—*continued.*

Occupations.	Range.	Prevailing Rate.
Hut keepers	£26 to £52 per annum ..	£40 per annum
Generally useful men ..	15s. to 30s. per week ..	20s. per week
Sheep washers	20s. to 30s. ,, ..	20s. ,,
Shearers, hand*	19s. to 25s. per 100 sheep	20s. per 100 sheep
,, machine* ..	19s. to 25s. ,,	20s. ,,
Bush carpenters	25s. to 60s. per week ..	30s. per week
Gardeners, market ..	17s. 6d. to 35s. ,, ..	20s. ,,
,, orchard ..	15s. to 35s. ,, ..	20s. ,,
Vineyard hands	15s. to 25s. ,, ..	15s. ,,

* It is believed that in cases of some of the highest rates rations are not found.

Area under cultivation.

In the following table are given figures showing the land under cultivation in each of the four years ended March, 1907 to 1910:—

CULTIVATION OF PRINCIPAL CROPS, 1906-7 TO 1909-10.

Crop.	Year Ended March.			
	1907.	1908.	1909.	1910.
	Acres.	Acres.	Acres.	Acres.
Wheat	2,031,893	1,847,121	1,779,905	2,097,162
Other Grain Crops ...	458,451	487,721	511,698	474,164
Root Crops	62,150	60,078	55,315	70,516
Hay	621,139	682,194	956,371	864,359
Green Forage	36,502	59,897	63,066	56,586
Vines	25,855	26,465	24,430	22,768
Orchards	54,021	54,111	54,946	56,108
Market Gardens	7,906	9,022	9,279	10,214
All other Crops	5,669	5,914	6,751	6,658
Land in Fallow	990,967	894,300	1,034,422	1,175,750
Total Cultivation ...	4,294,553	4,126,823	4,496,183	4,834,285

The area under cultivation, exclusive of permanent and artificial grasses, increased from 50 acres sown down with wheat in 1836 to 4,834,285 acres, under crops of various kinds and in

fallow in 1909-10. The first returns of oats, maize, potato, and tobacco crops were obtained in 1838, of barley and rye in 1839, of hay in 1841, of green forage and vines in 1842, of peas and beans in 1849, of mangel-wurzel, carrots, parsnips, turnips, and onions in 1855-6, of garden and orchard produce in 1856-7, and of chicory, grass and clover seeds, and hops in 1867-8. Returns of land sown with artificial grass were first procured in 1855-6, and since that year steady progress has been made, though the area in the last two years shows a slight decline when compared with that for 1907-8. The area of land in fallow has also been increasing since 1858-9, and in later years the increase has been very marked.

For the fourteen years, 1896-7 to 1909-10, the total area under cultivation, its proportion to the area of the State—56,245,760 acres—and the yearly increases or decreases, actual and centesimal, were as follows:—

AREA UNDER CULTIVATION, 1896-7 TO 1909-10.

Year ended March.	Area under Tillage (exclusive of area under artificial Grass).		Yearly Increase (+) or Decrease (-)	
	Total.	Percentage of Area of Victoria.	Total.	Percentage.
	Acres.		Acres.	
1897 ...	2,925,416	5·20	...	...
1898 ...	3,144,574	5·59	+219,158	+7
1899 ...	3,727,765	6·63	+583,191	+19
1900 ...	3,668,556	6·52	-59,209	-2
1901 ...	3,717,002	6·61	+48,446	+1
1902 ...	3,647,459	6·48	-69,543	-2
1903 ...	3,738,873	6·65	+91,414	+3
1904 ...	4,021,590	7·15	+282,717	+8
1905 ...	4,175,614	7·42	+154,024	+4
1906 ...	4,269,877	7·59	+94,263	+2
1907 ...	4,294,553	7·64	+24,676	+0·5
1908 ...	4,126,823	7·34	-167,730	-4
1909 ...	4,496,183	8·00	+369,360	+9
1910 ...	4,834,285	8·60	+338,102	+7.5

The land under cultivation, including land in fallow, but excluding that under artificial grasses, was in 1896-7 2,925,416, and in 1909-10 4,834,285 acres, there being an increase in the fourteen years of 1,908,869 acres, or of 65 per cent. The increase has been

fairly and almost constantly maintained. There are, however, three years in which a slight reduction appears. The area of land actually under crops of various kinds in 1909-10 was 3,658,535 acres.

Agricultural production.

The following return contains a statement of the production from cultivated lands for the past three years:—

AGRICULTURAL PRODUCTION, 1907-8 TO 1909-10.

Produce.	Year ended March.		
	1908.	1909.	1910.
Wheat ... ... bushels	12,100,780	23,345,649	28,780,100
Other Grain ... ... ,,	7,005,248	13,516,894	10,266,650
Root Crops ... ... tons	175,704	196,813	225,016
Hay ... ... ,,	682,370	1,415,746	1,186,738
Vines ... cwt. of grapes	535,804	561,679	548,828
Green Forage ... £	149,742	157,665	141,465
Orchards ... ... £	421,210	408,597	458,557
Market Gardens ... £	225,550	231,975	255,350
Other Agricultural Produce £	182,120	298,543	289,805

The principal crops grown in the State are wheat, oats, barley, potatoes, and hay.

Wheat was first grown in Victoria in 1836, and there was a general increase in the area under cultivation up to 1899-1900, when 2,165,693 acres were harvested. In the following two seasons there was a decline in the area, but after this there was an increase, until in 1904-5 the area under wheat was 2,277,537 acres, the largest recorded, and the return therefrom was 21,092,139 bushels, or an average of 9.26 bushels per acre. In 1909-10 the area under wheat was 2,097,162 acres, and the yield 28,780,100 bushels, which was the greatest to that date, and was equivalent to 13.72 bushels per acre.

An estimate of the area under wheat was made on 3rd August, 1909, and an estimate of the wheat yield was made four months later, on 30th November. The following were the forecasts:—

Estimated area under wheat for grain ...	2,102,300 acres
,, ,, ,, hay ...	200,000 ,,
Total	2,302,300 acres
Estimated produce of grain	28,535,250 bushels
Average per acre	13.57 ,,

The results showed that the estimated yield was only slightly understated, and that the estimated area as well as the production was as nearly accurate as could be desired.

The results in detail of the wheat harvest for the last three years are shown in the accompanying table:—

WHEAT YIELDS FOR THE SEASONS ENDED MARCH, 1908, TO MARCH, 1910, IN COUNTIES.

Districts and Counties.	Year ended March.								
	Area.			Produce.			Average per Acre.		
	1908.	1909.	1910.	1908.	1909.	1910.	1908.	1909.	1910.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushls.	Bushls.	Bushls.
Central—									
Bourke ..	1,544	1,794	6,332	19,483	28,632	97,994	12.62	15.96	15·35
Grant ..	7,509	7,213	18,896	84,904	130,754	244,765	11.31	18.13	12·95
Mornington ..	41	121	470	770	2,470	7,908	18.78	20.41	14·91
Evelyn ..	92	108	210	2,094	1,445	3,510	22.76	13.38	16·71
North-Central—									
Anglesey ..	694	884	2,641	5,870	16,834	47,945	8.46	19.04	18·15
Dalhousie ..	1,928	2,795	7,671	28,208	48,171	112,706	14.63	17.23	14·69
Talbot ..	10,039	10,885	23,635	136,005	211,842	318,215	13.55	19.46	13·46
Western—									
Grenville ..	5,098	7,968	18,854	90,051	167,294	279,593	17.66	21.00	14·83
Polwarth ..	..	7	155	..	87	2,627	..	12.43	16·95
Heytesbury ..	8	21	69	206	466	1,238	25.75	22.19	17·94
Hampden ..	3,294	2,278	6,976	51,153	47,475	84,622	15.53	20.84	12·13
Ripon ..	60,280	58,471	71,033	907,197	1,291,862	1,049,417	15.05	22.09	14·77
Villiers ..	1,139	1,524	2,689	19,169	21,015	25,638	16.83	13.79	9·53
Normanby ..	555	1,105	1,959	10,879	16,036	31,311	19.60	14.51	15·98
Dundas ..	1,255	1,183	4,350	21,281	19,784	61,743	16.96	16.72	14·19
Follett ..	379	303	428	8,638	4,568	6,914	22.79	15.08	16·15
Wimmera—									
Lowan ..	172,564	157,297	174,213	1,723,401	1,960,605	2,223,997	9.99	12.46	12·77
Borung ..	307,529	300,798	332,322	3,025,286	5,301,253	5,668,380	9.84	17.62	17·06
Kara Kara ..	107,375	104,223	113,648	1,077,558	1,792,609	1,659,539	10.04	17.20	14·60
Mallee—									
Millewa ..	..	..	..	..	..	..	..	..	..
Weeah ..	25,691	31,819	33,554	159,943	382,191	391,339	6.23	12.01	11·66
Karkarooc ..	318,792	284,057	280,095	800,131	2,587,595	2,849,633	2.51	9.11	10·17
Tatchera ..	269,058	242,961	245,010	273,695	1,597,398	2,532,771	1.02	6.57	10·34
Northern—									
Gunbower ..	23,738	23,753	30,699	87,200	249,688	395,925	3.67	10.51	12·90
Gladstone ..	104,285	98,221	113,902	796,239	1,492,342	1,626,284	7.64	15.19	14·28
Bendigo ..	91,673	95,267	122,016	576,712	1,509,691	2,039,407	6.29	15.84	16·71
Rodney ..	95,712	102,558	134,514	701,089	1,628,178	2,046,596	7.32	15.88	15·21
Moira ..	207,557	205,913	284,651	1,163,864	2,218,701	4,124,932	5.61	10.77	14·49
North-Eastern—									
Delatite ..	6,580	7,749	13,539	94,359	160,081	177,383	14.34	20.66	13·10
Bogong ..	21,433	26,214	43,689	211,805	423,751	482,092	9.88	16.17	11·03
Benambra ..	142	499	1,186	2,249	8,599	21,411	15.84	17.23	18·05
Wonnangatta	4	16	40	86	156	411	21.50	9.75	10·28
Gippsland—									
Croajingolong	38	27	31	589	318	365	15.50	11.78	11·77
Tambo ..	..	19	178	..	431	3,476	..	22.68	19·53
Dargo ..	..	11	225	..	147	3,780	..	13.36	16·80
Tanjil ..	1,045	1,749	6,416	19,763	21,957	142,953	18.91	12.55	22·28
Buln Buln ..	50	94	816	903	1,223	14,180	18.06	13.01	17·38
Total ..	1,847,121	1,779,905	2,097,162	12,100,780	23,345,649	28,780,100	6.55	13.12	13·72

It will be observed that the area harvested for wheat last season was 317,257 acres more than in the previous one, and 250,041 acres more than in 1907-8. The increase last season was principally in

the counties of Borung, Bendigo, Rodney, and Moira. In 1909-10 the production was the highest recorded, and the average per acre was, with the exception of that in 1903-4, the highest since 1883-4.

The principal districts where wheat is grown are the Wimmera, comprising the counties of Lowan, Borung, and Kara Kara; the Mallee, comprising those of Weeah, Karkarooc, and Tatchera; and the Northern, comprising Gunbower, Gladstone, Bendigo, Rodney, and Moira. Of the total wheat harvested in 1909-10, that in the counties enumerated was 1,864,624 acres, or 89 per cent. of the total, and the produce therefrom was 25,558,803 bushels, or 89 per cent. of the total in the State. The other districts are, however, not to be regarded as unsuitable for wheat-growing, as though they provided only a small proportion of the area and produce in 1909-10 the average yield per acre was greater than that in the counties mentioned.

The following table shows the area of each of the principal wheat-growing counties, and the cultivation for the years of first and largest record, and for last year:—

WHEAT-GROWING COUNTIES: AREA AND PRODUCTION.

District and County.	Area of County.	First Cultivation Recorded.			Largest Cultivation Recorded.			Cultivation for 1909-10.	
		Year.	Area.	Average Yield Per Acre.	Year.	Area.	Average Yield Per Acre.	Area.	Average Yield Per Acre.
			Acres.	Bushels.		Acres.	Bushels.	Acres.	Bushels.
Western Dist.—									
Ripon ..	1,125,760	1855-6	40	35·62	1909-10	71,033	14·77	71,033	14·77
Wimmera Dist.—									
Lowan ..	3,181,440	1871-2	232	16·69	1892-3	257,685	8·58	174,213	12·77
Borung ..	2,740,480	1871-2	4,590	15·59	1903-4	424,224	13·67	332,322	17·06
Kara Kara ..	1,472,640	1871-2	7,987	14·34	1899-00	125,345	9·68	113,648	14·60
Mallee Dist.—									
Weeah ..	2,562,560	1891-2	40	21·00	1909-10	33,554	11·66	33,554	11·66
Karkarooc ..	3,797,120	1879-80	233	10·87	1902-3	371,069	·22	280,095	10·17
Tatchera ..	2,138,240	1871-2	2	12·00	1904-5	342,022	3·35	245,010	10·34
Northern Dist.—									
Gunbower ..	862,720	1871-2	181	13·36	1880-1	75,114	9·29	30,699	12·90
Gladstone ..	1,153,280	1869-70	7,988	17·46	1909-10	113,902	14·28	113,902	14·28
Bendigo ..	1,247,360	1869-70	21,038	16·26	1909-10	122,016	16·71	122,016	16·71
Rodney ..	1,087,360	1855-6	63	26·66	1909-10	134,514	15·21	134,514	15 21
Moira ..	1,986,560	1871-2	14,936	15·93	1904-5	328,811	10·87	284,651	14·49

In the next table the average yield of wheat per acre in each of these counties during the last ten years is given :—

AVERAGE YIELD OF WHEAT PER ACRE IN WHEAT-GROWING COUNTIES, 1900-1 TO 1909-10.

District and County.	Average Yield of Wheat per Acre (in Bushels) during Year ended March.									
	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Western District—										
Ripon	16·75	18·13	9·60	15·32	16·57	16·59	14·96	15·05	22·09	14·77
Wimmera District—										
Lowan ..	7·43	8·53	3·21	13·47	11·32	12·43	10·72	9·99	12·46	12·77
Borung ..	8·83	7·22	·47	13·67	11·03	13·61	14·02	9·84	17·62	17·06
Kara Kara ..	10·10	10·19	1·38	15·97	12·50	14·59	14·64	10·04	17·20	14·60
Mallee District—										
Weeah ..	9·80	5·65	·46	12·39	7·24	7·54	9·21	6·23	12·01	11·66
Karkarooc ..	6·41	3·77	·22	10·76	3·30	5·77	8·15	2·51	9·11	10·17
Tatchera ..	4·83	3·22	·10	11·99	3·35	5·33	9·00	1·02	6·57	10·24
Northern District—										
Gunbower ..	9·56	3·93	·27	14·54	8·77	10·70	10·58	3·67	10·51	12·90
Gladstone ..	9·79	8·49	1·25	16·68	12·36	13·45	14·43	7·64	15·19	14·28
Bendigo ..	12·31	8·35	1·40	18·54	13·44	15·13	14·54	6·29	15·84	16·71
Rodney ..	13·04	10·82	4·37	17·40	12·40	15·37	10·38	7·32	15·88	15·21
Moira	11·70	9·27	1·15	17·18	10·87	12·71	8·99	5·61	10·77	14·49

The following table shows the area of each county, and the rise and fall in the cultivation of wheat in the central and north-central districts :—

WHEAT CULTIVATION IN CENTRAL AND NORTH-CENTRAL COUNTIES.

District and County.	Area of County.	First Cultivation Recorded.		
		Year.	Area.	Average Yield Per Acre.
	Acres.		Acres.	Bushels.
Central District—				
Bourke	1,101,440	1855–6	13,606	25·03
Grant	1,173,760	1855–6	12,072	25·65
Mornington	1,040,000	1855–6	943	29·57
Evelyn	750,080	1855–6	1,124	31·43
North-Central District—				
Anglesey	1,054,080	1855–6	129	28·77
Dalhousie	838,400	1855–6	3,113	26·67
Talbot	1,037,440	1855–6	445	33·68

District and County.	Largest Cultivation Recorded.			Cultivation in 1908–9.		Cultivation in 1909–10.	
	Year.	Area.	Average Yield Per Acre.	Area.	Average Yield per Acre.	Area.	Average Yield Per Acre.
		Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Central District—							
Bourke	1861–2	30,268	17·12	1,794	15·96	6,382	15·35
Grant	1861–2	35,349	15·86	7,213	18·13	18,896	12·95
Mornington	1860–1	3,153	14·03	121	20·41	470	14·91
Evelyn	1859–60	1,789	15·43	108	13·38	210	16·71
North-Central District—							
Anglesey	1874–5	4,146	12·96	884	19·04	2,641	18·15
Dalhousie	1869–70	25,124	21·47	2,795	17·23	7,671	14·69
Talbot	1871–2	76,555	13·81	10,885	19·46	23,635	13·46

The following is a table showing the area under wheat, the produce, and the average yield per acre, during the last fourteen years:—

WHEAT RETURN, 1896-7 TO 1909-10.

Year ended March.	Area under Crop.	Produce.	Average per Acre.
	Acres.	Bushels.	Bushels.
1897	1,580,613	7,091,029	4·49
1898	1,657,450	10,580,217	6·38
1899	2,154,163	19,581,304	9·09
1900	2,165,693	15,237,948	7·04
1901	2,017,321	17,847,321	8·85
1902	1,754,417	12,127,382	6·91
1903	1,994,271	2,569,364	1·29
1904	1,968,599	28,525,579	14·49
1905	2,277,537	21,092,139	9·26
1906	2,070,517	23,417,670	11·31
1907	2,031,893	22,618,043	11·13
1908	1,847,121	12,100,780	6·55
1909	1,779,905	23,345,649	13·12
1910	2,097,162	28,780,100	13·72

In 1902-3 wheat was grown on about 17,100 holdings, in 1903-4 on 17,400 holdings, in 1904-5 on 18,000 holdings, in 1905-6 on 18,362 holdings, in 1906-7 on 18,077 holdings, in 1907-8 on 16,303 holdings, in 1908-9 on 16,968 holdings, and in 1909-10 on 18,593 holdings. The decline in the yield and in the average per acre, which is observed in the two years prior to 1903-4, was due to the severity of the seasons experienced all over the wheat-growing districts of the State. In 1903-4 the yield was the second highest recorded, although the area under crop was smaller than in any other year since 1897-8, with three exceptions. The yield in 1905-6 was 23,417,670 bushels, and that in 1906-7, 22,618,043 bushels; in 1907-8, as the result of an adverse season, it again fell to the level of that in 1901-2, but in 1908-9 it reached 23,345,649 bushels, and in 1909-10, 28,780,100 bushels, a quantity in excess of that for any previous year. In addition to 2,097,162 acres harvested for grain, there were 186,400 acres of wheat cut for hay in 1909-10, so that the total area sown with wheat in that year was 2,283,562 acres. From information received from growers, it is estimated that the corresponding area for the season 1910-11 is 2,570,600 acres, or an increase of over 287,000 acres, the additional acreage being supplied in part by each district of the State. The standard weight of wheat is reckoned to be 60 lbs. to the bushel; but the actual weight of a bushel of Victorian wheat, according to the standard fixed by the Chamber of Commerce, was 62½ lbs. in 1899-1900, 1900-1, and 1901-2; 61 lbs. in 1902-3; 60½ lbs. in 1903-4; 61½ lbs. in 1904-5; 63 lbs. in 1905-6; 62¾ lbs. in 1906-7; and 62½ lbs. in 1907-8, 1908-9, and 1909-10.

Population and bread stuffs.

The following table shows, for 1898 and each subsequent year to 1906, the mean population of Victoria; the stocks of old wheat and flour on hand at the beginning of each year; the quantity of wheat grown; the quantity (after deducting imports) of wheat, flour, and biscuit exported; and the breadstuffs left over and available for home consumption. In addition to that required for food consumption, a quantity is used for seed purposes, equal, on an average, to three-quarters of a bushel per acre. Reliable information in regard to wheat imported across the border from New South Wales and South Australia is not now available, and this makes it impossible to state the particulars since 1906:—

POPULATION AND WHEAT RETURNS, 1898 TO 1906.

Year.	Mean Population.	Stocks of old Wheat and Flour on hand (1st January).	Wheat harvested for season ended March in each Year.	Wheat, Flour, and Biscuit.	
				Exported after deducting Imports.	Available for Home Consumption.
		Bushels.	Bushels.	Bushels.	Bushels.
1898 ...	1,172,950	330,224	10,580,217	1,855,951	9,054,490
1899 ...	1,186,265	1,282,902	19,581,304	10,662,011	10,202,195
1900 ...	1,193,338	2,121,700	15,237,948	7,011,242	10,348,406
1901 ...	1,202,960	1,872,000	17,847,321	10,248,093	9,471,228
1902 ...	1,207,110	1,525,288	12,127,382	3,899,246	9,753,424
1903 ...	1,208,880	903,616	2,569,364	−4,495,403*	7,968,383
1904 ...	1,207,537	173,708	28,525,579	18,616,831	10,082,456
1905 ...	1,212,517	2,609,878	21,092,139	15,427,229	8,274,788
1906 ...	1,227,072	549,930	23,417,670	17,053,652	6,913,948

* Net import.

Disposal of breadstuffs.

The manner in which the breadstuffs available for home consumption were disposed of in each of the eight years ended with 1905 was as follows:—

DISPOSAL OF BREADSTUFFS, 1898 TO 1905.

Year.	Wheat and Flour.				
	Quantity available for Home Consumption.	How disposed of—			
		Stocks on hand on 31st December.	Required for Seed.	Used for Food, &c.	
				Total.	Per Head.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1898 ...	9,054,490	1,282,902	1,770,941	6,000,647	5·12
1899 ...	10,202,195	2,121,700	1,772,602	6,307,893	5·32
1900 ...	10,348,406	1,872,000	1,696,000	6,780,406	5·68
1901 ...	9,471,228	1,525,288	1,529,249	6,416,691	5·33
1902 ...	9,753,424	903,616	1,616,946	7,232,862	5·99
1903 ...	7,968,383	173,708	1,626,954	6,167,721	5·10
1904 ...	10,082,456	2,609,878	1,807,351	5,665,227	4·69
1905 ...	8,274,788	549,930	1,705,182	6,019,676	4·96

With the exception of 1896 and 1903, the breadstuffs produced in the twenty-nine years ended with 1905 have been more than enough to supply home consumption. Wheat has therefore been exported each year, with these two exceptions. The maximum export was 18,616,831 bushels in 1904.

Stocks of wheat and flour.

As previously mentioned, there is now no reliable information as to the wheat imported through border stations, and this makes it difficult to accurately account for the disposal of that harvested in 1909-10, but it is estimated that about 8,500,000 bushels are required locally for food and seed, which will leave over 20,000,000 bushels of Victorian wheat for export during the year. Information as to the stocks of wheat and flour on hand on 30th June, 1910, has been received from holders, and is as follows:—

WHEAT AND FLOUR ON HAND, 30TH JUNE, 1910.

Where Located.	Quantity in Bushels.		
	Wheat.	Flour (equivalent in Wheat).	Total.
Railway Stations and in transit ...	124,100	65,300	189,400
Sites leased from Railways	4,041,600	35,900	4,077,500
Mills and Stores (other than on Railways)	3,622,300	551,000	4,173,300
Farms	1,910,000	...	1,910,000
Total	9,698,000	652,200	10,350,200

Wheat production of world.

The wheat crop of the world, according to the latest statement of the United States Agricultural Department, except in the case of Australasia, is shown below for the last three years:—

WHEAT PRODUCTION OF THE WORLD, 1907 TO 1909.

Continent.	1907.	1908.	1909.
	Bushels.	Bushels.	Bushels.
Australasia	72,027,000	50,223,000	71,364,000
Europe	1,606,603,000	1,678,972,000	1,943,274,000
Asia	466,710,000	384,380,000	430,987,000
Africa	65,078,000	60,257,000	66,531,000
America, North ...	735,778,000	785,036,000	911,933,000
,, South ...	178,636,000	218,834,000	189,672,000
Total	3,124,832,000	3,177,702,000	3,613,761,000

Oats.

In 1908-9 the area harvested for oats in Victoria was 419,869 acres, from which a yield of 11,124,940 bushels, or the second highest on record, was obtained, giving an average of 26.50 bushels

to the acre; in 1909-10, this area was reduced to 384,226 acres, and the produce to 7,913,423 bushels. The following return shows the harvest results for this crop for the last fourteen years:—

OATS GROWN, 1896-7 TO 1909-10.

Year Ended March.	Area under Crop.	Produce.	Average per Acre.
	Acres.	Bushels.	Bushels.
1897	419,460	6,816,951	16·25
1898	294,183	4,809,479	16·35
1899	266,159	5,523,419	20·75
1900	271,280	6,116,046	22·55
1901	362,689	9,582,332	26·42
1902	329,150	6,724,900	20·43
1903	433,489	4,402,982	10·16
1904	433,638	13,434,952	30·98
1905	344,019	6,203,429	18·03
1906	312,052	7,232,425	23·18
1907	380,493	8,845,654	23·25
1908	398,749	5,201,408	13·04
1909	419,869	11,124,940	26·50
1910	384,226	7,913,423	20·60

In addition to the area shown for last season, there were 660,525 acres of oats cut for hay, so that the total area sown with oats in 1909-10 was 1,044,751 acres. In August, 1910, it was estimated that the area under this grain for 1910-11 was 952,200 acres, or a decrease of 92,551 acres as compared with the year 1909-10. Imports into Victoria during 1909 included 65,860 bushels of oats, as well as 351,455 lbs. of oatmeal, whilst in the same year there were exported 1,432,372 bushels of oats and 5,194,482 lbs. of oatmeal.

Barley.

The area under barley was 58,603 acres in 1909-10, of which 38,762 were under malting barley, and 19,841 under other barley. There is a remarkable fluctuation in the area of land sown with barley, which seems strange, seeing that the market for

this product is uniformly good. The following table shows the returns for the last fourteen years. It will be noticed that the average per acre in 1905-6 is the best for the period covered by the table:—

CULTIVATION OF BARLEY, 1896-7 TO 1909-10.

Year ended March.	Area under Crop.		Produce.		Average per Acre.		
	Malting.	Other.	Malting.	Other.	Malting.	Other.	Total.
	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1897	53,421	8,952	641,406	174,199	12·01	19·45	13·08
1898	26,118	11,087	502,411	256,043	19·24	23·09	20·39
1899	33,584	14,275	776,785	335,782	23·13	23·52	23·25
1900	65,970	13,603	1,197,948	268,140	18·16	19·71	18·42
1901	49,723	9,130	1,003,477	212,001	20·18	23·22	20·65
1902	25,480	6,943	527,564	166,287	20·71	23·95	21·40
1903	26,436	11,280	394,877	166,267	14·94	14·74	14·88
1904	33,586	14,174	878,721	339,282	26·17	23·80	25·50
1905	30,799	15,290	575,505	298,594	18·69	19·53	18·97
1906	26,279	14,659	645,456	416,683	24·56	28·43	25·95
1907	30,052	22,764	674,043	581,399	22·43	25·54	23·77
1908	41,940	21,134	747,315	311,980	17·82	14·76	16·79
1909	42,882	21,766	1,013,384	497,797	23·63	22·87	23·38
1910	38,762	19,841	658,105	365,279	16.98	18·41	17·46

During 1909, barley and malt were imported to the extent of 315,844 and 1,142 bushels respectively, South Australia having supplied 97 per cent of the former; exports accounted for 197,982 bushels of barley, and 409,377 bushels of malt, 74 per cent. of the latter having been sent to New South Wales. In the same year 986,049 bushels of barley were used locally in the production of 978,291 bushels of malt.

Potatoes. The greatest area of land planted with potatoes was 62,390 acres last season; the next being 57,334 acres in 1891-2. The highest yield was 204,155 tons in 1890-1, the next 200,523 tons in 1891-2. The yield in 1909-10 was 174,970 tons, or 2 tons 16 cwt. per acre. The following table shows the potato returns for the last fourteen years:—

POTATOES GROWN, 1896-7 TO 1909-10.

Year ended June.	Area under Crop.	Produce.	Average per Acre.
	Acres.	Tons.	Tons.
1897	43,532	146,555	3·37
1898	44,197	67,296	1·52
1899	41,252	161,142	3·91
1900	55,469	173,381	3·13
1901	38,477	123,126	3·20
1902	40,058	125,474	3·13
1903	49,706	168,759	3·40
1904	48,930	167,736	3·43
1905	46,912	92,872	1·98
1906	44,670	115,352	2·58
1907	55,372	166,839	3·01
1908	54,149	135,110	2·50
1909	47,903	152,840	3·19
1910	62,390	174,970	2·80

Trade in potatoes is mainly confined to that with the Australian States, as in 1908, of 10,465 tons imported, all but 1 per cent. were received from Tasmania; while of 21,130 tons exported, 8,954 were sent to New South Wales, 5,009 to Queensland, 3,981 to Western Australia, and 3,010 to South Australia. In 1909, the import section of this trade was interrupted on account of the prevalence of "Irish Blight" in the potato crops of Tasmania, as the result of which restrictions were placed upon the transfer of potatoes from affected areas. During that year the imports into Victoria amounted to only 2,557 tons, of which all but 76 tons were received from Tasmania; but the exports reached 25,642 tons, the principal consignments being 8,367 tons to South Australia, 7,157 tons to New South Wales, 5,451 tons to Western Australia, and 4,117 tons to Queensland. During the first six months of 1910, Victoria exported to other States 16,693 tons of potatoes, valued at £81,790. Judging by the increased demand and prospective high values, it is anticipated that much more of the available area in this State suitable to this crop will next season be brought under cultivation, especially as the conditions surrounding the Victorian grower leave him little to dread from the potato disease.

Hay.

Statistics of the hay crop were collected as far back as 1841, when 450 acres returned 900 tons. The greatest area sown, and the maximum production since that date were in 1908, when 956,371 acres were cut for 1,415,746 tons; the next highest record in production was in 1903, when 1,233,063 tons were produced. The quantity of straw returned for the season 1909-10 was 159,590 tons. The following is a return of the hay crop for each of the last fourteen years:—

HAY RETURNS, 1896 TO 1909.

Year.	Area under Crop.	Produce.	Average per Acre.
	Acres.	Tons.	Tons.
1896	416,667	449,056	1·08
1897	580,000	659,635	1·14
1898	565,345	723,299	1·28
1899	450,189	596,193	1·32
1900	502,105	677,757	1·35
1901	659,239	884,369	1·34
1902	580,884	601,272	1·04
1903	733,353	1,233,063	1·68
1904	452,459	514,316	1·14
1905	591,771	864,177	1·46
1906	621,139	881,276	1·42
1907	682,194	682,370	1·00
1908	956,371	1,415,746	1·48
1909	864,359	1,186,738	1·37

Hay making is largely confined to oaten crops, as of the total hay produced last season there were 912,636 tons of oaten hay, equal to 1.38 tons per acre harvested, 248,611 tons of wheaten hay, or 1.33 tons per acre, and 25,491 tons of hay made from lucerne and other crops, equal to 1.46 tons per acre harvested. The trade in hay and chaff was not very great in 1909; exports amounted to only

74,928 tons, of which 95 per cent. was sent to New South Wales and Queensland, while the quantity imported was only 465 tons.

The five principal crops.

The area under the five principal crops during each of the last eleven years, the production of these crops, and the proportion of each to the population, are exhibited in the following table. It is interesting to observe the variations per head of the population in the areas under crop, and in the yields during the period covered by the table:—

AREA, PRODUCTION, AND AVERAGES PER HEAD OF POPULATION OF FIVE PRINCIPAL CROPS, 1899-1900 TO 1909-10.

Year ended March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.
1900 ..	2,165,693	271,280	79,573	55,469	450,189
1901 ..	2,017,321	362,689	58,853	38,477	502,105
1902 ..	1,754,417	329,150	32,423	40,058	659,239
1903 ..	1,994,271	433,489	37,716	49,706	580,884
1904 ..	1,968,599	433,638	47,760	48,930	733,353
1905 ..	2,277,537	344,019	46,089	46,912	452,459
1906 ..	2,070,517	312,052	40,938	44,670	591,771
1907 ..	2,031,893	380,493	52,816	55,372	621,139
1908 ..	1,847,121	398,749	63,074	54,149	682,194
1909 ..	1,779,905	419,869	64,648	47,903	956,371
1910 ..	2,097,162	384,226	58,603	62,390	864,359
	PRODUCTION.				
	Bushels.	Bushels.	Bushels.	Tons.	Tons.
1900 ..	15,237,948	6,116,046	1,466,088	173,381	596,193
1901 ..	17,847,321	9,582,332	1,215,478	123,126	677,757
1902 ..	12,127,382	6,724,900	693,851	125,474	884,369
1903 ..	2,569,364	4,402,982	561,144	168,759	601,272
1904 ..	28,525,579	13,434,952	1,218,003	167,736	1,233,063
1905 ..	21,092,139	6,203,429	874,099	92,872	514,316
1906 ..	23,417,670	7,232,425	1,062,139	115,352	864,177
1907 ..	22,618,043	8,845,654	1,255,442	166,839	881,276
1908 ..	12,100,780	5,201,408	1,059,295	135,110	682,370
1909 ..	23,345,649	11,124,940	1,511,181	152,840	1,415,746
1910 ..	28,780,100	7,913,423	1,023,384	174,970	1,186,738
	AREA PER HEAD OF POPULATION.				
	Acres.	Acres.	Acres.	Acres.	Acres.
1900 ..	1·82	·23	·07	·05	·38
1901 ..	1·69	·30	·05	·03	·42
1902 ..	1·45	·27	·03	·03	·54
1903 ..	1·65	·36	·03	·04	·48
1904 ..	1·62	·36	·04	·04	·61
1905 ..	1·88	·28	·04	·04	·37
1906 ..	1·70	·26	·03	·04	·49
1907 ..	1·66	·31	·04	·04	·51
1908 ..	1·47	·32	·05	·04	·54
1909 ..	1·40	·33	·05	·04	·75
1910 ..	1·63	·30	·05	·05	·67

AREA, PRODUCTION, AND AVERAGES PER HEAD OF POPULATION OF FIVE PRINCIPAL CROPS, 1899-1900 TO 1909-10—*continued.*

Year ended March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	PRODUCTION PER HEAD OF POPULATION.				
	Bushels.	Bushels.	Bushels.	Tons.	Tons.
1900 ..	12·81	5·14	1·23	·15	·50
1901 ..	14·91	8·00	1·02	·10	·57
1902 ..	10·01	5·56	·57	·10	·73
1903 ..	2·12	3·63	·46	·14	·50
1904 ..	23·60	11·11	1·01	·14	1·02
1905 ..	17·47	5·14	·72	·08	·42
1906 ..	19·22	5·94	·87	·10	·71
1907 ..	18·43	7·21	1·02	·14	·72
1908 ..	9·62	4·13	·84	·11	·54
1909 ..	18·33	8·74	1·19	·12	1·11
1910 ..	22·42	6·16	·80	·14	·92

The next table compares last season's yields of the principal crops with those of the two previous seasons, and the averages of the ten years ended in March, 1907.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS, 1897-8 TO 1906-7, 1907-8, 1908-9, AND 1909-10.

Crop.	Yield per Acre.			
	Average of Ten Years, 1897-8 to 1906-7.	1907-8.	1908-9.	1909-10.
Wheat ... bushels	8·64	6·55	13·12	13·72
Oats ... ... ,,	21·26	13·04	26·50	20·60
Barley—Malting ,,	20·62	17·82	23·63	16·98
,, Other... ,,	23·16	14·76	22·87	18·41
,, Total ... ,,	21·32	16·79	23·38	17·46
Potatoes ... tons	2·93	2·50	3·19	2·80
Hay—Wheaten ,,	1·16	·82	1·32	1·33
,, Oaten, &c. ,,	1·42	1·08	1·55	1·38
,, Total ... ,,	1·33	1·00	1·48	1·37

The substantial improvement in the average yield of wheat is to a great extent due to improved methods of cultivation.

The percentage of total area under the principal crops in each district during last season was as follows:—

PERCENTAGE OF AREA IN EACH DISTRICT TO TOTAL AREA UNDER EACH OF THE PRINCIPAL CROPS, 1909-10.

District.	Percentage in each District of Area under—						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
Central	1·24	10·54	40·99	37·52	23·87	36·12	3·78
North-Central	1·62	9·79	10·37	23·01	7·97	3·94	1·72
Western	5·08	10·93	17·83	23·35	13·63	9·00	8·10
Wimmera	29·57	20·54	1·69	·70	16·62	2·88	40·89
Mallee	26·64	9·53	4·28	..	6·89	6·02	15·71
Northern	32·70	27·14	16·86	·14	19·57	10·52	28·84
North-Eastern	2·79	7·02	1·25	3·77	5·00	8·93	·78
Gippsland	·36	4·51	6·73	11·51	6·45	22·59	·18

NOTE.—For counties contained in each district, see table on page 619.

This statement shows that during last season 89 per cent. of the area under wheat was in the Wimmera, Mallee, and Northern districts; nearly half that under oats was in the Wimmera and Northern districts; three-fourths of that under barley was in the Central, Western, and Northern districts; and 84 per cent. of that under potatoes was in the Central, North-Central, and Western districts. Hay was more uniformly cultivated over the whole State, though the proportion was somewhat small in the North-Central, Mallee, North-Eastern, and Gippsland districts. The Central district accounted for more than one-third of the area under minor crops, principally through a much larger area being used for gardens and orchards and for peas and beans than in other portions of the State. Naturally, the fallow land is confined to the wheat-growing districts.

The area under the principal crops in proportion to the cultivation in each district during last season was as follows:—

PERCENTAGE OF AREA UNDER PRINCIPAL CROPS TO TOTAL CULTIVATION IN EACH DISTRICT, 1909-10.

District.	Percentage of Total Cultivation under—						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
Central	5·98	9·34	5·54	5·39	47·54	15·96	10·25
North-Central	17·99	19·94	3·22	7·61	36·52	4·01	10·71
Western	26·38	10·40	2·59	3·61	29·17	4·27	23·58
Wimmera	46·62	5·93	·07	·03	10·80	·42	36·13
Mallee	65·44	4·29	·30	..	6·98	1·35	21·64
Northern	51·62	7·85	·74	·01	12·74	1·52	25·52
North-Eastern	37·00	17·06	·46	1·49	27·32	10·84	5·83
Gippsland	5·58	12·63	2·87	5·23	40·60	31·56	1·53
Total of Victoria ..	43·38	7·95	1·21	1·29	17·88	3·97	24·32

NOTE.—For counties contained in each district, see table on page 619.

It is apparent that the area cultivated was mainly confined to wheat in the Wimmera, Mallee, and Northern districts; largely to wheat and hay in the Western and North-Eastern districts; to oats and hay in the North-Central district; and to hay and minor crops in the Central and Gippsland districts.

In Victoria the proportion of the land under each crop to the total area under tillage during the last twelve years was as stated hereunder:—

PROPORTION TO TOTAL CULTIVATION OF LAND UNDER EACH CROP, 1898-9 TO 1909-10.

Year ended March—	Proportionate Area to Total Cultivated Land of— (Exclusive of Area under Artificial Grass.)						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1899	57·78	7·14	1·28	1·11	15·17	3·64	13·88
1900	59·04	7·39	2·17	1·51	12·27	3·74	13·88
1901	54·28	9·76	1·58	1·03	13·51	3·62	16·22
1902	48·09	9·02	·89	1·10	18·08	4·13	18·69
1903	53·34	11·59	1·01	1·33	15·54	4·02	13·17
1904	48·95	10·78	1·19	1·22	18·24	3·90	15·72
1905	54·54	8·24	1·10	1·12	10·84	3·71	20·45
1906	48·49	7·30	·96	1·05	13·86	3·75	24·59
1907	47·31	8·86	1·23	1·29	14·46	3·77	23·08
1908	44·76	9·66	1·53	1·31	16·53	4·54	21·67
1909	39·59	9·34	1·44	1·06	21·27	4·29	23·01
1910	43·38	7·95	1·21	1·29	17·88	3·97	24·32

It is shown on page 617, that during the period covered by this table, the area under cultivation has steadily increased. By the figures in the table above it would seem that the actual area under wheat has not made anything like a corresponding increase. If, however, it be taken in conjunction with land in fallow which is mainly used for wheat cropping, it will be observed that in proportion to the total area under cultivation, that used for wheat has been fairly uniform in the last twelve years, but that in the later years the practice to fallow preparatory to sowing has grown considerably.

Prices of agricultural produce.

The following information regarding prices in February and March, except that relating to potatoes, has been procured direct from the growers. The table gives the average price for each of the last twelve years:—

PRICES OF PRODUCE, 1899 TO 1910.

Year.	Average Price in February and March.							
	Wheat.	Oats.	Barley.		Hay.	Potatoes.		
			Malting.	Other.		Early Crop.	Main Crop (after March).	
	Per bushel.	Per bushel.	Per bushel.	Per bushel.	Per ton.	Per ton.	Per ton.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
1899	2 2	1 7¾	4 2½	2 2½	34 5	73 0	36 5	
1900	2 5	2 1	3 2½	2 3½	40 9	41 11	26 11	
1901	2 5¾	1 6½	2 10¾	1 11¼	39 4	73 11	55 10	
1902	2 10¼	2 4	3 9¼	2 9¼	55 5	77 7	84 4	
1903	6 0	3 2¾	4 5¾	3 8	100 1	91 3	47 1	
1904	2 8	1 1½	2 10½	1 9½	27 2	52 6	26 1	
1905	2 11½	1 6	3 2½	2 1	33 6	110 0	84 0	
1906	2 10½	1 10½	3 11	2 8½	38 0	115 6	101 5	
1907	2 9	1 10¼	4 2	2 2¾	38 2	59 1	37 6	
1908	4 0½	3 0½	4 11½	3 7	88 7	70 4	54 11	
1909	3 9¼	1 9¼	3 9¾	2 5	46 0	80 0	51 0	
1910	3 9¾	1 11½	3 8¼	2 4¾	41 0	78 0	57 0	

In Melbourne the price of wheat throughout last year was good, having ranged from 3s. 7½d. to 5s. 4½d. per bushel. The latter price was reached in the month of April. After that month the price declined, and in December it was down to 4s. 1½d. The highest and lowest prices in Melbourne during each month in 1909 were as follows:—

PRICES OF WHEAT IN MELBOURNE, 1909.

Month.	Price per Bushel.	
	Highest.	Lowest.
	s. d.	s. d.
January	3 9	3 7½
February	4 3	3 10
March	4 7	4 4
April	5 4½	4 10
May	5 3¼	4 11½
June	5 0½	4 11½
July	5 1	4 11
August	4 9	4 6
September	4 7	4 5½
October	4 8¼	4 6½
November	4 7¼	4 5½
December	4 5½	4 1½

The following return shows the yield of the principal crops in the various Australian States and New Zealand for each of the nine years ended March, 1910:— Yield of crops in Australasia.

YIELD OF PRINCIPAL CROPS IN AUSTRALASIA, 1901-2 TO 1909-10.

Year ended March.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
WHEAT.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1902 ...	12,127,382	14,808,705	1,692,222	8,012,762	956,886	963,662	4,046,589
1903 ...	2,569,364	1,585,097	6,165	6,354,912	970,571	876,971	7,457,915
1904 ...	28,525,579	27,334,141	2,436,799	13,209,465	1,855,460	767,398	7,891,654
1905 ...	21,092,139	16,464,415	2,149,663	12,023,172	2,013,237	792,956	9,123,673
1906 ...	23,417,670	20,737,200	1,137,321	20,143,798	2,308,305	776,478	6,798,934
1907 ...	22,618,043	21,817,938	1,108,902	17,466,501	2,758,567	651,408	5,605,252
1908 ...	12,100,780	9,155,884	693,527	19,135,557	2,925,690	644,235	5,567,139
1909 ...	23,345,649	15,483,276	1,202,799	19,397,672	2,460,823	700,777	8,772,790
1910 ...	28,780,100	28,532,029	1,571,589	25,133,851	5,602,368	793,660	8,661,000
OATS.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels	Bushels.
1902 ...	6,724,900	687,179	42,208	469,254	163,653	1,702,659	15,045,233
1903 ...	4,402,982	351,758	520	620,823	161,714	1,752,745	21,766,708
1904 ...	13,434,952	1,252,156	70,713	902,936	255,300	1,621,950	15,107,237
1905 ...	6,203,429	652,646	15,137	555,696	226,318	1,178,819	14,553,611
1906 ...	7,232,425	883,081	5,858	869,146	283,987	1,200,024	12,707,982
1907 ...	8,845,654	1,404,574	28,884	896,166	457,155	1,979,574	11,201,789
908 ...	5,201,408	851,776	9,900	874,388	721,753	1,526,002	15,021,861
1909 ...	11,124,940	1,119,113	38,811	1,280,235	739,303	1,946,010	18,906,788
1910 ...	7,913,423	1,966,186	50,018	1,209,131	1,248,162	2,347,548	13,804,000
BARLEY.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1902 ...	693,851	103,361	277,037	243,362	34,723	167,483	855,993
1903 ...	561,144	18,233	3,595	317,155	45,778	201,133	1,136,232
1904 ...	1,218,003	174,147	510,557	487,920	51,487	212,459	1,160,504
1905 ...	874,099	266,781	331,772	346,718	37,332	163,194	1,128,164
1906 ...	1,062,139	111,266	61,816	505,916	49,497	93,664	1,024,045
1907 ...	1,255,442	152,739	158,283	491,246	48,827	141,895	1,035,346
1908 ...	1,059,295	75,148	64,881	566,937	76,205	149,186	1,163,406
1909 ...	1,511,181	166,538	137,667	825,740	74,433	158,645	1,938,452
1910 ...	1,023,384	272,663	193,586	691,424	101,673	153,654	1,304,000
POTATOES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1902 ...	125,474	39,146	22,402	15,059	5,739	114,704	206,815
1903 ...	168,759	30,732	3,257	28,312	6,200	163,518	193,267
1904 ...	167,736	56,743	17,649	31,415	4,315	168,419	208,787
1905 ...	92,872	48,754	19,231	19,521	5,614	110,547	134,608
1906 ...	115,352	49,889	11,308	20,328	6,297	64,606	123,402
1907 ...	166,839	114,856	15,830	22,277	5,028	182,323	169,875
1908 ...	135,110	55,882	13,177	20,263	5,671	145,483	142,999
1909 ...	152,840	71,794	11,550	21,588	6,695	121,605	195,206
1910 ...	174,970	89,000	13,544	18,569	5,948	73,862	180,500
HAY.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1902 ...	884,369	472,621	122,039	346,467	89,729	88,125	125,968*
1903 ...	601,272	243,289	23,181	308,825	91,593	89,210	138,684*
1904 ...	1,233,063	816,810	136,117	479,723	119,156	115,513	154,334*
1905 ...	514,316	366,293	80,662	294,252	113,794	73,457	157,632*
1906 ...	864,177	459,182	56,829	435,546	139,380	90,077	161,498*
1907 ...	881,276	621,846	94,343	398,866	158,112	104,797	140,402*
1908 ...	682,370	376,800	77,601	376,170	137,511	98,406	160,870*
1909 ...	1,415,746	729,507	92,947	591,141	170,008	137,518	173,134*
1910 ...	1,186,738	981,112	96,854	574,475	195,182	118,746	†

* Estimated. † No Information.

Other crops.

The following table shows the area under other than principal crops and the production since March, 1904 :—

OTHER THAN PRINCIPAL CROPS, 1904-5 TO 1909-10.

Crop.	1904–5.		1905–6.		1906–7.	
	Area.	Production.	Area.	Production.	Area.	Production.
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize	11,394	623,736	11,785	641,216	11,559	704,961
Rye	2,267	30,578	1,959	28,893	1,571	20,770
Peas and Beans ..	11,523	201,145	12,253	265,206	12,012	286,636
		Tons.		Tons.		Tons.
Mangel-wurzel ..	1,441	13,894	1,657	16,400	1,360	16,139
Beet, Carrots, Parsnips, and Turnips	823	6,149	909	6,408	713	5,644
Onions	2,862	12,969	4,889	25,597	4,705	28,000
Green Forage ..	29,902	..	34,041	..	36,502	..
		Bushels.		Bushels.		Bushels.
Grass and Clover Seeds	2,249	27,300	2,767	33,281	1,859	17,494
		Cwt.		Cwt.		Cwt.
Hops	251	1,449	313	1,906	323	2,787
Tobacco ..	106	1,112	169	1,405	133	603
Vines—Grapes ..	28,016	452,433	26,402	498,590	25,855	752,826
Flax	564	320 fibre, 781 seed	500	332 fibre, 2,357 seed	655	1,116 fibre, 4,853 seed
Gardens and Orchards	60,655	..	59,607	..	61,927	..
Minor Crops ..	2,716	..	2,763	..	2,699	..
Land in Fallow ..	853,829	..	1,049,915	..	990,967	..
Artificial Grasses	953,543	..	1,040,335	..	1,095,642	..

Crop.	1907–8.		1908–9.		1909–10.	
	Area.	Production.	Area.	Production.	Area.	Production.
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize	10,844	508,761	14,004	650,462	19,112	1,158,031
Rye	1,441	21,966	2,024	32,504	2,399	26,070
Peas and Beans ..	13,613	213,818	11,153	197,807	9,824	145,742
		Tons.		Tons.		Tons.
Mangel-wurzel ..	1,184	14,295	1,370	15,048	1,119	14,116
Beet, Carrots, Parsnips, and Turnips	496	3,650	702	4,541	573	4,215
Onions	4,249	22,649	5,340	24,384	6,434	31,715
Green Forage ..	59,897	..	63,066	..	56,586	..
		Bushels.		Bushels.		Bushels.
Grass and Clover Seeds	1,076	10,685	1,741	18,161	1,595	13,160
		Cwt.		Cwt.		Cwt.
Hops	248	1,179	189	1,094	140	882
Tobacco ..	345	2,764	413	2,647	321	†
Vines—Grapes ..	26,465	535,804	24,430	561,679	22,768	548,828
Flax	1,263	60 fibre, 2,710 seed	190	6 fibre, 153 seed	1,213	676 fibre, 1,515 seed
Gardens and Orchards	63,133	..	64,225	..	66,322	..
Minor Crops ..	2,982	..	4,218*	..	3,389*	..
Land in Fallow ..	894,300	..	1,034,422	..	1,175,750	..
Artificial Grasses	1,095,471	..	1,029,711	..	988,671	..

* For details see page 643. † Not available.

In the year 1901-2 there were 10,020 acres under maize, from which a return of 615,472 bushels was obtained. After that year the area of land under this crop was fairly constant until 1908-9, when it was increased to 14,004 acres, which produced 650,462 bushels. In 1909-10 the area was further increased to 19,112 acres, and the production to 1,158,031 bushels, of which 312,501 bushels were in the county of Tanjil, 309,581 in Tambo, 266,683 in Dargo, 192,886 in Croajingolong, 24,178 in Buln Buln, 19,188 in Bogong, 12,597 in Benambra, and 10,790 in Delatite. Maize is grown in other counties of the State, but to such a small extent that it accounted for only 1 per cent. of the total production last season. Maize.

The area under rye has increased during the last three seasons, and in 1909-10 was 2,399 acres, from which 26,070 bushels of grain were obtained. This area is the second highest on record, having been exceeded only in 1869-70, when 4,275 acres were cultivated for a yield of 65,822 bushels. The production last season was, however, not only below that of 1869-70, but was less than that of each of seven other seasons as well. Rye was in 1909-10 grown throughout the State, except in the counties of Polwarth, Hampden, Borung, Gunbower, Gladstone, Rodney, Tambo Millewa, Weeah, Karkarooc, and Tatchera. In Delatite, the quantity yielded was 7,460 bushels, in Bogong 3,002 bushels, and in Talbot 2,030 bushels. In each of the counties, Villiers, Anglesey, Moira, and Buln Buln the produce exceeded 1,000 bushels, but in no other county did it reach that quantity. Rye.

In the area under peas and beans there was an increase from 8,297 acres in 1901-2 to 12,253 acres in 1905-6, and to 13,613 acres in 1907-8; but there was a decline in 1908-9 to 11,153 acres, and in 1909-10 to 9,824 acres. The production last season was with two exceptions the lowest during the last 39 years, and was only one-seventh of that in 1893-4. Peas and beans are generally grown in all the counties except those in the Mallee District. Those from which the principal crops were obtained last season were Buln Buln with 38,979 bushels, Tanjil with 19,830 bushels, Mornington with 17,035 bushels, and Grant with 14,096 bushels. Peas and beans.

A considerable increase in the area under mangel-wurzel has taken place since 1900-1, there having been 865 acres in 1901-2, 1,360 acres in 1906-7, and 1,370 acres in 1908-9. There was, however, a decline to 1,119 acres in 1909-10. During the same period the production increased from 9,679 tons in 1901-2 to 16,139 tons in 1906-7, 15,048 tons in 1908-9, and 14,116 tons in 1909-10. Mangolds are grown principally in the counties of Villiers, Grant, Heytesbury, Buln Buln, Hampden, Grenville, Bourke, and Mornington. Mangel-wurzel.

The cultivation of beet, carrots, parsnips, and turnips, exclusive of those grown in market gardens, showed a decrease of 18 per cent. in area and 7 per cent. in production in the last, as compared Beet, carrots, parsnips, and turnips.

with the previous season. In 1901-2, the land sown was 561 acres; in 1908-9 it was 702 acres, and last year it fell to 573 acres. The produce was 4,140 tons, 4,541 tons, and 4,215 tons in the respective years named.

Onions. Onions are grown in nearly every county south of the Dividing Range. The counties yielding the largest crops last season were—Bourke, Grenville, Polwarth, Buln Buln, and Mornington. In Bourke, the yield was 6,813 tons from 1,110 acres; in Grenville, 4,939 tons from 1,208 acres; in Polwarth, 4,745 tons from 825 acres; in Buln Buln, 4,396 tons from 751 acres; in Mornington, 3,251 tons from 699 acres; in Villiers, 2,812 tons from 549 acres; and in Grant, 2,704 tons from 820 acres. The total area under and production of onions in 1909-10 exceeded those of any previous year. The following is a return for the last fifteen years:—

ONION CULTIVATION, 1895-6 TO 1909-10.

Year.	Area.	Produce.	Year.	Area.	Produce.
	Acres.	Tons.		Acres.	Tons.
1895-6 ..	3,780	10,759	1903-4 ..	4,176	25,218
1896-7 ..	3,735	11,256	1904-5 ..	2,862	12,969
1897-8 ..	3,751	11,217	1905-6 ..	4,889	25,597
1898-9 ..	4,472	17,308	1906-7 ..	4,705	28,000
1899-1900 ..	4,436	19,905	1907-8 ..	4,249	22,649
1900-1 ..	2,815	12,766	1908-9 ..	5,340	24,384
1901-2 ..	4,151	20,859	1909-10 ..	6,434	31,715
1902-3 ..	5,565	27,467			

Green forage. During the last nine seasons the area devoted to green forage was lowest in 1904-5, when it was 29,902 acres. In 1908-9 it had increased to 63,066 acres, the highest recorded since 1877-8, and in 1909-10 it was 56,586 acres, which was less than that in each of the two preceding years.

Grass and clover seed. The area under grass and clover for seed last season showed an increase on the figures for 1907-8; but a reduction on those for 1908-9 and with three exceptions was the lowest during the last thirty-eight years. The product returned in 1908-9 from 1,741 acres was 18,161 bushels, and in 1909-10 from 1,595 acres it was 13,160 bushels. It is remarkable that such favorable results have not led to the reservation of a greater area for seed purposes.

Hops. The hop-growing industry attained its maximum development in 1883-4, when 1,758 acres were planted, and yielded 15,717 cwt. Delatite, Dargo, and Bogong were the chief counties in which hops were grown last season, and yields were also recorded in Tanjil, Polwarth, Heytesbury, and Evelyn. There has been a heavy falling-off in the last twenty-six years, and the area and production of hops in 1909-10 were lower than in any other of the last thirty-five years. Last season there were only 24 growers, whose return from 140 acres was 882 cwt.

Flax. In 1895-6 there were 1,969 acres under flax or linseed ("Linum Usitatissimum"), but in 1898-9 the area had fallen to 72 acres. Since that year the area sown has increased, the returns for 1903-4 showing

19 growers of flax, who cultivated 259 acres, and produced 1,226 cwt. of seed, 61 cwt. of made fibre, and 4,769 cwt. of straw for treatment; in 1904-5 there was a considerable increase, the number of growers being 33, the area cultivated, 564 acres, and the produce 781 cwt. of seed, 320 cwt. of fibre made, and 3,060 cwt. of straw for treatment; in 1906-7 there were 72 growers, and the area increased to 655 acres, which produced 4,853 cwt. of seed and 1,116 cwt. of fibre, with 13,800 cwt. of straw awaiting treatment; in 1907-8 there were 87 growers, and the area still further increased to 1,263 acres, but the season was very unfavorable to the crop, and only 2,710 cwt. of seed, 60 cwt. of fibre, and 9,800 cwt. of straw for treatment were returned; in 1908-9 there were only 21 growers who cultivated 190 acres, and produced 153 cwt. of seed, 6 cwt. of fibre, and 861 cwt. of straw. In 1909-10, the effect of a stimulus caused by the Commonwealth Government granting a bonus of 10 per cent. on the market value of both fibre and seed was very evident, as in Victoria there were 106 growers who cultivated 1,213 acres, and produced 1,515 cwt. of seed, and 676 cwt. of fibre, as well as 836 cwt. of straw which awaited treatment.

In 1909, imports into Victoria included linseed to the value of £3,544; linseed oil worth £45,477; and fibre worth £116,117. After supplying local requirements there is an extensive market, as there is scarcely any limit to the demand for linseed and fibre in other parts of the world. There is therefore great promise that in this State the flax industry will become firmly established, and be very profitable.

In addition to the Government tobacco experimental station (see page 593), there are plantations in the counties of Delatite, along the banks of the King River, and in Bogong; last season there was also a small area cultivated in Anglesey. Particulars relating to the cultivation of tobacco for the last fourteen years are as follows:— Tobacco.

CULTIVATION OF TOBACCO, 1896-7 TO 1909-10.

Year.	Number of Growers.	Area.	Produce.
		Acres.	Cwt. (dry.)
1896-7	233	1,264	7,890
1897-8	77	522	3,419
1898-9	31	78	190
1899-1900	28	155	1,365
1900-1	16	109	311
1901-2	17	103	345
1902-3	24	171	781
1903-4	25	129	848
1904-5	20	106	1,112
1905-6	31	169	1,405
1906-7	30	133	603
1907-8	49	345	2,764
1908-9	60	413	2,647
1909-10	50	321	..

The maximum quantity of tobacco grown was in 1880-1, when 17,333 cwt. of dry leaf was produced, but of late years tobacco growing in Victoria has been upon a small scale.

Vines, wine, raisins, &c.

The area under vines showed a steady increase from 4,284 acres in 1879-80, to 30,307 acres in 1894-5. In 1900-1 the area was 30,634 acres, but since then there has been a falling off to 25,855 acres in 1906-7, and 22,768 acres in 1909-10. The vineyards are distributed fairly well over the State. There are, however, districts where the principal industries are connected with vine-growing; the Shire of Mildura producing last season 341,779 cwt. of grapes; Rutherglen, 65,587 cwt.; and Yackandandah, 22,067 cwt. In the Goulburn Valley wine-making is a flourishing industry. In the Wimmera district, in the County of Borung, there are many vineyards, particularly in the Stawell Shire, where 6,953 cwt. of grapes was produced in 1909-10. At Mildura the crop was principally dried for raisins and currants. The results of fourteen years' operations are as follows:—

VINE PRODUCTION, 1897 TO 1910.

Year ended June.	Number of Growers.	Area.	Produce.			
			Grapes Gathered.	Wine made.	Raisins Made.	Currants Made.
		Acres.	Cwt.	Gallons.	Cwt.	Cwt.
1897 ..	2,603	27,934	601,053	2,822,263	11,276	762
1898 ..	2,364	27,701	457,437	1,919,389	13,234	462
1899 ..	2,453	27,568	468,887	1,882,209	17,979	1,033
1900 ..	2,382	27,550	298,920	933,282	17,847	3,315
1901 ..	2,486	30,634	631,912	2,578,187	29,370	3,715
1902 ..	2,469	28,592	497,269	1,981,475	27,533	2,546
1903 ..	2,347	28,374	444,966	1,547,188	35,534	3,722
1904 ..	2,260	28,513	654,965	2,551,150	53,447	7,490
1905 ..	2,253	28,016	452,433	1,832,386	30,295	5,974
1906 ..	2,009	26,402	498,590	1,726,444	42,975	6,403
1907 ..	1,860	25,855	752,826	2,044,833	98,127	11,730
1908 ..	1,967	26,465	535,804	1,365,600	68,617	10,440
1909 ..	1,637	24,430	561,679	1,437,106	69,536	11,929
1910 ..	1,606	22,768	548,828	991,941	81,044	27,408

Of the total quantity of grapes gathered in 1909-10, 146,706 cwt. was used for making wine, 338,342 cwt. for raisins and currants, and 63,780 cwt. for table consumption and export. Of the 81,044 cwt. of raisins made, 49,810 cwt. were sultanas almost entirely from Mildura. That destructive insect affecting the vines, the phylloxera vastatrix, has not during recent years shown itself to any marked extent. Attempts are being made to completely stamp out the pest by the Department of Agriculture through the distribution of disease-resistant stocks.

Raisins are being produced in Victoria upon a scale far in excess of local requirements. It is estimated that a year's consumption of raisins is about 20,000 cwt., consequently over 61,000 cwt. of the production in 1910 is available for export. With regard to

currants, a year's consumption is about 29,650 cwt., and it was not until last season that anything approaching the required quantity was locally produced.

Orchards.

The total number of persons in the State growing fruit for sale was 5,647 in 1909-10, as against 5,586 in 1908-9, 5,241 in 1907-8, 5,367 in 1906-7, 5,163 in 1905-6, and 5,341 in 1904-5. The area under orchards in these years was 51,578, 50,675, 49,212, 49,086, 47,312, and 47,205 acres respectively. The orchards are fairly spread over the whole State. The counties having the largest areas last season and the acreage in each were as follows:—Evelyn, 11,717 acres; Bourke, 11,233 acres; Mornington, 7,774 acres; Rodney, 3,057 acres; Talbot, 2,767 acres; Karkarooc (including Mildura), 1,777 acres; Bendigo, 1,776 acres; Borung, 1,610 acres; Grant, 1,516 acres; and Buln Buln, 1,034 acres.

In the following table will be found a statement of the number of fruit trees and plants—showing trees bearing and non-bearing—producing the various kinds of fruit grown during the season 1907-8:—

RETURN SHOWING THE NUMBER OF FRUIT TREES, PLANTS, ETC., IN ORCHARDS AND GARDENS WHERE FRUIT WAS GROWN FOR SALE, 1907-8.

Fruit.	Number of Trees, Plants, &c., 1907-8		
	Not Bearing.	Bearing.	Total.
Apples	795,188	1,155,966	1,951,154
Pears	225,916	261,959	487,875
Quinces	18,505	48,309	66,814
Plums	187,353	296,915	484,268
Cherries	100,228	231,084	331,312
Peaches	109,406	295,189	404,595
Apricots	43,312	260,351	303,663
Nectarines	1,807	5,048	6,855
Oranges	27,117	34,024	61,141
Lemons	14,111	46 465	60,576
Loquats	2,170	5,248	7,418
Medlars	63	197	260
Figs	4,846	29 274	34,120
Passion	4,203	7,251	11,454
Guavas	352	949	1,301
Pomegranates	152	93	245
Persimmons	253	517	770
Total Large Fruits ..	1,534,982	2,678,839	4,213,821
Raspberries	..	1,547,847	1,547,847
Strawberries	..	4,157,534	4,157,534
Gooseberries	..	297,853	297,853
Mulberries	430	1,145	1,575
Olives	652	3,165	3,817
Currants (Red, White, and Black) ..	10,327	77,906	88,233
Almonds	8,605	19,772	28,377
Walnuts	4,726	3,787	8,513
Filberts	1,197	2,052	3,249
Chestnuts	410	476	886
Total Nuts	14,938	26,087	41,025

The area under orchards growing fruit for sale increased steadily from 5,800 acres in 1872-3, to 10,048 in 1882-3, 31,370 in 1892-3, 44,502 in 1902-3, 47,205 in 1904-5, 49,212 acres in 1907-8, and 51,578 acres in 1909-10, which is the largest area returned up to date. Details of the produce from orchards growing fruit for sale during the last ten years are as follows:—

ORCHARDS GROWING FRUIT FOR SALE, 1900-1 TO 1909-10.

Year Ended March.	Number of Fruit-growers.	Area under Gardens and Orchards.	LARGE FRUITS GATHERED.			
			Apples.	Pears.	Quinces.	Plums.
		Acres.	Bushels.	Bushels.	Bushels.	Bushels.
1901	5,400	44,688	893,418	251,384	71,357	172,467
1902	5,693	45,885	652,525	118,742	64,145	201,291
1903	5,301	44,502	903,853	248,030	91,665	154,112
1904	5,254	46,642	805,034	158,186	81,516	289,972
1905	5,341	47,205	1,019,816	188,849	90,735	121,725
1906	5,163	47,312	578,700	219,864	56,898	130,917
1907	5,367	49,086	1,010,381	303,647	77,277	237,468
1908	5,241	49,212	618,424	182,609	47,871	157,366
1909	5,586	50,675	1,241,826	373,145	99,608	167,012
1910	5,647	51,578	1,121,702	253,195	50,559	232,657

LARGE FRUITS GATHERED—*continued.*

Year Ended March.	Cherries.	Peaches.	Apricots.	Oranges.	Lemons.	Figs.	Others.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1901	105,032	160,968	228,686	37,184	57,866	21,846	9,901
1902	111,891	284,312	234,101	60,150	64,954	18,135	9,363
1903	102,512	173,414	168,348	23,210	48,083	19,214	8,187
1904	124,423	260,589	336,899	27,670	61,429	26,405	8,863
1905	82,504	230,130	186,360	34,088	81,716	23,500	7,335
1906	116,845	132,870	154,791	21,364	63,904	32,467	12,339
1907	120,496	276,077	258,049	23,431	37,662	29,549	16,817
1908	71,798	290,178	239,735	28,620	46,827	20,460	10,753
1909	95,012	282,040	149,262	22,363	38,548	23,687	17,462
1910	100,054	291,766	292,496	34,027	51,130	22,675	10,566

Year Ended March.	SMALL FRUITS GATHERED.					NUTS GATHERED.			
	Raspberries.	Strawberries.	Gooseberries.	Currants (Red, Black, & White).	Others.	Almonds.	Walnuts.	Filberts.	Chestnuts.
	cwt.	cwt.	cwt.	cwt.	cwt.	lbs.	lbs.	lbs.	lbs.
1901	20,396	4,246	12,431	1,794	882	66,837	25,294	6,818	6,469
1902	13,610	4,435	10,436	1,383	968	72,528	18,435	3,469	6,990
1903	20,185	3,101	11,573	1,456	1,011	41,551	19,378	3,437	8,262
1904	22,377	3,122	14,199	2,312	1,327	113,791	13,276	2,223	6,677
1905	12,480	5,456	13,558	1,805	1,320	80,758	28,306	1,756	4,396
1906	6,821	2,643	9,814	2,113	1,320	81,077	23,131	6,144	4,696
1907	13,816	5,487	12,276	2,054	3,307	69,378	15,863	5,339	3,506
1908	12,466	3,645	8,526	3,705	2,145	62,921	20,266	1,928	5,047
1909	8,640	4,874	6,950	1,278	2,747	91,230	23,100	3,323	3,355
1910	6,143	6,472	5,876	1,428	1,738	81,608	25,368	1,760	5,003

The following return shows the average produce per tree for all trees for the years 1898-9 and 1901-2, and for all trees, and for bearing trees only, for the year 1907-8:—

PRODUCE OF FRUIT TREES.

Fruit Trees.	AVERAGE PER TREE.			
	1898-9.	1901-2.	1907-8.	
			All Trees.	Bearing Trees.
	Bushels.	Bushels.	Bushels.	Bushels.
Apples	·90	·77	·32	·53
Pears	·59	1·00	·37	·70
Quinces	1·48	1·43	·72	·99
Plums	·46	·54	·32	·53
Cherries	·37	·40	·22	·31
Peaches	·56	·52	·72	·98
Apricots	·69	·83	·79	·92
Nectarines	·32	·92	·73	·98
Oranges	·51	·88	·47	·84
Lemons	·65	·87	·77	1·01
Loquats	·97	·49	·12	·17
Medlars	·40	1·53	·24	·32
Figs	·60	·69	·60	·70
Passion Fruit	·20	·43	·38	·60
Guavas	·14	·09	·04	·05
Pomegranates	·13	1·13	·33	·88
Persimmons	2·70	·63	·38	·56
Total Large Fruits only	·64	·72	·41	·64
	lbs.	lbs.	lbs.	lbs.
Almonds	2·22	2·78	2·22	3·18
Walnuts	2·99	1·52	2·38	5·35
Filberts	1·34	1·73	·59	·94
Chestnuts	6·89	6·40	5·70	10·60

This table shows a fair increase in the average production of large fruits between 1898-9 and 1901-2, but a serious falling off in 1907-8, *i.e.*, when taking all trees into consideration; and this is probably due to the large planting of young trees immediately prior to that year.

In addition, large quantities of melons, rhubarb, and tomatoes were produced in these orchards, the following being the quantities returned for 1909-10—Melons, 10,991 cwt.; rhubarb, 32,081 dozen

bundles, and tomatoes, 36,278 cwt. There were also 4,530 acres laid down in private fruit gardens, the value of the produce being estimated at about £9,000.

Previous to 1904-5 the value of the fruit produce of the State was estimated on the basis of £25 per acre; but since that year extensive inquiries have been made, the most prominent growers, the various fruit associations, and others interested in the trade having been consulted, with the result that it has been decided to estimate only the value of such fruit as reaches the market. Upon this basis, and according to the prices received by the growers, the estimated value of the fruit sold was £341,891 in 1904-5, £345,844 in 1905-6, £451,672 in 1906-7, £386,807 in 1907-8, £373,600 in 1908-9, and £423,500 in 1909-10. This, of course, does not represent the actual value of all the fruit grown, as large quantities are privately consumed in various ways. No very reliable estimate of the value of such fruit can be prepared; but it may be set down at about £35,000.

In recent years some attention has been given to cider making, and, with the view of encouraging this industry, the Agricultural Department imported a complete cider-making plant, and had it sent to various districts, the consequence being that large quantities of cider were made by it. Local manufacturers of machinery have since made machines on the lines of the imported one, with the result that the cider industry is fairly well established, and colonial cider may now be obtained in most hotels.

Market gardens.

The area under market gardens for the year 1909-10 was 10,214 acres. In view of the fact that these gardens are generally situated near large centres of population, and that the producers are consequently able to dispose of the bulk of their goods with a minimum of loss from waste, &c., an average return of £25 per acre is regarded as a fair estimate. On this basis, the total value of the produce may be stated at £255,350. This does not include crops of one acre and over of potatoes, onions, mangel-wurzel, beet, carrots, parsnips, and turnips grown in market gardens, such crops being tabulated under their respective heads in the returns relating to agriculture.

Dried fruit.

The quantity of dried fruit (weight after drying) was for the first time collected in 1895-6, when 179,460 lbs. were returned, and it increased to 636,294 lbs. in 1900-1, after which date the quantity, principally by reason of a reduction in apricots, declined to 338,173 lbs. in 1906. In the next three years there was a notable

improvement, and in 1910 the quantity dried reached 811,935 lbs., which was by far the highest for the years recorded. The details for the last ten seasons are as follows:—

DRIED FRUIT, 1900-1 TO 1909-10.

Year ended June.	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Pears.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1901 ..	28,944	35,931	97,254	411,526	62,639	..	636,294
1902 ..	42,218	33,789	90,328	328,599	66,472	..	561,406
1903 ..	18,178	28,996	70,759	110,666	69,069	8,935	306,603
1904 ..	25,137	58,293	114,096	184,960	17,599	..	400,085
1905 ..	28,021	33,080	134,019	179,520	41,137	..	415,777
1906 ..	19,290	9,207	27,703	252,746	29,227	..	338,173
1907 ..	42,113	64,648	109,958	143,970	37,716	..	398,405
1908 ..	35,544	25,504	87,383	223,091	13,112	8,077	392,711
1909 ..	69,120	56,183	84,514	170,620	26,796	30,322	437,555
1910 ..	46,767	76,015	109,661	539,910	22,160	17,422	811,935

The bulk of the above dried fruit comes from Mildura, where in 1909-10 there were made also 8,835,456 lbs. of raisins, which quantity represented an increase of over 1,634,080 lbs. on the produce of the previous year.

Minor crops.

The following is a return of the minor crops for the last two seasons. The items do not in all cases represent the whole of the respective crops grown, but only such as were taken cognisance of by the collectors:—

MINOR CROPS, 1908-9 AND 1909-10.

Crop.	1908-9.		1909-10.	
	Area.	Produce.	Area.	Produce.
	Acres.		Acres.	
Chicory	453	450 tons (dry)	522	462 tons (dry)
Flowers	108	...	82	...
Garlic	3	68 cwt.	...	...
Gherkins	50	221 tons	...	...
Herbs	7	...	10	...
Lupins	...	...	4	4 cwt.
Millet—Broom ...	486	2,253 cwt. fibre 2,094 cwt. seed	178	578 cwt. fibre 620 cwt. seed
,, Japanese ...	8	56 cwt. seed	26	145 cwt. seed
Nursery	489	...	578	...
Opium poppies ...	2	8 lbs.	2	26 lbs.
Pumpkins	2,461	29,157 tons	1,942	20,764 tons
Seeds—Agricultural and garden	84	...	4	...
Sugar Beet	...	...	2	35 tons
Sunflowers	67	3,421 bushels	39	1,787 bushels
Total... ...	4,218	...	3,389	...

Land in fallow.

The fallowing of land in Victoria commenced in 1858-9, when 6,000 acres were so treated. With annual variations in acreage, but a general increase, the area in fallow reached 853,829 acres in 1904-5, 1,049,915 acres in 1905-6, 990,967 acres in 1906-7, 894,300 acres in 1907-8, 1,034,422 acres in 1908-9, and 1,175,750 acres in 1909-10. The system of fallowing is much more extensive in the wheat-growing counties than in the other districts of the State. It is gratifying to find that the enormous advantages obtainable from this mode of treating the land are now being properly recognised. Evidence of this is supplied by returns received in March, 1908, from which it appears that on fallowed land manured there was a gain in wheat yield of over 5 bushels per acre, while on fallowed land unmanured the gain was nearly 2 bushels per acre. In order to obtain definite information regarding the relative production from fallowed and unfallowed land under wheat, particularly in a dry season like 1907-8, some of the principal growers in the wheat districts of the State were invited in the year 1908 to furnish information on the subject, and the tabulated results of their replies are set out in the table which follows :—

WHEAT GROWING ON FALLOWED AND UNFALLOWED LAND, 1907-8.

District.	Manured Land.			
	Fallowed.		Unfallowed.	
	Area.	Yield per acre.	Area.	Yield per acre.
	Acres.	Bushels.	Acres.	Bushels.
Wimmera—				
Counties of Lowan, Borung, and Kara Kara	69,834	11·82	27,520	5·75
Mallee—				
Counties of Weeah, Karkarooc, and Tatchera	31,963	5·75	20,908	2·62
Northern—				
Counties of Gunbower, Gladstone, Bendigo, Rodney, and Moira	41,110	9·50	28,946	4·06
Western—				
County of Ripon	4,821	17·93	5,993	13·47
Total	147,728	10·07	83,367	4·93

Taking the districts as a whole, it will be seen that the yield per acre from the fallowed was more than twice as great as that from the unfallowed land; and taking the districts separately, this proportion is maintained in each of the three principal ones. In the Western District the difference is not marked, due probably to the fact that wheat-growing except on a very small scale was commenced in that portion of the State only in recent years.

Some information was also obtained in regard to wheat-growing on unmanured land, particulars of which, in the case of the counties of Karkarooc and Tatchera in the Mallee District (the driest in the State in 1907-8) are set out below :—

District and County.	Wheat Grown on Unmanured Land.			
	Fallowed.		Unfallowed.	
	Area.	Yield per acre.	Area.	Yield per acre.
Mallee—	Acres.	Bushels.	Acres.	Bushels.
Karkarooc	3,067	2·21	17,448	·95
Tatchera	2,453	3·06	17,323	·24
Total	5,520	2·59	34,771	·60

A striking difference is shown here between the yields from the fallowed and the unfallowed land, the latter being simply a failure.

Manure used.

In those counties which are included in the first, but not in the second table, the areas returned as unmanured were small, indicating that wheat growing on unmanured land is in them carried on to only a limited extent. This conclusion is confirmed by the increasing number of farmers using manure, and by the quantity of manure used in Victoria, as exhibited in the following table :—

Manure used for Fertilization, 1898 to 1909.

Year.	Farmers using.	Area used on.	Manure used—	
			Natural.	Artificial.
		Acres.	Tons.	Tons.
1898	7,318	225,830	143,586	16,052
1901	11,439	556,777	153,611	23,535
1902	18,537	1,099,686	206,676	36,630
1903	19,921	1,205,443	207,817	41,639
1904	20,167	1,521,946	190,903	45,940
1905	21,586	1,791,537	210,507	54,674
1906	23,072	1,985,148	205,906	60,871
1907	23,733	2,018,079	232,394	62,337
1908	24,437	2,053,987	235,492	64,715
1909	26,690	2,407,331	197,446	77,579

During 1909 the quantity of manure imported into Victoria was 52,310 tons, and its value £145,662, while the quantity exported was 38,523 tons, valued at £160,739.

Use of artificial manures.

So widespread is the range of application of artificial manures and so general has their use become in Victoria, that it would appear difficult to add anything of interest to the purchaser of these

modern aids to agriculture. If there is one point more than another, with which the purchaser of manures is not entirely conversant, it is probably a knowledge of the safeguards afforded him by the Artificial Manures Act.

After divesting of their legal phraseology the clauses showing the intentions of the framers of this Act, it will be found that every vendor of artificial manures (over the amount of one half hundredweight) within the State is required each year during the months of October or November to furnish the Agricultural Chemist with samples of all manures, which it is intended to sell during tne ensuing twelve months, together with a note of the selling price of each. From these samples the unit values or values of 1 per cent. of each class of plant food (Nitrogen, Phosphoric Acid, and Potash) in a ton of manure are calculated. The unit values so established operate for twelve months only, and what is called the "real value" of all manures sold during that period is calculated from them. A list showing the "real value" and selling price of all manures will be found in the *Agricultural Journal.* The Act further requires that each bag of manure shall have a label attached showing the net weight and an analysis of the contents. It may not be generally known that each purchaser of manures is required under the Act to produce these labels if a case for prosecution arise. Purchasers of manures, therefore, may with advantage to themselves observe the precaution of keeping the labels.

In order to check the quality of manures despatched to the country, inspectors are empowered to take samples during transit, at a railway station, or on the farm itself. The compliance of the vendors with the guarantee given by them is best described in the words of the Agricultural Chemist:—"It is quite noteworthy that almost without exception the whole of the samples were well up to the guarantee, and in many cases were in excess of the percentages of fertilizing constituents guaranteed." So far, then, the Victorian farmer can have no fault to find with the quality of the article sold in the State.

As regards the price per ton, it is gratifying to find that farmers are able to purchase manures of equal quality at a cheaper rate per ton than that which rules in adjoining States.

It may be assumed that superphosphates form by far the largest proportion of manures sold, and the position is concisely put by the Agricultural Chemist in the statement "That a superphosphate of 20 per cent. water soluble and 1½ per cent. insoluble would cost per ton in Victoria, £4 11s. 6d., as against £5 3s. 10½d. in New South Wales and £6 5s. 3d. in New Zealand."

Selling prices in several of the American States are also higher than those prevailing in Victoria. The Victorian purchaser of artificial manures may thus congratulate himself on being able to purchase high-grade manures at very moderate prices. It is, moreover, a matter of further congratulation that complete harmony exists between the Department of Agriculture as the administrator of the Act and the merchants whose business is amenable to its operation.

It has come to be recognised by progressive farmers that, valuable as are the effects of manures rationally used, their usefulness is controlled by the manner of the cultivation given to the land. In other words, it is unreasonable to expect the maximum benefit from manures on imperfectly tilled land, the moisture content of which is below what it should be. Cultivation always has been, and always will be, the most important of all operations on the farm, and it is the recognition of this fact that leads to some persons securing better results than their neighbours.

The three watchwords in agricultural practice may be described as Cultivation, Rotation, and Fertilization, the proper observance of which leads to that higher standard of production towards which the demands of civilization are forcing the agriculturists of all nations to aspire.

Characteristics of Victorian soils.

The soils of Victoria, like those of every part of the world, vary widely in their physical and chemical conditions. Colour alone is not always an index to productivity, yet to the average mind a darkish colour in soils is generally accepted as indicating a higher potential fertility than exists in lighter coloured soils. There is some logic in this reasoning on account of darkish coloured soils containing generally more organic matter, and, other things being equal, having thus a better absorptive and retentive power for moisture. Fertility, however, is the harmonious operation of a number of factors, some of which are difficult to control. The absorption, retention, and movement of the soil moisture are entirely dependent on the composition, size, and nature of the soil particles, and in this particular, many farmers do not sufficiently appreciate the far-reaching effects of cultivation as the most economical manner in which the latent wealth of the soil may be made available to the needs of crops. Porosity, or natural drainage, controls the temperature of the soil, especially during the period when growth is most abundant, viz., the Spring, hence it is that many soils whose drainage is imperfect, remain cold at that season and the crops grown upon them are restricted in yield. Capillarity, or the power of the soil to transfer moisture from the subsoil to the upper cultivated portion, wherein the roots of crops develop, is exemplified in the case of the two extreme types of sand and clay. In the former case, the surface dries rapidly during summer, although there may be an abundant supply of moisture a few feet down—in the latter case, owing to the facility with which moisture rises from the subsoil to the surface and is lost by evaporation, the soil becomes hard and dry. It is, however, the amounts of the mineral elements of plant food present that are usually regarded as the true measure of fertility. Without food no plant can thrive, but without an adequate supply of moisture no seed can even germinate, much less produce a mature plant. Hence it is that the chemical condition of a soil is subordinate in importance to its physical composition.

During the past eighteen years some thousands of chemical analyses of Victorian soils have been made by the Chemical Branch of the Department of Agriculture, and the tabulation of the figures has given a general knowledge of the characteristics of soils in every district in the State.

To divide the State into three broad divisions of coastal plain, northern plain, and hill country, is sufficient classification for the general statement that the soils of each locality are somewhat below the standard for phosphoric acid, hence the universal suitability of manures containing that ingredient. In the extensive areas stretching from the coast to the hills throughout Gippsland and the Western District, field experiments have indicated the necessity for a supplementary application of manures containing nitrogen. The greater rainfall of these southern districts permits a more luxuriant growth of vegetation, and as the function of nitrogen is to build up the framework of the plant, it is logical enough that the soils should require feeding in that direction. As regards potash, there is evidence that the majority of Victorian soils, particularly those of the clay type, are well furnished, and at all events for some time, except it may be for special crops, there would appear to be little necessity for manures supplying this element. It must not be forgotten, however, that plant foods produce their best results when in correct proportions to one another, and on sandy soils, when root crops and legumes are grown, potash fertilization may be found necessary.

The percentage of lime present forms a distinct feature in soils of the northern plain, but in the south with the exception of certain places where the geological formation is of limestone, this most essential element is lacking. It is not too much to say that many thousands of acres in Southern Victoria stand in more need of drainage and liming than of manures. As a corrector of soil acidity, and as the formation of a base, wherewith other plant foods may combine and be held in such a manner as to become gradually available to the needs of plants, lime will be found of great service. For the breaking down of adhesive clay soils, so as to render the passage of implements easier, lime well repays the application of from 5 to 10 cwt. per acre—once every two or three years.

Useful as the work of soil analysis has been, its value will be made more manifest when the agriculturist has standards of fertility established to meet the requirements of different soil types under varying climatic conditions.

A better appreciation on the part of the farmer of the powerful influence that soil treatment exerts on the production of crops, and a clearer conception of the rational principles of fertilization will gradually lead to a higher standard of farming, and an all round increase in the average yields of all crops grown within the State.

In recent years the number of engines, horse-works, and machines, and other implements on agricultural, dairying, and pastoral holdings has been ascertained at the time of the collectors' visits. The particulars for the last two years are as follows:— Farm implements.

MACHINERY AND IMPLEMENTS ON FARMS AND PASTORAL HOLDINGS IN EACH DISTRICT, 1909 AND 1910.

Districts.	Number of —													
	Engines.		Horse-works.	Harvesters.	Threshing Machines.	Winnowing Machines.	Reapers and Binders.	Strippers.	Ploughs.	Harrows.	Cultivators.	Grain Drills.	Chaff-cutters.	Cream Separators.
	Steam.	Oil.												
1909.														
Central ..	88	246	1,792	71	83	307	3,109	30	15,194	10,883	5,103	1,961	5,361	4,494
North-Central	291	85	1,073	158	37	332	2,071	47	5,666	3,847	1,422	1,218	2,106	2,422
Western ..	262	418	1,622	513	66	308	2,586	127	8,687	6,180	1,619	1,628	2,891	2,228
Wimmera ..	96	327	2,879	2,184	52	2,067	3,147	3,507	8,365	5,744	3,485	3,680	3,575	2,034
Mallee ..	143	66	845	701	43	1,391	1,001	2,612	3,574	1,940	2,129	1,494	1,010	988
Northern ..	600	140	1,881	3,702	115	2,802	5,089	2,857	12,334	8,177	4,876	4,382	2,764	4,336
North-Eastern	332	60	844	178	43	348	1,354	334	4,989	3,226	1,072	695	1,437	1,579
Gippsland ..	342	114	598	27	49	127	853	22	7,538	5,528	2,017	624	1,902	4,314
Total ..	2,554	1456	11,534	7,534	488	7,677	19,210	9,536	66,347	45,525	21,723	15,682	23,046	22,395
1910.														
Central ..	509	353	1,826	116	87	297	3,560	17	16,163	11,674	5,356	2,312	5,494	4,903
North-Central	303	106	1,064	162	31	336	2,053	43	5,737	3,896	1,355	1,218	2,149	2,502
Western ..	264	525	1,725	711	70	261	2,837	81	9,599	6,560	1,883	1,963	3,122	2,630
Wimmera ..	119	553	2,865	2,475	56	2,023	3,276	3,318	8,613	5,847	3,749	3,880	3,642	2,288
Mallee ..	132	98	988	805	24	1,415	1,034	2,657	3,668	1,921	2,080	1,558	1,108	1,065
Northern ..	624	189	1,830	4,176	109	2,692	5,243	2,630	12,832	8,392	5,170	4,656	2,686	4,731
North-Eastern	306	86	816	228	33	319	1,495	298	5,041	3,171	1,066	786	1,450	1,768
Gippsland ..	380	144	608	28	68	124	1,000	13	7,731	5,633	2,226	738	2,020	4,471
Total ..	2,637	2057	11,722	8,701	478	7,467	20,498	9,057	69,384	47,094	22,885	17,111	21,671	24,358

NOTE.—The returns collected in March, 1910, showed that there were also in use 432 milking machine plants, 3,058 shearing machines, and 3,418 wool presses.

Compared with 1909, the only decreases shown by the figures for 1910 are in the numbers of threshing machines, winnowers, and strippers, and this position is the result of the increased use of harvesters, which, especially in the Wimmera and Northern districts, have grown in numbers. The Central and Western districts are mainly responsible for a marked increase in reapers and binders, grain drills, ploughs, and harrows. A substantial increase occurred also in cream separators, each district having contributed a share to the number added.

Dairying.

The following are particulars respecting dairy cows in Victoria in each of the last seven years :—

DAIRYING, 1903 TO 1909.

Year.	Number of Cow-keepers.	Number of Dairy Cows at end of Year.	Butter Made.	Cheese Made.	Number of Cream Separators in use.
			lbs.	lbs.	
1903 ..	41,824	515,179	46,685,727	5,681,515	8,986
1904 ..	42,931	632,493	61,002,841	4,747,851	13,408
1905 ..	46,757	649,100	57,606,821	4,297,350	15,710
1906 ..	47,741	701,309	68,088,168	4,877,593	19,446
1907 ..	49,406	709,279	63,746,354	4,397,909	20,599
1908 ..	49,158	609,166	48,461,398	4,328,644	22,395
1909 ..	50,870	625,063	55,166,555	5,025,834	24,358

In 1908 the autumn was exceptionally dry, and as a result of this the number of cow-keepers and of dairy cows and the quantity of butter and cheese made showed a decrease in that year as compared with the year 1907. In 1909, the production was somewhat increased, though the number of cows and the quantity of butter made were still less than in any of the years 1904 to 1907 inclusive. It is generally regarded that the milk required to make 1 lb. of butter will make about 2 lbs. of cheese, and on this basis the figures in the table show that, after deducting supplies required for milk and cream consumed in their natural state and for milk concentrated, condensed, or preserved, the average production from each dairy cow was equal to 92 lbs. of butter in 1909, as against an average of 83 lbs. in 1908, 93 lbs. in 1907, 100 lbs. in 1904 and 1906, 92 lbs. in 1905, and 97 lbs. in 1903.

Live stock.

The numbers of horses, cattle, sheep, and pigs, in each census year since 1861, together with the numbers per head of the population at each period, are shown in the following table. The progress of the industries dependent on the breeding of stock is thus indicated :—

LIVE STOCK PER HEAD OF POPULATION : RETURN FOR FIVE CENSUS YEARS.

Stock.	1861. Population 540,322.		1871. Population 731,528.		1881. Population 862,346.		1891. Population 1,140,405.		1901. Population 1,201,341.	
	Number.	Per Head of Population.	Number.	Per Head of Population.	Number.	Per Head of Population.	Number.	Per Head of Population.	Number.	Per Head of Population.
Horses (including foals) ..	76,536	·14	209,025	·29	275,516	·32	436,469	·38	392,237	·33
Cattle—										
Milch Cows	197,332	·37	212,193	·29	329,198	·38	395,192	·35	521,612	·43
Other ..	525,000	·97	564,534	·77	957,069	1·11	1,387,689	1·22	1,080,772	·90
Sheep ..	5,780,896	10·70	10,477,976	14·32	10,360,285	12·01	12,692,843	11·13	10,841,790	9·03
Pigs ..	61,259	·11	180,109	·25	241,936	·28	282,457	·25	350,370	·29

The animals are here compared with the number of inhabitants of Victoria, a continually changing quantity. In the next table they are apportioned to a constant quantity—the number of square miles in the State.

LIVE STOCK PER SQUARE MILE: RETURN FOR FIVE CENSUS YEARS.

Year.	Average per Square Mile (Area of Victoria, 87,884 Square Miles).				
	Horses.	Cattle.		Sheep.	Pigs.
		Milch Cows.	Other.		
1861	·87	2·25	5·97	65·78	·70
1871	2·38	2·41	6·42	119·22	2·05
1881	3·14	3·75	10·89	117·88	2·75
1891	4·97	4·50	15·79	144·43	3·21
1901	4·46	5·94	12·30	123·36	4·00

The increase in each class was constant up to 1891, except for a slight fall in the number of sheep between 1871 and 1881. Between the censuses of 1891 and 1901, however, there was a reduction in the numbers of horses, cattle generally, and sheep, probably due to the dry seasons in the intercensal period. There was also an exceptional export of horses to South Africa for some time prior to the 1901 census. The number of milch cows increased considerably in the decade, indicating the growth of the dairying industry, and explaining in part the largely augmented output of butter. The number of pigs steadily and satisfactorily increased throughout the intercensal periods preceding 1901; but since that year there has been a falling-off.

The following return shows the live stock in Victoria in each of the last four years. Tables showing the stock, classified in conjunction with holdings in March, 1910, will be found on page 608; and the sheep, further classified in different sized flocks, in March, 1910, are enumerated on page 658.

LIVE STOCK IN VICTORIA, 1907 TO 1910.

Live Stock.	1907.	1908.	1909.	1910.
Horses (including foals)...	406,840	424,648	424,903	442,829
Cattle—				
Dairy Cows	701,309	709,279	609,166	625,063
Other (including calves)	1,103,014	1,133,528	964,996	924,577
Sheep	12,937,440	14,146,734	12,545,742	12,937,983
Pigs	220,452	211,002	179,358	217,921

It will be seen that the figures for 1910 relating to all classes of stock, except cattle other than dairy cows, are above those of the previous year. Horses, which include 47,938 foals reared, show an increase of 17,926, and as there was a net export of 736, the number that died was about 29,300, or less than 7 per cent. Allowing for accidents and old age, this is a light mortality, and indicates that the rearing of horses in Victoria is not interrupted by disease of any kind.

Prices of stock.

In the following table will be found a statement of the average and the range of prices ruling in Melbourne during the years 1908 and 1909 for live stock. The information has been extracted from the Melbourne *Stock and Station Journal*:—

PRICES IN MELBOURNE OF LIVE STOCK, 1908 AND 1909.

Stock.	Prices in 1908.									Prices in 1909.								
	Average.			Range.						Average.			Range.					
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.		£	s.	d.	
Horses.																		
Extra heavy draught	48	7	6	45	0	0	to	55	0	0	49	10	0	46	0	0	to	52	0	0
Medium draught ..	36	2	6	31	0	0	to	40	15	0	37	10	0	34	0	0	to	40	10	0
Delivery Cart ..	28	7	6	24	0	0	to	32	10	0	29	7	6	26	0	0	to	33	0	0
Order Cart	19	7	6	17	10	0	to	23	5	0	19	5	0	17	10	0	to	22	0	0
Indian Remounts ..	28	7	6	22	10	0	to	33	10	0	23	5	0	22	0	0	to	30	0	0
Saddle and Harness	12	2	6	8	10	0	to	14	0	0	12	2	6	11	0	0	to	13	0	0
Ponies	22	2	6	15	10	0	to	25	0	0	21	15	0	21	0	0	to	24	0	0
Fat Cattle.																		
Bullocks—																		
Extra Prime ..	14	7	0	11	12	6	to	18	7	6	13	9	0	10	19	0	to	15	10	0
Prime	12	12	0	11	2	6	to	15	7	6	11	12	0	10	0	0	to	13	5	0
Good	10	13	0	8	17	6	to	13	5	0	9	13	0	8	7	0	to	11	2	0
Good Light and Handy Weights ..	9	0	0	6	17	6	to	11	10	0	8	0	0	6	10	0	to	9	5	0
Second	7	5	0	5	7	6	to	9	10	0	6	13	0	5	10	0	to	7	15	0
Cows—																		
Best	9	10	0	7	10	0	to	12	0	0	8	3	0	6	19	0	to	9	5	0
Others	6	7	6	4	7	6	to	9	5	0	5	15	0	4	15	0	to	7	0	0
Young Cattle.																		
Prime Steers and Heifers	5	1	0	3	17	6	to	6	5	0	4	17	0	4	5	0	to	5	9	0
Calves, prime ..	2	17	6	2	5	0	to	3	10	0	2	14	0	2	2	0	to	3	0	0
,, good ..	1	19	0	1	10	0	to	2	7	6	1	18	0	1	9	0	to	2	5	0
Dairy Cattle.																		
Best Milkers ..	9	15	0	7	12	6	to	11	13	0	9	14	0	8	10	0	to	11	9	0
Good	7	11	0	6	16	0	to	8	3	0	7	2	0	5	10	0	to	8	15	0
Inferior	4	5	0	3	0	0	to	5	10	0	3	14	0	2	15	0	to	4	10	0
Springers, best ..	7	11	0	7	5	0	to	7	16	0	7	4	0	6	10	0	to	8	5	0
Heifers, best Springers	5	13	0	4	15	0	to	6	12	0	5	8	0	4	5	0	to	6	15	0
Dry Cows	4	1	0	3	10	0	to	5	0	0	3	9	0	2	12	0	to	4	0	0
Stores	3	1	0	2	12	0	to	3	9	0	2	14	0	2	5	0	to	3	0	0
Fat Sheep.																		
Wethers (cross)—																		
Extra Prime ..	1	1	0	0	15	2	to	1	9	0	0	17	7	0	12	2	to	1	3	3
Prime	0	18	4	0	13	4	to	1	4	6	0	15	8	0	11	0	to	1	1	0
Good	0	15	7	0	11	4	to	1	1	0	0	13	7	0	9	4	to	0	17	7
Ewes (cross)—																		
Extra Prime ..	0	17	7	0	12	6	to	1	4	6	0	14	9	0	9	11	to	1	0	3
Prime	0	15	3	0	10	6	to	1	1	0	0	12	11	0	8	6	to	0	17	0
Good	0	12	9	0	8	9	to	0	17	6	0	11	1	0	7	4	to	0	14	3

PRICES IN MELBOURNE OF LIVE STOCK, 1908 AND 1909—*continued.*

Stock.	Prices in 1908.				Prices in 1909.			
	Average.		Range.		Average.		Range.	
Fat Sheep—continued.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.		£ s. d.
Wethers (merino)—								
Prime	0 16 5	0 11 3	to	1 3 0	0 13 9	0 9 6	to	0 18 1
Good	0 13 8	0 9 0	to	0 19 9	0 11 9	0 8 0	to	0 15 7
Ewes (merino) ..	0 11 2	0 6 7	to	0 17 6	0 10 0	0 6 7	to	0 14 5
Fat Lambs.								
Extra Prime ..	0 15 7	0 13 6	to	0 19 10	0 13 9	0 8 9	to	0 19 1
Prime	0 13 6	0 11 9	to	0 17 6	0 11 9	0 8 0	to	0 15 6
Good	0 11 1	0 8 10	to	0 14 3	0 9 11	0 7 2	to	0 12 10
Second	0 8 6	0 6 9	to	0 12 0	0 8 0	0 6 2	to	0 10 9
Pigs.								
Back Fatters—								
Extra Heavy Prime ..	5 17 6	3 18 6	to	7 13 6	5 5 0	2 15 0	to	6 12 6
Extra Prime and Weighty ..	3 18 0	2 17 6	to	5 5 0	3 13 0	2 10 0	to	5 2 0
Baconers—								
Extra Prime ..	3 10 6	2 12 6	to	4 16 0	3 2 0	2 7 0	to	3 10 0
Prime	3 1 6	2 6 0	to	4 3 0	2 16 0	2 5 0	to	3 3 0
Porkers	1 17 6	1 10 0	to	2 13 6	1 19 0	1 13 0	to	2 4 6
Stores	1 2 0	0 15 0	to	1 16 0	1 6 0	1 1 0	to	1 12 0
Slips and Suckers ..	0 9 6	0 4 6	to	0 15 6	0 14 0	0 8 0	to	0 19 0

Compared with 1908, the average prices of heavy horses and store pigs in 1909 point generally to improved values; but those of light horses, cattle, and weighty pigs show a reduction. The range of prices indicates fluctuations in value during each year as well as unevenness in the quality of all classes of stock.

Stock slaughtered.

The return of stock slaughtered in the last seven years was partly furnished by the municipal authorities, and partly collected by the police. The number includes those slaughtered on farms and stations, as well as in municipal abattoirs. Previous to 1903, the returns were furnished solely by the municipal authorities, an estimate being made of the stock slaughtered privately. The following is a statement of the stock slaughtered during each of the last ten years:—

STOCK SLAUGHTERED: 1900 TO 1909.

Year.	Number Slaughtered.		
	Sheep and Lambs.	Cattle.	Pigs.
1900	2,371,415	248,797	231,752
1901	2,469,797	251,477	261,479
1902	2,827,938	233,206	224,431
1903	2,652,569	235,284	164,745
1904	2,305,729	243,937	191,311
1905	2,576,316	249,454	248,568
1906	2,826,144	261,034	274,391
1907	3,226,141	289,709	257,695
1908	3,309,865	279,710	225,162
1909	3,708,512	287,548	210,613

The purposes for which the slaughtered animals were used were as follows:—

PURPOSES FOR WHICH STOCK WERE SLAUGHTERED: 1900 TO 1909.

Year.	For Butcher and Private Use.			For Freezing.			For Preserving and Salting.			For Boiling Down.		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1900	1,921,284	244,571	119,137	437,332	3,808	..	9,181	115	112,604	3,618	303	11
1901	2,016,863	249,079	134,276	431,740	980	..	10,087	937	127,145	11,107	481	58
1902	2,337,262	229,728	106,390	378,029	2,293	..	13,211	485	117,984	99,436	700	57
1903	2,337,958	231,682	52,681	294,906	1,630	4,200	11,400	1,473	107,754	8,305	499	110
1904	1,843,896	242,276	67,302	459,963	720	3,200	1,095	699	120,758	775	242	51
1905	1,922,402	231,519	92,347	649,107	16,663	1,959	3,229	981	154,190	1,578	291	72
1906	2,170,581	251,004	96,618	651,914	8,009	2,580	2,522	1,476	175,120	1,127	545	73
1907	2,255,308	282,403	81,116	866,498	2,805	1,585	11,760	3,141	174,970	92,575	1,360	24
1908	2,480,072	260,529	71,309	773,396	15,789	2,296	10,775	2,015	151,478	45,622	1,377	79
1909	2,718,344	276,759	67,117	941,309	7,399	225	10,962	2,235	143,206	37,897	1,155	65

The most noticeable figures in these tables are those relating to the sheep—a large proportion of which were lambs—slaughtered for freezing. The number in 1909 was greater than in any previous year, which is an indication of the growth of the frozen meat trade in Victoria.

Gain or loss in live stock.

The following is a return of the imports and exports of animals under principal heads during 1909. The export of horses was largely to New South Wales and India, and the other trade in live stock was principally with Australian States:—

LIVE STOCK IMPORTED AND EXPORTED, 1909.

	Number of—			
	Horses.	Cattle.	Sheep.	Pigs.
Imported	6,696	90,539	1,650,381	1,860
Exported	7,432	81,935	842,922	95
Net Imports ...	...	8,604	807,459	1,765
Net Exports ...	736	...	...	...

The information in this table, combined with that relating to stock held at the end of the year and stock slaughtered during the year, shows that there were no very serious losses by death of live stock during 1909. By adding the increase in the number on hand, the stock slaughtered, and the stock exported (net) during 1909, it will be seen that after replacing losses by mortality, those reared give a net production for the year of about 18,600 horses, 254,400 cattle, 3,293,300 sheep, and 247,400 pigs.

In the last five years the wool production of the State has been arrived at by a method which gives a much more accurate estimate of the season's production than formerly. The information relating to the clip has been obtained direct from the growers, and an allowance has been made for the wool on Victorian skins, both stripped and exported. Previously, the wool production was estimated from the Customs returns for the calendar year, but it is considered that under the present method the production of each particular season can be better distinguished. Wool production.

VICTORIAN WOOL CLIP AND ESTIMATED TOTAL PRODUCTION, SEASON 1909-10.

Districts.		Wool Clip, 1909-10.		
		Sheep.	Lambs.	Total.
		lbs.	lbs.	lbs.
Central		5,069,458	395,378	5,464,836
North-Central		5,585,241	543,575	6,128,816
Western		25,095,940	1,784,573	26,880,513
Wimmera		12,966,170	924,008	13,890,178
Mallee		3,570,032	265,399	3,835,431
Northern		10,602,625	993,141	11,595,766
North-Eastern		4,122,758	373,438	4,496,196
Gippsland		3,993,779	394,094	4,387,873
Total Clip*	1909-10	71,006,003	5,673,606	76,679,609
	1908-9	65,289,108	3,641,093	68,930,201
	1907-8	72,542,779	6,577,194	79,119,973
	1906-7	67,943,784	6,739,416	74,683,200
	1905-6	58,919,314	5,258,557	64,177,871

—	1908-9.	1909-10.
	lbs.	lbs.
Wool clip	68,930,201	76,679,609
Estimated quantity of wool stripped from Victorian skins	7,523,250	6,551,844
Estimated quantity of wool on Victorian skins exported	11,083,000	12,101,376
Total production	87,536,451	95,332,829
Total value	£3,556,168	£4,044,755

* The average weight of the fleece in 1909-10 was—sheep, 6·70 lbs.; lambs, 2·29 lbs. ; sheep and lambs combined, 5·86 lbs.

The quantity of wool produced last season, as the result of a better average clip and an increased number of sheep, was 9 per cent. in excess of that for 1908-9. Its value was £4,044,755, or nearly 14 per cent. greater than in the previous season, so that there was an increase in the value per lb. as well as in the quantity.

Wool imported, exported, and used locally.

The following table shows the wool imported, exported, and used in the factories of the State, and the value of same. With an allowance for weight lost in washing and scouring and for the wool on skins exported, the figures will give approximately the quantity of wool produced in the last eleven calendar years:—

QUANTITY AND VALUE OF WOOL IMPORTED, EXPORTED, AND USED LOCALLY—1899 TO 1909.

Year	Wool Imported.		Wool Exported.		Wool Used in Manufactures in the State.			Wool Production—Greasy and Scoured (Approximately).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Rate per lb.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	s. d.	£	lbs.	£
1899	63,067,135	2,351,059	121,877,604	5,701,410	2,867,884	1 0	143,394	61,678,353	3,493,745
1900	62,527,987	1,927,677	102,205,965	4,217,018	3,045,292	0 6	76,132	42,723,270	2,365,163
1901	61,796,450	1,840,066	131,623,062	4,350,285	3,408,526	0 6	85,213	73,235,138	2,595,432
1902	38,008,765	1,141,715	100,516,094	3,473,372	3,473,835	0 8	115,794	65,981,164	2,447,451
1903	36,726,396	1,381,647	84,560,603	3,186,054	3,772,390	0 9	141,464	51,606,597	1,945,871
1904	51,449,037	2,076,958	123,208,133	5,452,973	4,027,080	0 10	167,795	75,786,176	3,543,810
1905	67,935,833	2,911,556	125,181,191	5,420,259	4,493,041	0 10½	196,570	61,738,399	2,705,273
1906	82,989,583	3,578,056	141,696,567	6,154,382	4,765,687	0 10½	208,498	63,472,671	2,784,824
1907	70,940,674	3,111,249	167,506,728	7,372,148	5,600,873	0 9	210,033	102,166,927	4,470,952
1908	65,458,440	2,836,606	136,897,537	6,059,914	6,152,253	0 9	230,709	77,591,350	3,454,017
1909	77,341,336	3,405,759	164,255,173	7,062,370	5,895,372	0 9¼	239,500	92,809,209	3,896,111

Wool production—Australasia.

The quantity and value of wool produced in 1908 in the various Australian States and New Zealand, estimated on the import and export returns, were:—

	Quantity. (Greasy, Washed, and Scoured.) lbs.	Value. £
Victoria	77,591,350 ..	3,454,017
New South Wales	302,864,387 ..	12,838,574
Queensland	90,687,635 ..	4,147,323
South Australia	47,005,598 ..	1,654,866
Western Australia	20,743,045 ..	637,008
Tasmania	12,846,084 ..	518,707
New Zealand	167,191,140 ..	5,509,564

The 1908 figures have been inserted, as the information relating to some of the other States for 1909 is not available.

Prices of wool.

The following information as to the average prices of wool per lb. prevailing during the past three seasons has been extracted from Messrs. Goldsborough, Mort, and Co.'s annual review:—

PRICES OF WOOL, 1907-8 TO 1909-10.

Class of Wool.	Average Value per lb. in—		
	1907–8.	1908–9.	1909–10.
GREASY MERINO.			
Extra Super (Western District) .	17½d. to 20½d.	17½d. to 19d.	18d. to 21d.
Super	16d. to 17d.	16d. to 17d.	16d. to 17½d.
Good	13d. to 15½d.	13½d. to 14½d.	13d to 14½d.
Average	11d. to 14d.	12d. to 13d.	12d. to 13d.
Wasty and Inferior	6d. to 9½d.	7½d. to 8½d.	7½d. to 9½d.

PRICES OF WOOL, 1907-8 TO 1909-10—*continued.*

Class of Wool.	Average Value per lb. in—		
	1907–8.	1908–9.	1909–10.
GREASY MERINO—*continued.*			
Extra Super Lambs	20d. to 21d.	up to 21½d	21d. to 23½d.
Super Lambs	14d. to 16d.	14d. to 16d.	15d. to 18d.
Good Lambs	10½d. to 12½d.	11d. to 12d.	11½d. to 13½d.
Average Lambs	7d. to 9d.	8d. to 8½d.	9d. to 10d.
Inferior Lambs	4½d. to 6½d.	5d. to 6d.	5d. to 6½d.
GREASY CROSSBRED.			
Extra Super Comebacks ...	17½d. to 18½d.	15d. to 16d.	17d. to 18¾d.
Super Comebacks	up to 16½d.	13½d. to 14½d.	15d. to 16½d.
Fine Crossbred	8½d. to 13½d.	11d. to 12d.	13d. to 14½d.
Medium Crossbred	6½d. to 11d.	6½d. to 7½d.	10d. to 11d.
Coarse Crossbred and Lincoln ...	5d. to 9½d.	5½d. to 6d.	8½d. to 9½d.
Super Fine Crossbred Lambs ...	13d. to 14½d.	11½d. to 12d.	13d. to 16d.
Good Crossbred Lambs ...	9½d. to 12d.	9½d. to 10½d.	11d. to 12d.
Coarse and Lincoln Lambs ...	6d. to 9d.	7½d. to 8½d.	8d. to 9½d.
SCOURED.			
Extra Super Fleece	21½d. to 25d.	21½d. to 23d.	24d. to 25½d.
Super Fleece	19d. to 22d.	20d. to 21½d.	22d. to 23d.
Good Fleece	17½d. to 20d.	18d. to 19½d.	20d. to 22d.
Average Fleece	16d. to 19d.	16½d. to 17½d.	19d. to 20d.
RECORD PRICES FOR THE SEASON.			
Greasy Merino Fleece ...	20½d.	19d.	21d.
" Comeback Fleece ...	18½d.	16d.	18¾d.
" Merino Lambs ...	21d.	21½d.	23½d.
" Comeback Lambs ..	14½d.	12d.	16d.
Scoured Fleece	25d.	23d.	25½d.

Flocks of sheep.

Returns which were collected in March, 1910, gave full information in regard to the flocks of sheep in Victoria. The numbers of flocks and of sheep at that time in the different districts were as follows :—

NUMBER OF FLOCKS AND OF SHEEP IN DISTRICTS, 1910.

District.	Number of—		Average Number of Sheep in a Flock.	Percentage of—	
	Flocks.	Sheep.		Flocks.	Sheep.
Central ..	2,592	982,754	379	10·69	7·63
North-Central ..	2,043	972,439	476	8·43	7·55
Western ..	5,445	4,327,632	795	22·45	33·58
Wimmera ..	4,038	2,250,811	557	16·65	17·47
Mallee ..	1,118	631,337	565	4·61	4·90
Northern ..	4,659	2,020,911	434	19·21	15·68
North-Eastern ..	1,985	797,999	402	8·19	6·19
Gippsland ..	2,368	901,483	381	9·77	7·00
Total ..	24,248	12,885,366	531	100·00	100·00

The figures do not include 52,617 sheep which were travelling on roads, or were located in cities and towns. The average number of sheep to a flock in Victoria is 531, and this average is exceeded in three of its divisions—the Western, Wimmera, and Mallee Districts. There are some very large-sized flocks in the Western District, and, as a consequence, it contains 33½ per cent. of the total sheep in the State, though possessing only 22½ per cent. of the total flocks. In the Central, North-Eastern, and Gippsland districts, which contain 28½ per cent. of the flocks, but only 21 per cent. of the sheep, there is a much better distribution, and also the evidence that the raising of lambs and the production of wool are combined more with cultivation than in other districts of the State. Since 1906 there has been an increase of 8,181 flocks, and of 1,545,244 sheep, each district having contributed to the increase of flocks and, with the exception of the Central and Western Districts, to the increase of sheep. The average number of sheep in a flock has decreased in each district, that of the State as a whole having been reduced during the period from 706 to 531. The decrease in the average size of flocks, combined with the increase in the number of sheep, is evidence of the growing popularity of sheep-farming. Excluding sheep travelling and in cities and towns, the following table contains a classification for the whole State of sheep according to sizes of flocks :—

SHEEP ACCORDING TO SIZES OF FLOCKS, 1910.

Size of Flocks.	Number of—		Percentage of—	
	Flocks.	Sheep.	Flocks.	Sheep.
Under 500	18,589	2,614,051	76·66	20·29
500 to 1,000 ..	3,205	2,267,722	13·22	17·60
1,001 „ 2,000 ..	1,477	2,100,701	6·09	16·30
2,001 „ 3,000 ..	378	923,881	1·56	7·17
3,001 „ 5,000 ..	258	994,634	1·07	7·72
5,001 „ 7,000 ..	107	629,821	·44	4·89
7,001 „ 10,000 ..	93	797,754	·38	6·19
10,001 „ 15,000 ..	69	850,294	·29	6·60
15,001 „ 20,000 ..	35	624,688	·14	4·85
Over 20,000 ..	37	1,081,820	·15	8·39
Total	24,248	12,885,366	100·00	100.00

Flocks of over 15,000, though not very numerous, being only about one in every 337, account for over 13 per cent. of all sheep, whilst those in the most general size—under 500 sheep—comprise 77 per cent. of the total flocks, and only 20 per cent. of the sheep. Of the largest flocks, 25 containing 712,609 sheep belong to the Western District counties, and 4, containing 128,775, to the Central District

counties. Flocks of from 15,001 to 20,000 are also chiefly confined to the Western District, where 28 of them, representing 491,367 sheep, are found—so that as regards this size the district possesses four-fifths of the flocks and sheep in the State. The Western District has, altogether, over 33½ per cent. of the total sheep in Victoria, but only 18 per cent. of the number in this district is in flocks up to 1,000. In every other district the keeping of sheep is combined with agriculture to a much greater extent, as of the total in each district the proportion per cent. in flocks up to 1,000 is, in the Northern, 53; Mallee, 50; Wimmera, 48; North-Eastern, 47; Gippsland, 44; North-Central, 44; and in the Central, 43. Between 1906 and 1910, the flocks up to 1,000 increased by 7,740, or 55 per cent., and the sheep in them by 1,501,078, or 44 per cent.; while in the same time the flocks over 1,000 increased by 441, or 22 per cent., and the sheep in them by only 44,166, or less than 1 per cent.

Breed of sheep.

An estimate of the numbers of sheep of different breeds in Victoria at March, 1910, is as follows:—

SHEEP ACCORDING TO BREED, MARCH, 1910.

Breed of Sheep.	Number.
Merino	4,657,500
Comeback	2,976,000
Crossbred, coarse	1,682,000
,, Shropshire and Southdown	1,552,500
Lincoln	905,500
Shropshire	517,500
Other	646,983
Total	12,937,983

Lamb Raising.

The export trade in frozen lamb began in 1892, and in the years that have since elapsed, it has so enormously developed that it is now recognised as one of the principal industries of the State. In 1892, 11,794 centals of beef and mutton were exported, and in 1894, 111,715 centals of mutton, or some 250,000 carcases, were shipped. In two years from its inception the trade had increased tenfold, and this prosperous beginning was an index of its future expansion. For three or four years after the inception of the trade mutton was the chief export, but in 1896 the export of lambs commenced to be seriously viewed by graziers. The trade in lambs has since grown to such an extent that even the most sanguine prophecies concerning it seem likely to fall short of realization. In 1909, a grand total of 941,309 carcases—760,308 of lamb and 181,001 of mutton—were exported, which is the largest in any one year since the inception of the industry.

The soil and climate of Victoria are well suited to the economical production of both lamb and mutton, and breeds, properly selected, are profitable, not only as meat but as wool producers. The climate permits of flocks being kept on open pasture all the year round, and there are certain districts where, in consequence of exceptionally mild conditions prevailing, the industry can be carried on with absolute success.

In Victoria the legislative trend is towards the breaking up of large estates, and many small holdings have been established. With the extension of the intense culture methods that are being impressed on farmers, lamb-raising will become a most extensive industry. Oversea markets for mutton and lamb are continually being opened up, so there is no risk of the trade being overdone.

The demand for lamb in Britain alone is ever steadily increasing, and supply and means of transport are the factors that must be duly considered on this side of the world.

The growing of wheat and the raising of lambs are two industries which are mutually dependent; farmers should, therefore, more actively combine these pursuits, as in so doing they will effect subtle transmutations in farming operations. Sheep, moreover, keep fields free from weeds, in addition to causing an enrichment of the ground.

The demand in Europe and America for mutton and wool, and in Japan for wool alone, is persistently increasing, while the supplies of these commodities are relatively decreasing, in consequence of the continuous growth and spread of population, and the increasing inability of stock owners in old countries to augment their flocks, because of the proportionate contraction of their grazing lands. Old lands whose territories are limited, and whose populations are vast and increasing, cannot find room to depasture the great flocks and herds necessary to meet their requirements, and so must look for supplies of meat and wool to newer lands, where sheep will flourish and where extensive grazing areas are available. The possibilities, then, for settlers in Victoria who may embark in the industry of raising lambs for export oversea are unbounded; the hours of toil are neither long nor exacting, and the industry is now one of the most profitable and popular of farming occupations. With the continuous breaking up of large estates and the settlement of increasing numbers of small sheep-farmers on the land, mutton will become the primary and wool the incidental consideration, instead of the present reverse condition existing.

The time is coming when sheep will be grown in Victoria primarily for mutton, but although this is evident, it is certain that the sheep will, in addition, require to be producers of good fleeces.

If special fodder crops were generally grown and methods of husbandry practised on the same lines as in New Zealand, it should be quite possible for Victoria to soon possess 25,000,000 sheep, whereas at present the number is only 12,937,983. The carrying capacity of a

farm is increased by growing special fodder crops, yet at the present time, although unlimited markets exist abroad, graziers do not make sufficient special provision for feeding their stock. They, for the most part, rely entirely on the natural pastures. If, however, systematic efforts were made to extensively grow fodder crops, graziers would not only materially augment their own incomes, but would increase the resources and prosperity of the State.

Where rainfall is certain and irrigation possible lucerne as a mainstay fodder should be grown, for the cultivation of this crop vastly increases the carrying capacity of the farm. When the irrigation schemes of the Northern areas are completed an enormous impetus will be given to lamb production. Lucerne, rape, kale and turnips, which are the best fattening fodders for sheep, will then, no doubt, be grown in great luxuriance.

There is no limit to the demand for meat in Britain, and the only real rival we have in the London market is the Argentine Republic, for there the seasons correspond with our own. Victoria is a State peculiarly free from diseases that decimate flocks, and in this respect is in a much more fortunate position than the Argentine, where State assistance towards promoting prosperity and checking ravages of disease is not so actively practised as in Victoria.

The possibilities, then, for farmers engaging in the trade of raising lambs in Victoria for export are very great, and no apprehension need be felt that the outlet for lambs is likely to become contracted. The significant feature to keep before the mind is that the number of sheep all the world over is not keeping pace correspondingly with the increase in population. Europe will, therefore, in the future have to depend largely on Australia for its mutton supply.

Raising lambs, although not an arduous vocation, is a calling in which one must possess some knowledge of farm practice and of the management of flocks, in addition to having an acquaintance with diseases incidental to sheep, before one can hope to meet with success.

Pork.

The breeding of pigs for export, either in the form of pork or bacon, if conducted on systematic lines, should prove a remunerative business. As an adjunct to dairying and general farm operations pig-breeding should be considered an indissoluble factor. Pigs are the best agents to profitably use up the waste products of a farm, and separated milk and damaged grain can profitably be converted into pork. Notwithstanding the high prices generally prevailing for pigs, and an incessant demand for pig products, pig-breeders supinely view this important branch of agriculture. There are only 217,921 pigs in the State at the present time, and this number could be enormously and advantageously increased, for there is a continuous demand in the old world for products of swine origin. It is estimated that in the principal countries of the world there exist 145,375,000 pigs. During the year only 4,159 carcases of pork were exported from Victoria.

Beef and Veal.

The raising of beeves for export is not as yet a great undertaking in the State, although the industry is capable of being established in districts where water is plentiful and where special fodder crops could be advantageously grown. The rearing of milk herds is an important business in Victoria, for the production of milk is one of the staple industries of the State. The number of cattle being raised in the world is not keeping pace with the increase of population, and therefore short supplies of beef in thickly populated countries must inevitably occur. It is estimated that there are about 420,550,000 cattle in the civilized countries of the world.

It is possible for Victoria to raise extensive herds, not only of dairy cattle, but also of beeves to furnish meat supplies for oversea markets. During 1909, there were exported 5,542 carcases of beef, and 3,341 carcases of veal.

Live stock in Australia and New Zealand.

In the subsequent statement are given the total number and the number per square mile of horses, cattle, sheep, and pigs in the various Australian States, according to the returns for the end of 1909, and in New Zealand as at the end of the previous year:—

LIVE STOCK IN AUSTRALASIA, 1909.

State.	Horses.	Cattle.		Sheep.	Pigs.
		Milch Cows.	Other.		
	Total Number.				
Victoria	442,829	625,063	924,577	12,937,983	217,921
New South Wales	604,776	794,543	2,233,161	46,187,678	237,849
Queensland ..	555,613	333,839	4,377,943	19,593,791	124,803
South Australia* ..	230,405	110,757	233,277	6,432,038	80,410
Western Australia..	125,315	29,176	764,041	4,731,737	47,062
Tasmania ..	40,492	50,996	148,949	1,734,761	55,705
New Zealand (1908)	363,259	536,629	1,236,697	23,480,707	245,092
	Number per Square Mile.				
Victoria	5·04	7·11	10·52	147·22	2·48
New South Wales	1·96	2·57	7·22	149·39	·77
Queensland ..	·83	·50	6·55	29·32	·19
South Australia* ..	·61	·29	·61	16·94	·21
Western Australia..	·13	·03	·78	4·85	·05
Tasmania ..	1·54	1·93	5·65	65·77	2·11
New Zealand (1908)	3·47	5·12	11·80	224·16	2·33

* Exclusive of Northern Territory, the return for which shows that in 1909 there were 23,479 horses, 414,046 cattle, 43,393 sheep and 1,387 pigs.

When a comparison is made between the above figures and those for previous years, the most striking feature presented is the all-round increase in the number of pigs last year. This is specially noticeable on account of the successive decreases which occurred in the three preceding years. The reduction between 1905 and the end of 1908 was as much as 37 per cent. in

Western Australia, 34 per cent. in Victoria and Tasmania, 33 per cent. in South Australia, 30 per cent. in New South Wales, and 24 per cent. in Queensland, but was only 2 per cent. in New Zealand. There was no apparent reason for these reductions, as the rearing of pigs has always been a most profitable adjunct to farming or dairying, and it is satisfactory to note that in 1909 there were increases over the previous year of 22 per cent. in Victoria, 16 per cent. in Tasmania, 10 per cent. in New South Wales, and minor increases in the other States. The number of horses showed an increase last year in each Australian State, that of cattle in each State except Victoria and Tasmania, and that of sheep in each State except South Australia. The stock, in proportion to area, are evidently most numerous in New Zealand, which possesses horses, cattle, and sheep equal to about 360 sheep to the square mile; Victoria comes next with 303; then follow New South Wales with 228; Tasmania with 127; Queensland with 80; South Australia with 28; and Western Australia, with the lowest average, it having stock equivalent to 11 sheep to the square mile.

World's supply of sheep.

The following is a statement of the number of sheep in the world at the latest dates for which information is available, according to the *Year-Book*, United States Department of Agriculture, except in the case of Australasia:—

NUMBER OF SHEEP IN THE WORLD, 1908.

	No. of Sheep.
United Kingdom	31,837,000
Other European countries	153,229,000
Total Europe	185,066,000
Australia and New Zealand	109,402,000
Asia	90,617,000
Africa	45,651,000
North America...	63,951,000
South America...	99,280,000
Total	593,967,000

Ensilage.

The importance of the preservation of forage in a green state is so great that the attraction of public attention to the question is highly desirable. Not only will stock eat anything of a vegetable nature that will make useful ensilage, but ensilage-fed animals at all times present an appearance of health and vigour. It cannot be affirmed that the uncertainty of the result of the system need militate against the trial. The silo is no longer in an experimental stage. Ancient nations are known to have practised the preservation of forage and fruits in a green state in large subterranean vaults; and for upwards of twenty years experiments on a large scale have been carried on, particularly in America, where the almost universal testimony of farmers is to the resulting economy in the feeding of cattle, and the consequent increased stock-carrying capacity of the land. As a result of these experiments, many farmers have introduced silos upon their holdings,

but it is a matter of surprise that so little has been done in Australia. Dr. Cherry, in a paper on "The Modern Silo," points out particularly that "animals which chew the cud differ from all other classes in requiring their food comparatively juicy and bulky. Their digestive apparatus is formed to suit this kind of food. Hence the cow or bullock cannot thrive on exclusively dry food so well as a horse." In Victoria, where every season the rapid drying up of the grass under the excessive heat of the summer sun causes large areas of pasture land to be parched and grassless, and where green food usually disappears from December till Autumn, an artificial method of preserving fodder should be of the utmost possible benefit, as the advantage of the luxuriance of trefoil, grasses, and self-sown crops in the spring would not then be lost. The juicy state in which the silo preserves ensilage fulfils another of the requirements of ruminant animals, viz.:— that their food should be presented in a succulent condition. Even in districts where fresh green fodder is available throughout the greater part of the year, the advantage of being able to secure the crop when it is in its best condition seems so evident, that the silo should soon become an indispensable adjunct on every farm.

The returns for Victoria relating to the years 1901 to 1910 show that last season there was a substantial increase in the number of farmers who made ensilage, and in the material used, as compared with the previous seasons. The following figures show how much has been done in this direction since 1900:—

ENSILAGE RETURNS, 1900-1 TO 1909-10.

Year Ended March.	Number of Farms on which made.	Weight of Materials Used.
		Tons.
1901	131	5,834
1902	125	5,065
1903	111	4,703
1904	290	10,931
1905	300	12,779
1906	160	7,240
1907	210	10,581
1908	203	11,031
1909	392	18,205
1910	518	27,280

Bee-keeping.

The returns for 1908-9 show that there were 4,303 bee-keepers owning 26,712 frame and 13,883 box hives, producing 2,141,820 lbs. and 231,808 lbs. of honey respectively, and 38,674 lbs. of beeswax. In 1909-10 there were 3,976 bee-keepers owning 29,761 frame and 12,871 box hives, producing 1,438,121 and 173,163 lbs. of honey respectively, and 22,369 lbs. of beeswax.

The number of bee hives increased from 21,412 in 1900-1 to 49,120 in 1904-5, after which it declined to 40,595 in 1908-9, and 42,632 in 1909-10. In 1891-2, the quantity of honey returned was 1,128,283 lbs.; after a decline in the next two years, the quantity gathered in 1894-5 was 1,323,982 lbs.; a falling off was recorded from that year to 1897-8, when the return was 195,163 lbs. A recovery has since been made, and the returns for the last six years indicate that the industry is making good progress. The production of honey in 1909-10, though less than in 1908-9, was over 40 per cent. greater than in 1907-8. The decrease last year occurred principally in the counties of Borung, Dundas, Lowan, Talbot, and Kara Kara.

BEE-KEEPING, 1900-1 TO 1909-10.

Season ended May.	Number of Bee-keepers.	Bee Hives.	Honey.	Beeswax.
			lbs.	lbs.
1901	2,293	21,412	957,020	15,269
1902	3,776	22,083	572,477	13,530
1903	4,402	32,126	1,199,331	23,061
1904	5,609	40,759	833,968	18,979
1905	6,494	49,120	1,906,188	28,653
1906	5,300	41,780	1,209,144	21,844
1907	4,974	48,005	2,965,299	46,780
1908	4,745	43,212	1,138,992	24,521
1909	4,303	40,595	2,373,628	38,674
1910	3,976	42,632	1,611,284	22,369

Poultry production.

The numbers of the various kinds of poultry in the State at the date of the last census—31st March, 1901—as ascertained from the schedules, were as follows:—

Fowls	3,619,938
Ducks	257,204
Geese	76,853
Turkeys	209,823

Taking the above figures as a basis, it is estimated that the gross value of poultry and egg production for the year 1909 was £1,570,000.

Poultry and poultry-owners at census, 1881, 1891, and 1901.

The following table shows the number of poultry and poultry-owners as ascertained at the censuses of 1881, 1891, and 1901 :—

POULTRY: RETURN FOR THREE CENSUS YEARS.

Census.	Poultry-owners.	Fowls.	Ducks.	Geese.	Turkeys.
1881	97,152	2,332,529	181,698	92,654	153,078
1891	142,797	3,487,989	303,520	89,145	216,440
1901	132,419	3,619,938	257,204	76,853	209,823

It thus appears that there was a falling off in the number of poultry-owners between 1891 and 1901, and although fowls showed a slight increase, there was a diminution in the other kinds of poultry. The United Kingdom in the five years ended December, 1909, imported annually £7,092,626 worth of eggs, of which 36 per cent. was from Russia, 24 per cent. from Denmark, 10 per cent. from Austria-Hungary, 8 per cent. from Italy, 6 per cent. from Germany, 6 per cent. from France, 9 per cent. from other foreign countries, and only 1 per cent. from British countries. It also imported in these years an annual average of over £900,000 worth of poultry, 99 per cent. of which was from foreign countries.

State expenditure on rabbit destruction.

Active operations for the destruction of rabbits, &c., on Crown lands were first undertaken by the Government in 1880, and from that date to 30th June, 1909, sums amounting to £521,651 had been expended in connexion therewith, including subsidies to Shire Councils for the destruction of wild animals. The following are the amounts spent since 1879 :—

EXPENDITURE ON DESTRUCTION OF RABBITS, ETC.

	£		£
1879–80 to 1888–9 ..	142,963	1903–4...	15,759
1889–90 to 1898–9 ..	208,638	1904–5...	16,603
1899–1900	14,801	1905–6...	16,477
1900–1..	15,817	1906–7...	16,513
1901–2...	17,250	1907–8...	17,585
1902–3...	16,489	1908–9...	22,756

In addition to the expenditure of £521,651 referred to above, a loan of £150,000 for the purchase of wire-netting to be advanced to land-holders was allocated to shires in 1890, and one of £50,000 in 1896, both of which have been repaid. In 1908-9 a further

sum of £45,850 was advanced from loans for the purchase of wire-netting for supply to municipalities and land-owners. A complete system, administered by an officer called the Chief Inspector under the Vermin Destruction Act, exists for effectually keeping the rabbits under control.

Rabbits, &c., sold, Melbourne Fish Market.

The quantity of rabbits, hares, and wild-fowl sold at the Melbourne Fish Market during each of the past eight years was as shown in the following statement:—

RABBITS, HARES, AND WILD-FOWL SOLD AT THE MELBOURNE FISH MARKET, 1902, TO 1909.

Year.	Rabbits.	Hares.	Wild Fowl.
	pairs.	brace.	brace.
1902 ...	471,964	2,401	32,756
1903 ...	316,462	1,024	13,130
1904 ...	402,944	1,466	49,556
1905 ...	364,066	903	47,348
1906 ...	275,166	535	28,610
1907 ...	298,024	260	58,210
1908 ...	231,216	148	20,634
1909 ...	235,548	163	42,240

Frozen rabbits &c., exported.

Large quantities of frozen rabbits and hares have been exported to the United Kingdom and other oversea countries during recent years, the numbers and values for the last eight years being as follows:—

FROZEN RABBITS AND HARES EXPORTED OVERSEA: 1902 TO 1909.

Year.	Quantity.	Value.
	pairs.	£
1902	3,213,376	158,043
1903	3,447,077	165,580
1904	4,045,036	125,038
1905	5,093,952	219,665
1906	4,622,307	221,064
1907 ...	3,251,231	154,789
1908 ...	1,743,466	84,835
1909	1,675,578	82,182

In 1909 the exports oversea from Victoria also contained 3,293,652 lbs. of rabbit and hare skins worth £161,156, sent principally to the United Kingdom and the United States of America.

The fishing industry.

In the following tables some information is given regarding the fishing industry. The first shows the various fishing stations round the coast and on the Murray and Goulburn Rivers, the number of men and boats engaged, and the value of the general fishing plant in use. The second shows the approximate quantity and value of Victorian and other fish sold in the Metropolitan market during the years 1908 and 1909; and the third shows the quantity and value of Victorian fish sold in the Melbourne, Ballarat, and other markets during 1909:—

FISHERIES—MEN AND BOATS EMPLOYED, 1909.

Fishing Stations.	1909.			
	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
			£	£
Anderson's Inlet	6	4	69	166
Barwon Heads and Ocean Grove ..	15	8	345	55
Brighton	6	5	113	69
Corner Inlet, Welshpool, and Toora ..	55	52	3,277	623
Dromana	24	20	820	231
Echuca	2	3	8	43
Frankston	13	10	179	100
Geelong	57	23	913	784
Gippsland Lakes	366	231	5,462	3,643
Kerang	5	4	10	15
Lorne	5	2	24	40
Mallacoota	4	4	80	30
Mentone	8	4	33	42
Mordialloc	13	13	321	118
Mornington	19	14	536	370
Nathalia	25	15	38	20
Portarlington and St. Leonards ..	55	40	938	458
Portland	44	48	1,562	422
Port Albert	54	54	1,817	726
Port Fairy	36	23	1,272	327
Port Melbourne	49	35	777	637
Queenscliff	94	52	4,723	529
Sandringham	18	23	763	80
Sorrento, Portsea, and Rye	11	9	720	175
St. Kilda	5	3	42	110
Swan Hill	3	3	15	125
Warrnambool	3	5	116	77
Western Port (Cowes, Hastings, Flinders, San Remo, and Tooradin) ..	111	63	1,480	1,290
Williamstown	19	10	254	175
Total	1,125	780	26,707	11,480

The quantities and values of Victorian and other fish sold in the Melbourne Fish Market during the last two years were as shown hereunder:—

FISH SOLD IN THE MELBOURNE FISH MARKET, 1908 AND 1909.

—	1908.		1909.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Fresh Fish (Victorian) lbs.	9,746,408	60,915	10,141,550	63,384
Crayfish (Victorian) .. doz.	24,066	6,016	26,112	6,528
Imported Fish (fresh or frozen) lbs.	1,948,200	22,323	2,405,960	32,580
Oysters .. .. cwt.	18,599	9,764	20,797	10,418
Total	..	99,018	..	112,910

In addition to the above, 1,452 cwt. of smoked fish, and 198 baskets of prawns were sold in this market in 1909.

The quantity and value of fish caught in Victorian waters, and sold in the Melbourne and the Ballarat markets or elsewhere in 1909 were as follows:—

VICTORIAN FISH SOLD IN 1909.

Markets.	Quantity.		Value.	
	Fish.	Crayfish.	Fish.	Crayfish.
	lbs.	doz.	£	£
Melbourne	10,141,550	26,112	63,384	6,528
Ballarat	667,520	1,820	3,314	368
Other	159,456	2,030	1,000	507
Total	10,968,526	29,962	67,698	7,403

In connexion with this subject, the quantities and values of the different classes of fish imported are of interest. The figures for the last two years are as follows:— Fish imported.

FISH IMPORTED 1908 AND 1909.

—	1908.		1909.	
	Quantity.	Value.	Quantity.	Value.
Fish—				
		£		£
Fresh or Preserved by cold process .. .. lbs.	1,426,967	16,602	2,531,544	33,796
Smoked .. .. ,,	267,216	6,611	226,809	3,984
Fresh Oysters .. cwt.	23,652	12,081	24,876	12,674
Potted, &c.	..	3,214	..	4,600
Preserved, in tins, &c. lbs.	4,520,624	113,043	4,940,543	120,197
N.E.I. .. .. cwt.	7,543	13,440	6,563	9,790
Total	..	164,991	..	185,041

The most important item in this table is fish preserved in tins and other air-tight vessels, of which 4,286,351 lbs., or 87 per cent., came from the United Kingdom, the United States, and Canada in 1909.

Imports by United Kingdom of articles that may be further developed in Victoria.

In Victoria the natural conditions are eminently suitable for agricultural and pastoral pursuits, and there is room for considerable expansion in these avenues of production. There is little need to fear over-production, as the United Kingdom offers an almost unlimited market for the consumption of many articles which could be supplied from here and would give very profitable employment. Some idea of the enormous importations by the United Kingdom from foreign countries of certain articles that can be profitably produced here is given in the table which follows. The figures, which are taken from the United Kingdom Board of Trade returns, represent the average annual imports for the five years 1905 to 1909 :—

AVERAGE ANNUAL IMPORTS INTO THE UNITED KINGDOM, 1905 TO 1909.

Articles.	Annual Value of Imports into United Kingdom from—			
	Australia.	Other British Possessions.	Foreign Countries.	All Countries.
	£	£	£	£
Butter	2,527,372	2,072,693	18,194,058	22,794,123
Cheese	2,944	5,503,629	1,366,832	6,873,405
Eggs	..	60,209	7,032,417	7,092,626
Meats — Bacon and Hams	..	2,237,340	15,080,686	17,318,026
Meats—All other	2,317,910	4,210,337	17,141,559	23,669,806
Poultry and Game	15,159	13,909	995,042	1,024,110
Fruit—Fresh, Dried, and Preserved	291,087	1,428,815	12,272,128	13,992,030
Flax and Hemp	..	956,591	6,421,484	7,378,075
Maize	..	600,660	11,423,904	12,024,564
Wheat	3,400,613	10,792,963	23,580,448	37,774,024
Wheatmeal and Flour	254,161	792,730	5,553,479	6,600,370
Wine	123,992	22,846	3,762,482	3,909,320
Leather	400,598	2,879,190	5,819,070	9,098,858
Skins, Furs, and Hides	1,530,952	3,254,304	6,113,205	10,898,461
Tallow and Stearine	951,495	610,305	1,466,551	3,028,351
Wool	12,819,835	11,051,073	4,838,026	28,708,934

As regards the sixteen articles specified, the requirements of the United Kingdom are to the extent of 66 per cent. met by foreign countries. Only 12 per cent. is supplied by Australia, where bountiful soils and a salubrious climate, especially in Victoria, give an opportunity of doing much more than at present in the supply of butter, meats, fruit, breadstuffs, &c. That it requires only increased population to enormously swell the output of primary products is apparent if a comparison be made with Great Britain, which is of equal size and less favoured generally by climate. The figures for

1909 relating to agriculture and live stock in Victoria and Great Britain are for comparative purposes placed side by side in the table which follows :—

AGRICULTURE AND LIVE STOCK IN VICTORIA AND GREAT BRITAIN, 1909.

—		Victoria.	Great Britain.
Area	acres	56,245,760	56,212,000
Wheat produced	bushels	28,780,100	61,442,376
Oats ,, ...	,,	7,913,423	123,025,576
Barley ,, ...	,,	1,023.384	60,938,560
Potatoes ,, ...	tons	174,970	3,674,453
Horses	No.	442,829	1,552,993
Cattle	,,	1,549,640	7,020,982
Sheep	,,	12,937,983	27,618,419
Pigs	,,	217,921	2,380,887

It should be possible in Victoria to have as great a production from agriculture and to maintain as many live stock as in Great Britain.

MINING.

In the issue of the *Year-Book*, 1906-7, will be found an interesting and instructive article on "The Economic Minerals and Rocks of Victoria" by Mr. A. E. Kitson, F.G.S.

The following table gives particulars of the expenditure from Revenue in aid of the mining industry during each of the last five financial years :— Expenditure in aid of Mining Industry.

EXPENDITURE ON MINING : 1904-5 TO 1908-9.

—	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
	£	£	£	£	£
Mining Department ...	24,526	25,431	26,200	26,531	24,910
Mining boards ...	2,916				
Victorian coal—Allowance to Railway Department on carriage of ...	8,847	10,807	11,302	7,541	7,419
Diamond drills for prospecting	10,823	11,231	13,124	13,150	11,805

EXPENDITURE ON MINING: 1904-5 TO 1908-9—*continued.*

—	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
	£	£	£	£	£
Testing plants ...	2,664	2,463	2,548	2,093	2,203
Geological and underground surveys of mines	5,616	5,469	5,631	5,701	5,628
Mining Development ...	...	...	...	...	19,465
Miscellaneous ...	963	777	916	2,274	8,094
Total ...	56,355	56,178	59,721	57,290	79,524

Yearly grants are also made to Schools of Mines, particulars of which will be found on page 390 of this work, and in addition to amounts annually voted from the consolidated revenue, £85,100 has been appropriated from funds provided by the Surplus Revenue Acts, of which sum £73,775 has been expended during the last five financial years in mining development, boring for gold and coal, and in advances to mining companies and miners. Also, since 1st July, 1896, £271,022 has been apportioned from loan receipts and expended on mining enterprise, particulars of which expenditure are shown in the following statement:—

LOAN MONEY EXPENDED ON MINING ENTERPRISE.

	£
Advances to companies for development of mining ...	62,740
Draining metalliferous areas	62,532
Construction of roads and tracks for mining	57,579
Plant for testing metalliferous material	12,357
Construction of races and dams for water to be used in sluicing for gold	8,260
Advances to miners for prospecting	27,839
Purchase of cyanide process patent rights	20,000
Equipping Schools of Mines with mining appliances ...	9,975
Miscellaneous	9,740
Total	271,022

The advances from loan moneys and revenue to mining companies to 30th June, 1909, for the development of mining totalled £110,915, of which sum £17,534 had up to that date been repaid, £9,066 realized, and £11,419 written off, leaving £72,896 outstanding. Interest paid during 1908-9 amounted to £674, and interest outstanding on the 30th June, 1909, to £2,499.

The following statement shows the manner of occupation of all persons connected with mining industries throughout the State according to the Census returns of 1901 :— Persons engaged mining, 1901.

RETURN OF PERSONS ENGAGED IN MINING PURSUITS, 1901.

Persons following Mining Pursuits.	Employers of Labour.		In business on their own Account, but not employing Labour.		Receiving Salary or Wages.		Relatives assisting.		Not at work for more than a week prior to Census.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Mines Department officer (not Geologist)	..	..	..	..	76	3	..	1	..	..
Mining engineer, inspector, surveyor, (not Government) ..	15	..	32	..	90	..	..	..	11	..
Mine, gold (quartz), proprietor, manager, worker ..	216	2	1,567	..	7,747	..	65	..	925	..
,, gold (alluvial), proprietor, manager, worker ..	87	..	4,141	..	4,285	..	107	..	448	..
,, gold (undefined), proprietor, manager, worker ..	35	1	682	..	1,142	..	20	..	213	..
,, (undefined), proprietor, manager, worker ..	79	1	1,165	..	4,264	..	30	..	624	..
,, tin (lode), worker ..	..	..	1	..	..	..	..	..	1	..
,, tin (alluvial), proprietor, manager, worker ..	..	..	9	..	9	..	..	..	1	..
,, silver, proprietor, manager, worker	..	..	..	..	2	..	..	..	3	..
,, coal, proprietor, manager, worker	10	..	8	..	844	..	..	..	32	..
,, copper, manager, worker	..	..	1	..	9	..	..	..	2	..
,, precious stones, manager, worker	1	..	3	..	..	..	..	..	1	..
,, expert, amalgamator, diamond drill worker ..	5	..	12	..	56	..	..	..	3	..
,, director, agent, legal manager, clerk, secretary ..	65	..	97	1	334	8	1	1	17	..
Quartz crusher	17	..	14	..	573	..	1	..	30	..
Pyrites worker, ore roaster ..	2	..	2	..	61	..	..	..	2	..
Cyanide worker, &c.	32	..	7	..	170	..	..	..	1	..
Smelter, gold	..	..	1	..	3	..	..	..	..	..
,, other	..	..	..	..	17	..	..	..	4	..
Quarry proprietor, manager, clerk	41	1	51	..	1	..	7	..	..	..
,, man, worker	..	..	..	..	734	..	..	..	62	..
Others	..	..	1	..	..	..	..	..	1	..
Total	605	5	7,794	1	20,417	11	231	2	2,381	..

Total Males	31,428
Total Females	19
GRAND TOTAL	31,447

Gold miners. The average number of men employed in mining is estimated annually by the Mines Department, and the figures for the ten years ended with 1909 are subjoined :—

NUMBER OF MEN EMPLOYED IN GOLD MINING, 1900 TO 1909.

Year.	Alluvial Miners	Quartz Miners.	Total.
1900	12,836	16,199	29,035
1901	12,886	14,891	27,777
1902	11,963	14,140	26,103
1903	11,058	14,150	25,208
1904	10,405	13,926	24,331
1905	11,403	13,966	25,369
1906	10,951	14,353	25,304
1907	10,390	12,901	23,291
1908	8,673	12,180	20,853
1909	7,925	10,746	18,671

The number of men employed in each mining district in 1909 was as follows :—Ararat and Stawell, 808; Ballarat, 3,423; Bendigo, 4,608; Beechworth, 3,958; Castlemaine, 2,086; Gippsland, 1,306; and Maryborough, 2,482.

Mineral produce. The following table shows the quantity and value of the metals and minerals produced in Victoria up to the end of 1909 :—

TOTAL MINERAL PRODUCTION TO 31ST DECEMBER, 1909.

Metals and Minerals.	Recorded prior to 1909.		Recorded during 1909.		Total Recorded to end of 1909.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Fine. ozs.	£	Fine. ozs.	£	Fine. ozs.	£
Gold	66,464,132	282,321,433	654,222	2,778,956	67,118,354	285,100,389
Silver ..	29,405	7,751	..	..	29,405	7,751
	1,283,879 tons.	197,689	21,655 tons.	2,310	1,305,534* tons.	199,999
Coal, black ..	2,926,813	1,612,886	128,173	76,870	3,054,986	1,689,756
,, brown ..	48,966	19,757	500	75	49,466	19,832
Lignite	12,923	3,086	..	..	12,923	3,086
Ore—copper ..	18,491	213,179	17	44	18,508	213,223
,, tin ..	15,504	762,757	89	7,067	15,593	769,824
,, antimony ..	31,356	204,529	1,750	5,000	33,106	209,529
,, silverlead ..	793	5,760	..	..	793	5,760
,, iron ..	5,434	12,540	..	..	5,434	12,540
Wolfram	3	252	14	1,432	17	1,684
Diamonds ..	..	108	..	..	..	108
Sapphires, &c. ..	..	630	..	..	..	630
Gypsum ..	15,670	8,951	1,613	1,000	17,283	9,951
Magnesite ..	6	12	..	..	6	12
Kaolin	4,095	9,763	493	619	4,588	10,382
Diatomaceous earth	2,193	9,952	800	2,400	2,993	12,352
Pigment clays ..	2	24	..	..	2	24
Bluestone, Freestone, Granite, &c.† .. Limestone, &c.‡ ..	..	3,628,260	..	94,935	..	3,723,255
Total ..	..	289,019,319	..	2,970,768	..	291,990,087

* Extracted from gold at the Melbourne Mint.—† From 1866 only.—‡ Record from 1900.

The total quantity of gold raised from its first discovery in 1851 to the end of 1909 was 71,379,889 ounces gross, or, as shown above, 67,118,354 ounces fine, the estimated value being £285,100,389. This sum is based on the average value of the gold received at the Melbourne Mint, which in 1909 was £3 19s. 1½d. per ounce. The yield of gold for 1909—702,221 ounces gross, or 654,222 ounces fine—was 18,999 ounces gross, or 16,688 ounces fine, less than the yield of the previous year, mainly owing to the closing down of some of the deep alluvial mines and the lessened yields from the lode mines at Walhalla and from dredging and sluicing.

Mining district gold yields

In the following return will be found the yield of gold from alluvial workings and from quartz reefs during 1908 and 1909 in each mining district of the State, according to the calculations of the mining registrars:—

DISTRICT YIELDS OF GOLD, ALLUVIAL AND QUARTZ, 1908 AND 1909.

Mining District.	1908.			1909.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	oz.	oz.	oz.	oz.	oz.	oz.
Ararat and Stawell ...	7,572	8,106	15,678	11,186	7,458	18,644
Ballarat	41,828	98,967	140,795	40,054	95,270	135,324
Beechworth	106,847	20,790	127,637	98,783	22,092	120,875
Bendigo	6,294	193,619	199,913	2,926	216,716	219,642
Castlemaine ...	31,968	52,092	84,060	22,539	53,650	76,189
Gippsland	7,360	58,656	66,016	6,985	42,872	49,857
Maryborough... ...	47,855	27,365	75,220	50,137	30,747	80,884
Total	249,724	459,595	709,319	232,610	468,805	701,415

According to these calculations, the totals of which fall short of the actual yields by 11,901 ounces in 1908 and by 806 ounces in 1909, alluvial mining shows a decrease of 17,114 ounces, and lode mining an increase of 9,210 ounces in 1909 as compared with 1908.

Deep mines.

On 31st December, 1909, there were 15 mines on the Bendigo gold-field with shafts over 3,000 feet deep, namely, Victoria Reef Quartz, 4,355 feet; New Chum Railway, 4,318 feet; Lazarus New Chum, 3,682 feet; New Chum and Victoria, 3,579 feet; North Johnson's, 3,498 feet; Lansell's 180, 3,365 feet; Great Extended Hustler's, 3,290 feet; Ironbark, 3,250 feet; Carlisle, 3,197 feet; Victoria Consols, 3,114 feet; Clarence, 3,110 feet; New Chum Consolidated, 3,099 feet; Eureka Extended, 3,060 feet; Princess Dagmar, 3,020 feet; and Johnson's Reef No. 2, 3,020 feet. The total number of shafts over 2,000 feet in depth at Bendigo is 52, and, in some of the mines, winzes have been put down below the level of the bottom of the shafts. For instance, this has been done in the Victoria Reef Quartz to a depth of 4,558 feet; in the New Chum

Consolidated to 3,583 feet; in the New Shenandoah, to 3,332 feet; in the Princess Dagmar to 3,390 feet; and in the Eureka Extended to 3,319 feet.

The following are the deepest mines on other gold-fields:—Long Tunnel, Walhalla, incline shaft, 4,051 feet; South Star, Ballarat, 3,180 feet; Long Tunnel Extended, Walhalla, 3,030 feet; Magdala, Stawell, 2,425 feet; South German, Maldon, 2,225 feet; and Lord Nelson, St. Arnaud, 2,139 feet.

Dredge mining and hydraulic sluicing.

Dredge mining and hydraulic sluicing continue to make good progress. Prior to 1900 the yield of gold from dredging operations was 90,528 ounces, and from 1900 to 1909, 638,112 ounces were obtained from 4,483 acres worked, the average yield of gold being 142 ounces per acre, or 2.4 grains per cubic yard of material treated. The quantity of tin won during the period 1900-9 was 526 tons. The following tables give particulars of the industry for 1909:—

DREDGE MINING AND HYDRAULIC SLUICING, 1909.

District.	Number of Plants.	Gold won during 1909.	Dividends paid during 1909.*
		oz.	£
Ballarat	11	11,258	963
Beechworth	52	54,294	43,960
Bendigo	3	461	...
Castlemaine	25	12,508	5,225
Gippsland...	8	4,591	2,625
Maryborough	12	5,227	...
Unspecified	12	630	...
Total	123	88,969	...

* These figures are merely approximate, as information was not furnished in connexion with some privately-owned plants.

DESCRIPTION OF DREDGING AND HYDRAULIC SLUICING PLANTS.

District.	Bucket Dredges.	Hydraulic Pump Sluices.	Jet Elevators.	Gravitation Hydraulic Sluicing.	Total.
Ballarat	..	11	...	...	11
Beechworth	43	6	3	...	52
Bendigo	...	3	...	...	3
Castlemaine	2	19	4	...	25
Gippsland	5	1	2	...	8
Maryborough	...	12	..	...	12
Unspecified	...	...	...	12	12
Total	50	52	9	12	123

The 50 bucket dredges raised 14,927,269 cubic yards of material and won 53,709 ounces of gold; the 52 hydraulic pump sluices dealt with 4,645,962 cubic yards of material for a return of 31,938 ounces of gold, the nine hydraulic jet elevators put through 397,900 cubic yards of material for a return of 2,692 ounces of gold; and the twelve plants operating in connexion with hydraulic sluicing by gravitation dealt with 201,887 cubic yards of material, which yielded 630 ounces of gold. The total quantity of material treated by these plants during 1909 was 20,173,018 cubic yards, representing an area of 745 acres, the amount of gold obtained being 88,969 ounces, and of tin 70 tons, as against a treatment of 20,703,092 cubic yards in 1908 for 105,808 ounces of gold, and 62½ tons of tin. The yield of gold per cubic yard of material was 2.1 grains, in 1909, as against 2.4 for the previous year. In 1909 the number of men employed in connexion with these 123 plants was 1,914, and their wages amounted to £175,230. Other returns in connexion with dredge-mining, &c., not referred to above, gave an additional yield of 269 ounces for the year 1909.

Value of machinery on gold-fields.

The following is a return showing the value of machinery used in alluvial and quartz mining for the five years ended 1909:—

VALUE OF MACHINERY ON GOLD-FIELDS, 1905 TO 1909.

Year.	Approximate Value of Machinery Employed in—		
	Alluvial Mining.	Quartz Mining.	Total.
	£	£	£
1905	790,810	1,819,750	2,610,560
1906	809,150	1,817,070	2,626,220
1907	964,120	1,935,125	2 899 245
1908	933,470	1,797,825	2.731,295
1909	850,311	1,643,072	2.493.383

Gold-mining dividends.

The next return shows the amount paid in dividends in each mining district of the State for the last six years:—

DIVIDENDS PAID BY GOLD MINING COMPANIES IN EACH MINING DISTRICT, 1904 TO 1909.

Mining District	Amount Distributed.					
	1904.	1905.	1906.	1907.	1908.	1909.
	£	£	£	£	£	£
Ararat and Stawell ...	10,167	102	...	...	...	5,275
Ballarat	77,315	66,700	62,700	51,675	43,500	47,863
Beechworth ...	57,511	70,413	65,599	53,189	78,245	54,114
Bendigo	382,321	228,028	251,727	120,880	133,114	159,273
Castlemaine ...	17,240	35,465	37,701	39,568	18,669	48,225
Gippsland	41,844	28,504	56,897	50,850	44,515	6,960
Maryborough ...	37,000	25,219	10,069	1,250	1,250	17,500

Yields and dividends for the whole State for the last ten years are given below :—

YIELDS AND DIVIDENDS, 1900 TO 1909.

Year.	Value of Gold Produced.	Dividends Paid.
	£	£
1900	3,229,628	453,333
1901	3,102,753	427,997
1902	3,062,028	472,136
1903	3,259,482	601,152
1904	3,252,045	623,398
1905	3,173,744	454,431
1906	3,280,478	484,693
1907	2,954,617	317,412
1908	2,849,838	319,293
1909	2,778,956	339,210

The dividends paid in the years mentioned range from 11 to 19 per cent. of the gold produced, the average for the ten years being 14½ per cent.

Gold raised in Australasia.

The following table summarizes the production of gold in Australasia from 1851, the year of its first discovery, and contains a statement of the quantity recorded as having been raised in the respective States at different periods. Prior to 1898, Victoria was almost invariably the leading gold-producing State of the group, but since then Western Australia has taken first place :—

GOLD RAISED IN AUSTRALASIA, 1851 TO 1909.

Period.	Victoria.	New South Wales.	Queensland.	South Australia.*	Western Australia.	Tasmania.	New Zealand.
	gross ozs.	gross ozs.	gross ozs.	gross ozs.	gross ozs.	gross ozs.	gross ozs.
1851–60	23,334,263	3,280,963	75,000	..	..	..	35,845
1861–70	16,276,566	3,542,912	250,000	..	..	3,504	5,507,004
1871–80	10,156,297	2,251,666	3,187,855	84,593	..	180,178	4,009,345
1881–90	7,103,448	1,164,452	3,925,620	209,275	46,967	397,983	2,265,616
1891–00	7,476,038	2,958,295	7,358,129	355,208	5,870,662	605,519	2,788,398
1851–00	64,346,612	13,198,288	14,796,604	649,076	5,917,629	1,187,184	14,606,208
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1901 ..	730,453	216,888	598,382	28,951	1,703,416	69,491	412,876
1902 ..	720,866	254,435	640,463	24,082	1,871,037	70,996	459,406
1903 ..	767,297	254,260	668,546	22,269	2,064,801	59,891	461,648
1904 ..	765,600	269,817	639,151	17,925	1,983,230	65,921	467,897
1905 ..	747,166	274,267	592,620	20.447	1,955,316	73,540	492,955
1906 ..	772,290	253,987	544,636	14,077	1,794,547	60,023	534,617
1907 ..	695,576	247,363	466,476	11,871	1,697,553	65,354	477,312
1908 ..	670,910	224,792	465,085	9,161	1,647,911	57,085	471,968
1909 ..	654,222	204,709	455,576	7,989	1,595,269	44,777	472,465
1901–9	6,524,380	2,200,518	5,070,935	156,772	16,313,080	567,078	4,251,144

* Quantity received at Melbourne and Sydney Mints.

The total production of Australasia from 1851 to 1900 inclusive, was 114$\frac{3}{4}$ million ounces (gross), more than half of which was produced in Victoria. The Australasian production for the nine years, 1901 to 1909, was over 35 million ounces (fine), to which Western Australia contributed 16$\frac{1}{3}$ million ounces.

World's production of gold and silver.

The total production of gold and silver for all countries since 1860, and for the leading gold and silver producing countries in 1908, as set out in the following tables, have been extracted principally from the annual report issued in 1909 by the Director of the United States Mint. The figures relating to the year 1871 and subsequent years are those of the Bureau of the Mint, and have been compiled from information furnished by foreign Governments, and revised from the latest data:—

WORLD'S PRODUCTION OF GOLD AND SILVER SINCE 1860.

Year.	Gold.		Silver.	
	Ounces—Fine.	Value.	Ounces—Fine.	Value—Commercial.
		£		£
1860 to 1869	61,314,500	264,059,200	378,311,600	105,151,400
1870 to 1879	52,764,400	227,236,800	628,717,300	161,850,700
1880 to 1889	51,405,100	221,383,000	921,103,100	200,523,200
1890 to 1899	95,081,700	409,481,900	1,568,876,900	238,928,600
1900	12,315,100	53,036,700	173,591,400	22,422,200
1901	12,698,100	54,686,000	173,011,300	21,626,200
1902	14,313,700	61,416,600	175,102,300	19,354,800
1903	15,768,400	67,908,700	167,937,900	18,893,100
1904	16,779,400	71,274,800	164,195,300	19,569,200
1905	18,268,300	77,598,400	169,588,800	21,257,400
1906	19,366,500	82,264,500	165,754,800	23,055,100
1907	19,860,600	84,363,600	185,014,600	25,091,900
1908	21,378,200	90,809,800	203,186,400	22,333,200
Total	411,314,000	1,765,520,000	5,074,391,700	900,057,000

WORLD'S PRODUCTION OF GOLD AND SILVER—PRINCIPAL COUNTRIES, 1908.

Country.	Gold.		Silver.	
	Ounces—Fine.	Value.	Ounces—Fine.	Value—Commercial.
		£		£
Africa	8,055,500	34,217,700	1,272,600	139,900
Australasia	3,546,900	15,066,500	17,175,100	1,887,800
Austria-Hungary	119,500	507,400	1,770,500	194,600
British India	512,700	2,177,900	...	..
Canada	476,100	2,022,400	22,106,200	2,429,800
Germany	3,100	13,200	4,971,600	546,400
Japan	139,700	593,400	3,801,300	417,800
Mexico	1,082,200	4,597,000	73,664,000	8,096,800
Peru	24,900	105,700	9,566,100	1,051,500
Russia	1 357,000	5,764,300	132,100	14,500
United States	4,574,300	19,430,800	52,440 800	5,764,000
Other Countries	1,486,200	6,313,400	16,286,100	1,790,100
Total	21,378,200	90,809,800	203,186,400	22,333,200

Coal production.

The following return shows the quantity of coal raised in each year, or group of years, since its first production :—

BLACK COAL RAISED IN VICTORIA TO 31ST DECEMBER, 1909.

Year.	Tons.
Prior to 1876	5,831
From 1876 to 31st December, 1890 ...	49,249
From 1891 to 31st December, 1900 ...	1,683,485
1901	209,329
1902	225,164
1903	64,200
1904	121,741
1905	155,136
1906	160,631
1907	138,584
1908	113,462
1909	128,173
Total	3,054,985

Brown coal raised to 31st December, 1909, 49,466 tons.

The State coal-field.

In the year 1909 the State undertook the development of the coal-mining field which had been found to exist in the Powlett River District. The following description of the operations which have

been carried on in that locality is based on information supplied by Messrs. Stanley Hunter and D. C. Mackenzie of the Mines Department, who were intrusted by the Government with the responsible work of directing the initial operations in connexion with the opening up and equipping of the mine:—

Although the existence of coal deposits at the Powlett River was proved by bores put down by the Mines Department as far back as the year 1880, when two seams were cut, viz., one of 2 ft. 1 in. at 352 feet, and the other of 2 ft. 6 in. at 689 feet, it was not until 1908 that systematic boring was commenced and the existence of a large area of payable coal subsequently proved. A large tract of the Powlett plains was then reserved for State coal-mining, an area of 524 acres, the site of the principal mining operations and of portion of the township, being repurchased from lessees, and an area of 1,765 acres held under grazing area lease being resumed by the Crown. By this means the way was kept open for the rapid development of the State Coal Mine.

Shortly after the commencement of the New South Wales coal strike in November, 1909, the work of opening out and equipping the mine was begun and by the end of that month four shafts had been sunk on to the coal seam and equipped with temporary winding and pumping machinery, and the regular output of coal had commenced. By the end of January, 1910, the output of coal was nearly 300 tons daily, of which 200 tons were regularly stacked in dumps, and the balance sent by road 10 miles to Inverloch harbor for shipment. To convey the coal from the mine 30 bullock teams, 20 two-horse teams, and 2 traction engines were employed; and to facilitate transport and loading it was necessary to undertake a great deal of road-making and repairing, remove sand hummocks at Inverloch, construct platforms for coal storage, lay down rails, and widen the jetty. The mine was officially opened on 15th March, 1910.

In addition to the four shafts already referred to, shaft No. 5 was opened out on coal at a depth of 139 feet on 24th May, the seam struck being 7 feet thick, and of excellent quality; shaft No. 6, which was commenced on 3rd May, has been sunk on excellent coal at a depth of 154 feet; shaft No. 7 was opened out on a 7-ft. seam of coal on 17th May, at a depth of 58 feet; and shaft No. 8 was opened out on a splendid seam 8 feet thick, at a depth of 97 feet, on 30th June.

Sites for shafts Nos. 9 and 10 have been located about half-a-mile west of No. 3, and will be started immediately. The area they will tap is extensive, and has been shown to contain a splendid seam of hard black coal.

About 6 miles of headings have been driven below since the inception of the mine. The shafts have been provided with the most modern plant, and the underground workings have been laid out in a thoroughly systematic manner, and are well timbered throughout.

An up-to-date changing house with bathrooms and drying rooms has been erected for the convenience of the workmen.

The daily output of the mine during August, 1910, was 1,100 tons, and the total amount of coal raised to the middle of that month was 80,000 tons, the bulk of which has been supplied to the Victorian Railways.

The fortnightly wages sheets for all works amounted in the same month to nearly £6,000. The miners numbered about 400, who, at contract rates, earned from 9s. 10d. to 18s. 5d. per shift, after making deductions for explosives and oil; the average wage being 12s. 9d. per day. The surface hands, of whom there were about 450, were paid from 6s. to 12s. per day.

The construction of a railway to the coal-field was authorized on 17th December, 1909, and in the beginning of the following year a strong force of men was put on the work. Platelaying was begun on 23rd January, and on 22nd February the rails were laid to the coal shafts, when the loading and transport of coal were at once commenced. It was found that the works for a permanent line would require many months for their execution, and the railway which has so far been constructed is therefore only of a temporary nature. It is called the Woolamai to Powlett Coal-field line, and extends from Woolamai to the township of Wonthaggi, a distance of 15 miles. It was opened for general traffic, including passengers, on 9th May, 1910. The construction of the permanent line is now in progress.

The first settlement on the field consisted of "Canvas Town," which was situated close to the mine, and in which nearly 3,000 people were living. The tents were arranged in streets, roads were rudely formed, water reticulation from springs and wells was carried out, a complete sanitary service evolved, and a simple code of regulations made for the protection and welfare of the camp inhabitants. The result was, on the whole, satisfactory. Good order was maintained, and no epidemic occurred.

The Government, recognising that a town would spring into existence, determined to take the matter in hand, with the view of preventing indiscriminate settlement. Allotment 31 parish of Wonthaggi containing 320 acres, was accordingly purchased at a price of £15 per acre, a properly-designed township was laid out, and allotments thereof were leased for 21 years as business and residential sites. The annual rental of these town allotments up to the present time (September, 1910) considerably exceeds the purchase price of the whole area. To assist in the improvement of the town and the betterment of the workers, the Government has formed roads and planted them with trees, carried out a large and complete water supply scheme, built 100 miners' houses, and generally supervised the development and advance of the town. It is now proposed to form a municipality, and for this purpose a Bill is to be brought before Parliament.

In addition to the State mine, there were eight other collieries being worked at the end of 1909, the output of which for that year was 125,227 tons.

The following statement shows the value of the local output, and for comparison, the quantity and value of black coal imported in each of the last ten years :— Values of coal produced and imported.

BLACK COAL PRODUCED AND IMPORTED, 1900 TO 1909.

Year.	Raised in State.		Imported.		
	Quantity.	Value.	Quantity.	Value.	
				Official.*	Actual.†
	tons.	£	tons.	£	£
1900	211,596	101,599	690,567	403,723	578,350
1901	209,329	147,191	710,918	446,058	595,394
1902	225,164	155,850	656,656	428,904	533,533
1903	64,200	40,818	796,407	450,781	623,852
1904	121,741	70,208	743,470	412,765	539,016
1905	155,136	79,035	745,477	387,069	475,242
1906	160,631	80,283	917,392	475,806	567,636
1907	138,584	79,681	883,245	489,421	636,672
1908	113,462	64,653	1,021,997	581,025	783,531
1909	128,173	76,870	945,215	539,786	748,295

* Value according to Customs Returns which is the invoice value in New South Wales as given by importers.
† Estimated value found by adding to cost at Newcastle the actual freight, insurance, primage, &c.

The local production and imports of coal amounted to about 900,000 tons in each year from 1900 to 1905; in 1906 they reached 1,078,023 tons; in 1907, 1,021,829 tons; in 1908, 1,135,459 tons; and in 1909, 1,073,388 tons.

The quantity of coal raised in the various States and in New Zealand from the date of the earliest records is given below. There is no record of any coal mining having been done in South Australia. Coal raised in Australasia.

COAL PRODUCED IN AUSTRALASIA.

Year.	Tons of Coal raised in—					
	Victoria.	New South Wales.	Queensland.	Western Australia.	Tasmania.	New Zealand.
Prior to 1878	9,346	17,538,869	507,226	..	92,176	709,931
1878 to 1882..	13	8,503,937	305,692	..	54,010	1,408,893
1883 to 1887..	7,951	13,902,101	911,416	..	59,554	2,506,631
1888 to 1892..	83,967	17,738,842	1,444,669	..	216,882	3,179,846
1893 to 1897..	920,452	18,982,101	1,587,973	..	184,391	3,785,485
1898 to 1902..	1,151,329	26,721,213	2,440,078	434,716	242,114	5,566,597
1903 ..	64,200	6,354,846	507,801	133,000	51,805	1,420,193
1904 ..	121,741	6,019,809	512,015	138,550	61,612	1,537,838
1905 ..	155,136	6,632,138	529,326	127,364	50,464	1,585,756
1906 ..	160,631	7,626,362	606,772	149,755	52 895	1,729,536
1907 ..	138,584	8,657,924	683,272	142,372	55,900	1,831 009
1908 ..	113,462	9,147,025	696,332	175,248	61,0 8	1,860,975
1909 ..	128,173	7,019,879	756,577	214,332	66,162	1,911,247

NOTE.—For details of single years see issue of this publication for 1905.

Coal production of the world.

The total known coal production of the world (exclusive of brown coal and lignite) in 1907 was about one thousand million tons (of 2,240 lbs.).

The following return shows the production and consumption of coal in the principal coal-producing countries of the world.

COAL PRODUCED IN VARIOUS COUNTRIES, 1907.

Country.	Production.	Value per ton at Collieries.	Excess of Imports (+) or Exports (−)	Number of Men Employed under and over ground.
	Tons.	s. d.	Tons.	
Australasia—				
Victoria	158,584	11 6	+883,074	621
New South Wales ...	8,657,924	6 9	−4,427,887	17,080
Queensland	683,272	6 6	+65,555	1,223†
Western Australia ...	142,372	7 9	+144,518	253
Tasmania	55,900	8 11	+95,000	138
New Zealand	1,831,009	10 7	+84,347	3,910
Austria	13,627,000	7 11	+9,330,000‡	69,995
Belgium	23,324,000	13 8½	−519,000	142,699
British India	11,147,000	4 8	−419,000	112,502
Canada	9,385,000	10 9	+7,906,000	22,075
France	35,586,000	11 2½*	+17,299,000	174,951*
Germany	140,885,000	9 8¾	−12,474,000	545,330
Japan	13,716,000	8 10	−2,904,000	106,589*
United Kingdom	267,831,000	9 0	−85,157,000	918,400
United States	428,896,000	5 11½	−11,021,000	640,780*

NOTE.—Some of these figures are provisional.
* Figures for 1906. † Census Figures, 1901. ‡ Austria-Hungary.

Stone quarries.

There were 86 stone quarries in which work was carried on during 1909; these gave employment to 853 persons, and the sum paid in wages was £63,181. These figures include the persons employed and wages connected with stone-breaking and tar-paving works, most of which are carried on in conjunction with quarries, and cannot be separated therefrom. The quantity and value of stone raised during the last five years are set forth in the following table:—

STONE QUARRIES: 1905 TO 1909.

Year.	Quantity of Stone Operated on—			Approximate Total Value of Stone Raised.
	Bluestone.	Freestone, &c.	Granite.	
	c. yds.	c. yds.	c. yds.	£
1905	357,474	300	584	52,649
1906	393,873	222	983	58,373
1907	405,718	475	475	62,296
1908	491,446	1,594	713	76,658
1909	525,555	370	838	81,719

During 1909 the Mines Department had the following boring plant at work:—Six diamond drills with calyx cutters and steam motive power, seven percussion drills with oil power, one pioneer drill with oil power, and one hand-boring machine. Four of these machines were engaged in boring for deep leads (alluvial), and put down 64 bores; one was utilized in proving a copper-bearing dyke near Walhalla, and put down 10 bores; and ten were used in boring for coal, and put down 51 bores. The aggregate depth of the alluvial bores was 9,771 feet; that of the copper lode bores 726 feet; and that of the coal bores 17,551 feet. Boring.

Government batteries are located in 23 districts, and during 1909 treated 3,068 tons of ore, which yielded 1,566 ounces of gold, the net cost to the Mines Department being £1,706. Government batteries.

There were 311 plants at work treating tailings by the cyanide process during 1909, this number representing an excess of 22 over that for the year 1908. The total quantity of gold obtained in the year was 75,429 ounces, valued at £267,431, from 1,257,338 tons of tailings, or an average of 1 dwt. 5 gr. per ton, being an increase of 31,570 in tonnage of tailings treated, but a decrease of 1,816 ounces in yield, as compared with the previous year. The records show that since the introduction of these methods, a grand total of 10,646,236 tons of tailings have been treated by cyanide and other processes for 936,679 ounces of gold, the yield being equal to an average of 1 dwt. 18 gr. per ton. Cyanidation.

The number of accidents happening in 1909 in connexion with gold mining was 105, in which 15 persons were killed and 99 seriously injured. In the last twenty years the average number of men employed in gold mining was 26,473, and the average yearly number of accidents 108, 31 persons per annum being killed, and 85 injured, or 1.16 and 3.22 respectively per thousand employed. In coal mining during the twenty-one years, 1889-1909, there were 29 persons killed and 116 injured. Mining accidents.

Manufactories.

That which is regarded in the subsequent tables as constituting a factory is any establishment employing on the average four persons or more, also those employing less than four persons where machinery is worked by other than manual power, and where the business carried on is that of making or repairing for the trade (wholesale or retail) or for export. Definition of a factory.

The classification of industries adopted was drawn up in 1902 at a conference of Australian statisticians. Where two or more industries are carried on by one proprietor in the same building, each industry is, where possible, treated as a separate undertaking. The following table shows, for the year 1909, the number of factories in each class of industry, the volume of power used, the number of Classification of factories

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1909.

persons employed, the wages paid, and the other chief items of expenditure, also the value of articles produced or work done:—

Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of amounts drawn by Working Proprietors.	Fuel and Light used	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employés.	Working Proprietors.	Employés.				
							£	£	£	£
Class I.—Treating Raw Material the product of Pastoral Pursuits, or Vegetable Products, not otherwise classed.										
Boiling down	19	141	12	102	..	..	7,922	3,370	99,483	133,641
Bone milling	19	526	14	106	1	2	8,316	3,162	45,332	68,483
Tanning	58	1,361	58	1,434	..	10	129,902	10,053	826,821	1,059,120
Fellmongering	35	580	38	458	..	1	33,951	4,328	484,947	577,077
Chaffcutting and grain crushing ..	189	1,451	192	700	6	11	36,345	6,486	407,371	496,948
Other	7	52	4	180	..	..	15,365	141	44,380	66,902
Total	327	4,111	318	2,980	7	24	231,801	27,540	1,908,334	2,402 171
Class II.—Oils and Fats Animal and Vegetable.										
Oil Grease, Glue, Soap, and Candle..	22	340	15	582	..	15	60,479	14,727	357,719	522,282

Class III.—Processes relating to Stone, Clay, Glass, &c.										
Brick, pottery, &c.	108	2,724	107	1,549	..	39	164,192	58,539	24,883	350,249
Cement, including cement pipes ..	4	475	..	143	..	..	12,850	6,884	16,996	50,648
Glass, including bottles	8	93	11	613	..	4	44,776	20,164	19,889	111,757
„ bevelling	20	68	20	193	..	3	18,509	728	33,441	65,315
Marble and stone dressing	37	103	47	346	..	2	38,020	783	39,932	98,781
Other	21	118	21	208	..	2	17,825	5,648	14,159	54,717
Total	198	3,581	206	3,052	..	50	296,172	92,746	149,300	731,467
Class IV.—Working in Wood.										
Cooperage	11	42	12	72	..	..	7,294	142	9,181	20,619
Sawmilling, moulding, &c.	261	4,950	297	4,302	3	12	394,395	7,610	600,789	1,215,671
Mantelpiece	12	56	16	239	..	1	18,757	225	18,283	43,739
Wood carving, turning	38	276	48	212	..	4	16,541	1,708	18,628	51,622
Other	7	26	9	93	..	..	7,875	204	15,535	29,561
Total	329	5,350	382	4,918	3	17	444,862	9,889	662,416	1,361,212
Class V.—Metal Works, Machinery, &c.										
Agricultural implement	52	677	61	1,822	..	9	181,391	12,697	242,922	611,293
Engineering, iron foundry, &c. ..	293	3,238	360	5,411	2	37	547,192	58,648	644,273	1,561,011
Railway workshop	15	699	..	2,873	..	4	360,679	9,469	396,695	833,111
Sheet-iron, tin, &c.	61	207	61	1,049	1	17	77,761	2,919	153,195	284,240
Brass, copper smithing	51	217	63	632	..	20	50,799	3,841	57,245	137,316
Wireworking	16	136	17	202	..	8	17,439	942	64,962	108,666
Metallurgical, &c., cyanide ..	101	409	137	672	..	..	59,172	6,309	123,542	262,358
Oven, range	18	73	23	186	..	1	16,300	828	22,149	53,505
Other	45	779	39	443	2	1	38,457	3,776	119,674	192,853
Total	652	6,435	761	13,290	5	97	1,349,190	99,429	1,824,657	4,044,353

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1909—*continued.*

Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employés.	Working Proprietors.	Employés.				
							£	£	£	£
Class VI.—Connected with Food and Drink or the preparation thereof.										
Bacon curing	26	252	27	299	..	11	28,454	4,118	388,865	443,277
Butter, cheese, butterine	212	2,568	54	1,108	3	33	110,274	20,345	2,154,008	2,401,084
Meat freezing, preserving	14	1,998	9	659	..	7	54,042	17,476	408,100	521,663
Biscuit	4	148	5	780	..	406	57,980	6,940	230,735	373,679
Flourmilling	59	4,112	46	686	..	2	79,547	21,313	2,227,439	2,639,519
Jam, sauce, &c.	24	388	16	806	..	587	81,958	6,708	369,162	573,849
Oatmeal, starch, &c.	25	1,015	22	298	..	207	34,245	5,533	230,385	314,090
Sugar, confectionery, &c.	27	691	26	1,030	2	804	123,659	20,589	1,140,382	1,421,341
Aerated water, cordial, &c. ..	144	473	136	959	8	21	78,127	3,802	107,228	304,512
Malt	20	203	7	173	..	1	21,905	5,728	194,513	262,648
Brewing	32	1,876	26	992	..	4	130,906	23,495	343,022	771,779
Distilling	7	165	7	92	..	..	11,414	3,532	28,351	50,657
Condiments, coffee, cocoa, &c. ..	11	482	7	167	..	92	21,198	2,843	164,049	229,594
Tobacco, &c.	14	415	13	908	..	1,528	171,495	3,015	592,807	963,660
Other	20	944	11	233	..	15	21,398	8,638	9,698	69,559
Total	639	15,727	412	9,190	13	3,718	1,026,602	154,075	8,588,744	11,340,911

Class VII.—Clothing and Textile Fabrics, and Fibrous Material.										
Woollen mill	9	2,443	7	787	..	923	100,140	13,541	202,059	403,106
Clothing, Tailoring, &c.	374	231	357	1,726	19	6,814	439,139	9,099	810,937	1,513,661
Dressmaking and millinery ..	548	126	58	172	442	8,650	285,380	5,307	557,626	1,015,790
Underclothing, shirt	130	346	54	190	93	5,139	176,127	4,972	427,409	720,621
Hat, cap	35	319	34	608	8	1,038	104,424	5,714	140,298	296,524
Hosiery	21	82	10	47	11	577	25,845	812	48,191	90,235
Oilskin, waterproof clothing ..	4	8	3	40	1	133	9,437	298	18,008	36,877
Boot, shoe	136	835	165	4,258	6	2,465	415,011	6,526	884,329	1,487,789
Umbrella	9	14	9	65	1	180	12,163	312	54,695	84,783
Rope, twine, &c.	8	1,005	11	427	..	332	45,211	3,932	154,929	258,974
Sail, tent, &c.	12	12	11	76	1	48	7,756	97	28,849	44,730
Other	22	83	16	135	5	279	22,579	1,022	63,593	115,401
Total	1,308	5,504	735	8,531	587	26,578	1,643,212	51,632	3,390,923	6,068,491
Class VIII.—Books, Paper, Printing, Engraving, &c.										
Printing	284	1,792	350	4,317	11	870	551,689	19,126	484,305	1,565,417
Account-book, stationery, paper, &c.	23	975	16	796	..	618	86,398	12,504	127,152	293,500
Fancy box	22	60	19	140	4	575	33,898	868	49,555	105,790
Die sinking, engraving, &c. ..	15	54	17	140	..	2	14,726	716	9,669	34,746
Other	11	54	11	94	..	3	10,372	659	17,235	37,931
Total	355	2,935	413	5,487	15	2,068	697,083	33,873	687,916	2,037,384
Class IX.—Musical Instruments ..	4	11	5	34	..	1	3,237	53	1,688	6,920
Class X.—Arms and Explosives ..	6	130	4	100	..	242	20,943	1,200	61,598	112,074

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1909—*continued.*

Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of amounts drawn by Working Poprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employés.	Working Proprietors.	Employés.				
							£	£	£	£
Class XI.—Vehicles and Fittings, Saddlery, Harness, &c.										
Coach, motor building, cycle ..	338	440	389	2,967	1	21	224,396	9,794	259,383	634,386
Saddle, harness	54	8	58	378	..	52	32,918	300	50,407	101,914
Other	12	17	15	113	1	3	8,881	202	12,825	27,679
Total	404	465	462	3,458	2	76	266,195	10,296	322,615	763,979
Class XII.—Shipbuilding, Fitting, &c.	13	1,141	13	115	..	..	11,393	895	6,529	26,375
Class XIII.—Furniture, Bedding, &c.										
Upholstery, bedding, &c.	38	191	27	301	2	130	31,096	1,261	93,804	146,045
Cabinet, including billiard table ..	140	294	155	1,387	1	31	136,957	1,755	169,533	368,936
Picture frame	20	41	15	180	1	50	15,643	668	28,632	54,035
Other	11	64	11	167	..	4	13,985	615	36,677	61,197
Total	209	590	208	2,035	4	215	197,681	4,299	328,646	630,213

Class XIV.—Drugs, Chemicals, and By-products.										
Blacking, blue, &c.	13	99	12	162	1	119	15,635	780	100,769	153,130
Chemical	34	1,189	28	793	4	162	94,652	9,018	474,500	766,320
Other	23	59	21	122	1	2	7,510	379	22,451	42,207
Total	70	1,347	61	1,077	6	283	117,797	10,177	597,720	961,657
Class XV.—Surgical and Scientific Appliances	10	10	5	40	..	5	3,577	95	2,910	9,292
Class XVI.—Timepicces, Jewellery, and Platedware	64	119	73	679	..	45	69,968	2,356	132,490	266,706
Class XVII.—Heat, Light, and Energy.										
Electric Light	13	13,293	..	440	..	2	54,621	39,400	700	207,959
Gas, coke	47	1,038	3	1,386	..	1	181,965	2,427	197,373	676,528
Other	12	994	10	132	..	102	17,351	3,334	49,480	108,250
Total	72	15,325	13	1,958	..	105	253,937	45,161	247,553	992,737
Class XVIII.—Leatherware (except Saddlery and Harness)	31	116	41	346	..	110	31,234	1,022	146,420	202,072
Class XIX.—Wares, not elsewhere included										
Rubber goods	12	497	13	537	..	195	59,927	6,853	227,762	316,609
Brush, broom	16	25	15	171	1	46	18,002	438	55,638	88,415
Basket, wickerware	14	2	17	70	..	..	4,559	12	4,952	12,915
Total	42	524	45	778	1	241	82,488	7,303	288,352	417,939
Grand Total	4,755	63,761	4,172	58,650	643	33,890	6,807,851	566,768	19,706,530	32,898,235

The total amount of wages paid during the year (£6,807,851) represents an average payment for all employés of £73 11s., an increase of £1 19s. on the average for 1908, of £4 5s. on that for 1907, and of £5 17s. on that for 1906, but along with this increase there has been a slight change in the relative proportions of male and female workers during the four years, the proportions being:—63 per cent. males and 37 per cent. females in 1909; 64 per cent. males and 36 per cent. females in 1908; and 65 per cent. males and 35 per cent. females in 1907 and 1906. The above average wage for 1909 is very much below the general rates of wages as shown in the table "Wages in Melbourne" on page 698, the reason being that the rates there mentioned relate to adult workers only, whereas the average payment of £73 11s. relates to all employés, adult and juvenile, male and female, apprentices and improvers, employed in each industry. Further, all hands are not continuously employed, nor are all factories working throughout the whole year.

The proportion per cent. that each of the items of outlay bore to the value of the output in the last two years is shown in the next statement.

OUTLAY AND OUTPUT OF FACTORIES: 1908 AND 1909.

—	1908.		1909.	
	Value.	Proportion per cent.	Value.	Proportion per cent.
	£		£	
Wages	6,380,296	20·7	6,807,851	20·7
Fuel and Light ...	538,571	1·8	566,768	1·7
Materials	18,662,070	60·6	19,706,530	59·9
	25,580,937	83·1	27,081,149	82·3
Articles produced or work done	30,787,760	100·0	32,898,235	100·0
Margin for profit and miscellaneous expenses	5,206,823	16·9	5,817,086	17·7

The percentage of the total of the various items of outlay to the value of articles produced has decreased to the extent of .8 since 1908, chiefly owing to a reduction in the proportionate value of materials used. The percentage that the difference between outlay and output, available for miscellaneous expenses and profit, bears to the output is consequently .8 more than in 1908.

The following grouping shows the factories arranged according to the number of persons employed:— Classification according to persons employed.

Under 4 hands	692 factories	1,757 persons.
4 hands	576 ,,	2,304 ,,
5 to 10 hands	1,710 ,,	11,869 ,,
11 to 20 hands	843 ,,	12,225 ,,
21 to 50 hands	577 ,,	17,744 ,,
51 to 100 hands	197 ,,	13,459 ,,
101 hands and upwards ...	160 ,,	37,997 ,,
Total	4,755 ,,	97,355 ,,

Of the 4,755 establishments, 3,069 used steam, gas, electric or other motive power, and employed 79,047 persons; and 1,686 used manual labour only, and employed 18,308 persons.

In the next return will be found particulars for the years 1908 and 1909 of the factories in the metropolitan and country districts. Factories, metropolitan and country.

FACTORIES AND PERSONS EMPLOYED, METROPOLIS AND COUNTRY: 1908 AND 1909.

Nature of Industry.	1908.			1909.		
	No. of Manufactories.	Average Number of Persons Employed.		No. of Manufactories.	Average Number of Persons Employed.	
		Males.	Females		Males.	Females
Metropolitan Area.						
1. Treating raw material, the product of pastoral pursuits, &c.	78	1,865	9	85	1,940	14
2. Oils and fats, animal and vegetable ..	12	484	13	11	505	14
3. Processes relating to stone, clay, glass, &c.	89	2,612	25	89	2,410	22
4. Working in wood	133	2,809	17	141	3,129	16
5. Metal works, machinery, &c. ..	387	10,298	72	410	10,506	87
6. Connected with food and drink, &c. ..	185	6,512	3,443	181	6,471	3,546
7. Clothing and textile fabrics, &c. ..	958	7,216	22,321	1,012	7,737	23,422
8. Books, paper, printing, engraving, &c.	227	4,600	1,933	236	4,697	1,982
9. Musical instruments	3	36	..	4	39	1
10. Arms and explosives	2	67	165	3	69	183
11. Vehicles, &c., saddlery, harness, &c. ..	199	2,035	46	207	2,137	55
12. Shipbuilding, fitting, &c.	9	91	..	11	108	..
13. Furniture, bedding, &c.	179	2,022	211	190	2,113	214
14. Drugs, chemicals, and by-products ..	45	919	248	47	939	284
15. Surgical and scientific appliances ..	12	53	5	10	45	5
16. Timepieces, jewellery, and platedware	55	694	49	59	731	43
17. Heat, light, and energy	23	1,609	97	24	1,703	104
18. Leatherware, except saddlery and harness	28	356	114	31	387	110
19. Wares not elsewhere included ..	38	796	251	41	819	242
Total	2,662	45,074	29,019	2,792	46,485	30,344

FACTORIES AND PERSONS EMPLOYED—*continued.*

Nature of Industry.	1908.			1909.		
	No. of Manufactories.	Average Number of Persons Employed.		No. of Manufactories.	Average Number of Persons Employed.	
		Males.	Females		Males.	Females
Country Districts.						
1. Treating raw material, the product of pastoral pursuits, &c.	242	1,434	14	242	1,358	17
2. Oils and fats, animal and vegetable ..	11	88	1	11	92	1
3. Processes relating to stone, clay, glass, &c.	119	913	27	109	848	28
4. Working in wood	170	1,989	2	188	2,171	4
5. Metal works, machinery, &c. ..	245	3,191	13	242	3,545	15
6. Connected with food and drink, &c. ..	464	3,155	145	458	3,131	185
7. Clothing and textile fabrics, &c. ..	288	1,511	3,542	296	1,529	3,743
8. Books, paper, printing, engraving, &c.	121	1,183	97	119	1,203	101
10. Arms and explosives	3	40	42	3	35	59
11. Vehicles, &c., saddlery, harness, &c. ..	191	1,683	22	197	1,783	23
12. Shipbuilding, fitting, &c.	2	23	..	2	20	...
13. Furniture, bedding, &c.	17	118	3	19	130	5
14. Drugs, chemicals, and by-products ..	21	194	6	23	199	5
16. Timepieces, jewellery, and platedware	4	17	2	5	21	2
17. Heat, light, and energy	47	256	..	48	268	1
19. Wares not elsewhere included	1	4	..	1	4	...
Total	1,946	15,799	3,916	1,963	16,337	4,189
State.						
1. Treating raw material, the product of pastoral pursuits, &c.	320	3,299	23	327	3,298	31
2. Oils and fats, animal and vegetable ..	23	572	14	22	597	15
3. Processes relating to stone, clay, glass, &c.	208	3,525	52	198	3,258	50
4. Working in wood	303	4,798	19	329	5,300	20
5. Metal works, machinery, &c. ..	632	13,489	85	652	14,051	102
6. Connected with food and drink, &c. ..	649	9,667	3,588	639	9,602	3,731
7. Clothing and textile fabrics, &c. ..	1,246	8,727	25,863	1,308	9,266	27,165
8. Books, paper, printing, engraving, &c.	348	5,783	2,030	355	5,900	2,083
9. Musical instruments	3	36	..	4	39	1
10. Arms and explosives	5	107	207	6	104	242
11. Vehicles, &c., saddlery, harness, &c. ..	390	3,718	68	404	3,920	78
12. Shipbuilding, fitting, &c.	11	114	..	13	128	...
13. Furniture, bedding, &c.	196	2,140	214	209	2,243	219
14. Drugs, chemicals, and by-products ..	66	1,113	254	70	1,138	289
15. Surgical and scientific appliances ..	12	53	5	10	45	5
16. Timepieces, jewellery, and platedware	59	711	51	64	752	45
17. Heat, light, and energy	70	1,865	97	72	1,971	105
18. Leatherware, except saddlery and harness	28	356	114	31	387	110
19. Wares not elsewhere included ..	39	800	251	42	823	242
Total	4,608	60,873	32,935	4,755	62,822	34,533

The factories in the metropolitan area in 1909 exceeded by 130 the number in 1908 and by 214 that in 1907, whilst those in country districts numbered 17 more than in 1908 and 11 more than in 1907.

The industries in the different classes showing a larger number of factories in 1909 than in 1908, both metropolitan and country, are as follows:—

Class 1 — Boiling-down, 1; tanning, fellmongering, 1; chaff-cutting, corn-crushing, 8. Class 3—Asbestos, 1. Class 4—Cork-cutting, 1; forest saw-milling, 13; saw-milling, moulding, joinery, 9; mantelpiece, 2; wood-carving, turnery, 2. Class 5—Engineering, boiler-making, iron foundry, 15; cutlery, tool, 1; oven, range, 1; brass, copper-smithing, 4; wire-working, 1. Class 6—Oatmeal, maizena, starch, arrowroot, 3; condiments, &c., 2; ice, 1; salt, 1; tobacco, cigar, cigarette, 1. Class 7—Clothing, tailoring, 21; dressmaking, &c., 31; underclothing, &c., 5; hat, cap, 1; hosiery, 2; umbrella, parasol, 1; dyeing, 1; flax, 1; rope, twine, &c., 1; tent, &c., 1. Class 8—Printing, 3; ink, 1; fancy box, 3. Class 9—Organ, pianoforte, 1. Class 10—Ammunition, 1. Class 11—Motor, cycle, 8; saddle, harness, 10. Class 12—Ship, boat, building, 1; graving dock, &c., 1. Class 13—Bedstead, 2; cabinet making, 11; picture frame, 1. Class 14—Chemical, 2; essential oil, 1; paint, &c., 2. Class 16—Goldsmithing, 5. Class 17—Electric apparatus, 1; electric light, 1. Class 18—Fancy leather, 3. Class 19—Basket, wicker, 2; rubber goods, 3.

The industries in which the number of factories was less in 1909 than in 1908 are:—

Class 1—Bone milling, manure, 2; sausage casings, 1. Class 2—Oil, &c., 1. Class 3—Brick, pottery, 11. Class 4—Cooperage, 1. Class 5—Iron safe, door, 1; cyanide, 1. Class 6—Butter, cheese, 4; meat freezing or preserving, 1; flour, 4; jam, pickle, sauce, 2; aerated water, cordial, 3; brewing, 3; distilling, 1. Class 7—Boot, shoe, 3. Class 11—Coach, carriage, &c., 3; saddletree, &c., 1. Class 13—Upholstery, bedding, &c., 1. Class 14—Blacking, blue, &c., 1. Class 15—Surgical instrument, 2. Class 19—Brush, broom, 2.

Since 1908 workers in metropolitan factories have increased by 2,736, there being an addition of 1,411 males and 1,325 females. Workers in country factories have during the same period increased by 811, the number of males being greater by 538 and that of females by 273 than in 1908.

The industries in the State showing the largest increases in the average number of workers employed in 1909, as compared with 1908, are as follows:—Saw-milling (forest), with an increase of 157 males; saw-milling, moulding, joinery, &c., with an increase of 285 males; agricultural implement, with an increase of 450 males and 1 female; railway workshop, with an increase of 277 males, but a loss of 1 female; biscuit, with an increase of 77 males and

36 females; confectionery, with an increase of 84 males and 77 females; clothing, tailoring, with an increase of 100 males and 247 females; dressmaking, &c., with an increase of 34 males and 325 females; underclothing, &c., with an increase of 7 males and 305 females; hat, cap, with an increase of 48 males and 120 females; boot, shoe, with an increase of 314 males and 232 females; flax, rope, &c., with an increase of 47 males and 90 females; printing, with an increase of 98 males and 51 females; fancy box, with an increase of 37 males and 169 females; and gas, with an increase of 91 males and 1 female.

The following are the industries which show the largest decreases in the number of persons employed as compared with the previous year:—Brick, pottery, and earthenware, 128 males and 2 females; engineering, &c., 124 males less an increase of 6 females; breweries, 116 males less an increase of 3 females; and account-book, stationery, &c., 17 males and 163 females.

Factories and works for eight years.

The following summary shows the power used, persons employed, and value of machinery, land, and buildings for each of the last eight years:—

FACTORIES—POWER, EMPLOYÉS, ETC.: 1902 TO 1909.

Year.	Number of Factories.	Factories using Machinery worked by—				Actual Horse-Power of Engines Used.
		Steam.	Gas.	Electricity, Oil, Water, Wind, or Horse.	Manual Labour.	
1902	4,003	1,328	755	330	1,590	43,821
1903	4,151	1,316	724	437	1,674	42,750
1904	4,208	1,304	734	509	1,661	40,859
1905	4,264	1,276	715	615	1,658	43,492
1906	4,360	1,255	709	712	1,684	48,765
1907	4,530	1,270	727	838	1,695	52,703
1908	4,608	1,220	741	962	1,685	58,945
1909	4,755	1,192	779	1,098	1,686	63,761

Year.	Average Number of Persons Employed			Approximate Value of—		
	Males.	Females.	Total.	Machinery and Plant.	Land.	Buildings and Improvements.
				£	£	£
1902	49,658	23,405	73,063	5,082,023	3,045,291	5,125,969
1903	49,434	23,795	73,229	5,010,896	2,855,174	5,112,771
1904	50,554	25,733	76,287	6,027,134	2,721,076	4,919,975
1905	52,925	27,310	80,235	6,187,919	2,767,071	5,004,167
1906	56,339	28,890	85,229	6,450,355	2,857,411	5,204,699
1907	59,691	31,212	90,903	6,771,458	2,932,036	5,444,606
1908	60,873	32,935	93,808	6,957,606	2,972,959	5,616,068
1909	62,822	34,533	97,355	7,140,304	2,903,506	5,738,838

This table shows that there has been considerable progress during the last eight years. The factories have increased to the extent of 752, the actual horse-power of engines by 19,940, the persons employed by 24,292, of whom 13,164 were males and 11,128 females; the approximate value of machinery and plant by £2,058,281, and that of buildings, &c., by £612,869. A noticeable feature in connexion with the power employed is the increase in the number of factories using electricity; in 1909 these numbered 802, an increase of 643 since 1902.

In the next table the persons employed in factories during the last three years are grouped according to the nature of their work. The total number of persons shows an increase of 3,547 compared with 1908, and of 6,452 compared with 1907:— Persons employed, male and female.

TOTAL PERSONS EMPLOYED.

	1907.	1908.	1909.
Males	59,691	60,873	62,822
Females	31,212	32,935	34,533
Total	90,903	93,808	97,355

CLASSIFICATION OF PERSONS EMPLOYED.

	1907.	1908.	1909.
Working Proprietors—			
Males	3,975	4,056	4,172
Females	629	629	643
Managers and Overseers—			
Males	2,318	2,222	2,324
Females	395	388	420
Accountants and Clerks—			
Males	2,314	2,461	2,540
Females	432	478	531
Engine-drivers and Firemen—			
Males	1,544	1,568	1,560
Workers in Factories—			
Males	45,319	46,545	48,251
Females	28,400	30,046	31,298
Factory Workers working in their own homes—			
Males	115	106	122
Females	1,314	1,351	1,573
Carters and Messengers—			
Males	3,000	2,945	2,949
All Others—			
Males	1,106	970	904
Females	42	43	68

The following is a statement of the rates of wages ruling in the various industries in Melbourne during 1909, the information having been compiled from determinations of Wages Boards or collected direct from the employers :—

WAGES IN MELBOURNE, 1909.

A.—Wages for Adult Workers in Classified Manufacturing Industries.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class I.—Treating Raw Material the product of pastoral pursuits or vegetable products not otherwise classed.			
Order 1.—Animal products.			
Boiling down Bone milling	Foremen Tallowmen Labourers Carters	 36s. to 40s. per week	42s. per week 40s. ,, 36s. ,, ,,
Sausage casing	Sausage skin cleaners	36s. to 48s. ,,	42s. per week
Tanning	Slicker whiteners		52s. ,,
	Fleshers		49s. ,,
	Jiggers and grainers		47s. ,,
	Rollers and strikers		45s. ,,
	Machine shavers		45s. ,,
	Scudders, unhairers, and stoners		44s. ,,
	Fancy leather machinists		42s. ,,
	Labourers in sheds, vats, &c.		40s. ,,
Fellmongering	Foremen scourers, tanners, headers, and trotters		45. per week
	Men in charge of limes		45s. ,,
	Hands at burring and fleshing machines		42s. ,,
	Wool sorters		45s. ,,
	Wool pressers and others		36s. ,,
Order 2.—Vegetable products.			
Chaff-cutting	Labourers	36s. to 42s. per week	37s.6d. ,,
	Carters	42s. to 45s. ,,	,,
Class II.—Oils and Fats, Animal and Vegetable.			
Oil, grease, and glue	Labourers	6s. 6d. to 7s. per day	6s. 6d. per day
Soap	Soapmakers	90s. to 95s. per week	,,
	Assistant soapboilers		50s. per week.
	Foremen		50s. ,,
	Men in charge of milling-room		48s. ,,
	Mixers		42s. ,,
	General hands		36s. ,,
	Wrappers, packers, and stampers—male		36s. ,,
	Wrappers, packers, and stampers—female		22s.6d. ,,
Candle	Stillmen		48s. ,,
	Acidifiers, glycerine distillers, and press-room gangers		45s. ,,
	Candle room gangers		47s.6d. ,,
	Candle moulders		44s.6d. ,,
	Other adult workers		42s. ,,
	Carters	40s. to 42s. per week	,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class III.—Processes relating to Stone, Clay, Glass, &c.			
Brick	Patternmakers	..	1s. 4½d. per hr.
	Bricklayers	..	1s. 3d. ,,
	Turners and Fitters	..	1s. 2d. ,,
	Engine-drivers	11½d. to 1s. 0½d. per hr.	..
	Burners on kilns	..	1s. 0½d. per hr.
	Blacksmiths, carpenters, facemen	..	1s. 0½d. ,,
	Drawers	..	1s. 1d. ,,
	Machine drivers, riggers and setters	..	11¾d. ,,
	Firemen	..	11½d. ,,
	Pan and crusher attendants	..	11½d. ,,
	Clayholemen	..	11d. ,,
	Hand Moulders and Wheelers	..	10½d. ,,
	Truckers	..	10d. ,,
	Blacksmiths' strikers	..	9¾d. ,,
	Loftmen, yardmen	..	9½d. ,,
Glazed pipes	Burners	56s. 3d. to 62s. 6d. per week	..
	Flangers	..	54s. per week
	Setters, pressers, junction stickers, men in charge of plunges, head drawers	..	45s. ,,
	Labourers	40s. to 42s. per week	..
General pottery	Burners	60s. to 62s. 6d. ,,	..
	Pressers, stoneware and flower pot throwers	45s. to 50s. ,,	..
	Handlers, turners, jiggerers—male	..	45s. per week
	Placers, dippers	40s. to 45s. per week	..
	Sagger makers	..	42s. per week
	Mould makers	..	50s. ,,
	,, ,, assistants	..	45s. ,,
	Labourers	40s. to 42s. per week	..
	Terra-cotta pressers and plungers	..	45s. per week
	,, clayhole facemen	..	8s. 4d. per day
	,, breakers and fillers	..	7s. 4d. ,,
	Females employed in making general pottery	..	20s. per week
Tiles	Tile moulders and pressers	..	42s. per week
	Others—male	..	40s. ,,
	,, female	..	20s. ,,
Lime, cement, cement pipes	Labourers	7s. to 7s. 6d. per day	..
Asbestos	Machinists	36s. to 42s. per week	40s. per week
Glass Bottle Works	Furnacemen (two or more producers)	..	52s. 6d. ,,
	Furnacemen (one producer)	..	38s. 6d. ,,
	Foremen, sorters, lathe workers	..	42s. ,,
	Pipe menders, wind pipe repairers	39s. to 40s. per week	..
	Sorters, lehrmen, labourers	..	36s. per week
	Teasers, firemen's assistants, light labourers	30s. to 33s. 9d. per wk.	..

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class III.—continued.			
Flint Glass Works	Castor place makers..	..	70s. per week
	,, blowers	..	57s.6d. ,,
	Chimney and general work makers (1st class)	..	60s. ,,
	Chimney and general work blowers (1st class)	..	48s. ,,
	Chimney and general work makers (2nd class)	..	51s. ,,
	Chimney and general work blowers (2nd class)	..	42s. ,,
	Mould blowers (1st class)	..	57s.6d. ,,
	Mould blowers (2nd class)	..	50s. ,,
	Mould blowers (3rd class)	..	42s. ,,
	Pot makers ..	..	52s. ,,
	Firemen	..	42s. ,,
	Sand blasters and packers	..	40s. ,,
Glass bevelling, &c. ..	Bevellers	..	45s. ,,
	Silverers	..	45s. ,,
	Cutters	45s. to 54s. per week	..
	Cementers	..	35s. per week
Marble, stone-dressing ..	Carvers in marble and stone	..	82s.6d. ,,
	Carvers' assistants ..	..	69s. 8d. ,,
	Letter cutters ..	..	61s1 0½d. ,,
	Monumental carvers..	..	67s. 6d. ,,
	Monumental stone cutters and turners	..	60s. 6d. ,,
	Other stone and slate cutters	..	56s. 3d. ,,
	Machinists, cutting, planing and polishing	50s. to 66s. per week	..
	Labourers, gritting and sanding	45s. to 46s. 10½d. ,,	..
Stone filter	Filtermakers ..	..	45s. per week
Modelling	Modellers	12s. to 14s. per day	..
	Shop hands ..	10s. to 11s. ,,	..
	Pressers and casters	42s. to 54s. per week	48s. per week
Asphalt	Asphalters and tar-pavers	7s. 6d. to 9s. per day	8s. per day
Class IV.—Working in Wood.			
Cooperage	Coopers	..	60s. per week
Corkcutting	Corkcutters ..	32s. 6d. to 55s. per week	40s. ,,
Bellows	Bellows-makers ..	36s. to 45s. ,,	37s. ,,
Saw-milling, moulding, joinery, sash, door, box, &c.	Foremen (various) ..	48s. to 72s. ,,	..
	Box makers and box nailing machine workers	..	48s. per week
	Box printing machine workers	..	45s. ,,
	Carpenters and joiners	54s. to 62s. per week	..
	Mantelpiece makers ..	..	52s. per week
	Millwrights, engineers, engine-drivers, and steam crane workers	48s. to 60s. per week	..
	Stokers	..	45s. per week
	Labourers, box stackers	39s. to 45s. per week	..
	Stackers, timber ..	..	48s. per week

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class IV.—continued.			
Saw-milling, &c.—*continued.*	Stackers and sorters on wharf	..	1s. 3d. per hr.
	Stackers, casual, public yards	..	1s. 3d. ,,
	Stackers, casual, private yards	..	1s. 1½d. ,,
	Stackers, private yards (foremen)	..	1s. 6d. ,,
	Wire nail machine workers	..	51s. per week
	Other machine workers	45s. to 64s. per week	..
	Polishers, coaters ..	..	50s. per week
	Painters and glaziers	..	51s. ,,
	Pullers out ..	36s. to 45s. per week	..
	Sawyers	48s. to 63s. ,,	..
	Saw sharpeners ..	..	57s. per week
	Blacksmiths ..	..	54s. ,,
	Blacksmiths' strikers	..	42s. ,,
	Salesmen, tally and order men	..	48s. ,,
Wood-carving, turning ..	Carvers	..	54s. ,,
	Turners	..	54s. ,,
Class V.—Metal Works, Machinery, &c.			
Agricultural implement ..	Pattern makers ..	..	60s. per week
	Blacksmiths, fitters, turners, wheelwrights and carpenters	..	54s. ,,
	Blacksmiths' strikers	..	42s. ,,
	Iron annealers ..	..	45s. ,,
	Drillers	..	42s. ,,
	Belt cutters ..	..	45s. ,,
	Machinists, iron ..	..	48s. ,,
	,, wood ..	42s. to 58s. per week	..
	Sheet iron workers ..	..	48s. per week
	Assemblers ..	..	45s. ,,
	Painters	51s. to 54s. per week	..
	Engine-drivers ..	45s. to 54s. ,,	..
	Labourers, yardmen ..	39s. to 45s. ,,	..
Engineering, boilermaking, iron foundry ..	Blacksmiths ..	10s. to 14s. per day	..
	Strikers	7s. to 8s. ,,	..
	Fitters and turners ..	10s. to 11s. ,,	..
	Boilermakers and platers	..	10s. per day
	Riveters	9s. to 10s. per day	..
	Bank pipe moulders	8s. 4d. to 10s. 8d. ,,	..
	Vertical pipe moulders	..	8s. per day
	Coremakers, pipe ..	8s. 4d. to 10s. 8d. per day	..
	Finishers and casters	..	10s. per day
	Furnacemen	..	8s. ,,
	Pipe dressers ..	..	7s.4d. ,,
	Labourers	..	7s. ,,
	Iron casting moulders —heavy	..	10s. ,,
	Iron casting moulders —light	8s. to 9s. per day	..
	Iron coremakers—heavy	..	10s. per day
	Iron coremakers—light	8s. to 9s. per day	..
	Steel moulders and core makers	..	10s. per day
	Steel crucible furnacemen	..	10s ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class V.—continued.			
Engineering, &c.—*continued.*	Steel converter furnacemen	..	9s. per day
	Furnacemen's assistants	..	8s. ,,
	Steel and iron dressers	7s. 2d. to 7s. 6d. per day	..
	Annealers and labourers	7s. to 7s. 4d. per day	..
Cutlery	Cutlers and sawmakers	60s. to 80s. per week	..
	Knifesmiths ..	50s. to 55s. ,,	..
	Saw and tool grinders and sharpeners	45s. to 55s. ,,	..
Nail, barbed wire	Nail makers ..	50s. to 60s. ,,	55s. per week
	Labourers	36s. to 40s. ,,	36s. ,,
	Barbed wire workers	40s. to 50s. ,,	45s. ,,
Iron safe, door	Fireproof safe, &c., makers	45s. to 80s. ,,	60. ,,
Tinsmithing, galvanized iron, sheet iron, japanning	Tinsmiths	..	48s. ,,
	Sheet iron workers ..	..	48s. ,,
	Zinc workers ..	..	48s. ,,
	Canister makers ..	41s.6d. to 46s. per week	..
	Galvanizers ..	45s. to 50s. ,,	48s. per week
	Stampers	43s. 6d. to 48s. ,,	..
	Machine soldering and other machinists	41s. 6d. to 44s. ,,	..
	Ornamental japanners	..	48s. per week
	Japanners, grainers, liners, coaters, and brush hands	38s. to 44s. per week	..
Stove, range, oven ..	Stove and oven fitters	47s. to 51s. ,,	..
Pattern making	Pattern makers ..	..	66s. per week
Meter	Instrument fitters ..	..	48s. ,,
Spring	Spring fitters and spiral spring makers	..	56s. ,,
	Engineers	..	54s. ,,
	Stokers	..	45s. ,,
	Elliptic heading and spring eye machinists	..	50s. ,,
	Other machinists ..	..	42s. ,,
	Strikers, emery wheel finishers and others	..	42s. ,,
Brass, copper smithing ..	Brass moudlers, finishers	..	48s. ,,
	Brass polishers ..	..	42s. ,,
	Dressers, furnacemen	..	36s. ,,
	Coremakers, male ..	..	45s. ,,
	,, female	..	30s. ,,
	Coppersmiths ..	48s. to 57s. per week	..
Lead, shot, pewter ..	Labourers in lead and shot factories	40s. to 50s. ,,	45s. per week
Wire working	Weavers	..	49s. ,,
	Bench hands ..	..	48s. ,,
	Light work wire workers	..	42s. ,,
	Weavers' strikers ..	..	36s. ,,
Wire mattrass	Machine operators ..	56s to 64s. per week	..
	Weavers, framemakers	..	50s. per week
	Weavers (female) ..	..	34s. ,,
Smelting, chlorination, cyanide pyrites	Metallurgists and assayers	£3 5s. to £5 per week	..
	Cyaniders	40s. to 55s. ,,	..
	Chlorinators ..	40s. to 55s. ,,	..
	Smelters	50s. to 70s. ,,	..
	Roasters	40s. to 42s. ,,	..
	Furnacemen ..	46s. to 60s. ,,	..
	Labourers	40s. to 48s. ,,	..
Bedstead, fender	Blacksmiths ..	..	46s. per week
	Fitters-up	..	49s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class V.—continued.			
Bedstead, &c., *continued.*	Assistant fitters-up ..	..	40s. per week
	Chill fitters ..	54s. to 62s. per week	..
	Frame setters ..	..	52s. per week
	Chippers	..	40s. ,,
	Mounters of bedstead pillars	40s. to 49s. per week	..
	Grinders and polishers	..	55s. per week
	Japanners	40s. to 49s. per week	..
	Fitters (fender) ..	..	49s. per week
	Electroplaters ..	..	62s. ,,
	,, assistants	..	54s. ,,
	Brass lacquer and plate work polishers	..	46s. ,,
	Packers and storemen	..	40s, ,,
	Japanners and polishers—female ..	..	24s.6d. ,,
	Wrappers—female ..	..	17s. 6d. ,,
Class VI.—Connected with Food and Drink, or the preparation thereof.			
Order 1.—Animal Food.			
Bacon-curing	Slaughtermen ..	..	60s. per week
	Cutters-up, &c. ..	48s. to 52s. per week	..
Butter, cheese, concentrated milk	Factory managers ..	60s. to 90s. ,,	70s. per week
	Butter makers, and churners	45s. to 50s. ,,	45s. ,,
	Labourers, packers ..	30s. to 40s. ,,	35s. ,,
Butterine, margarine ..	Labourers	30s. to 42s. ,,	40s. ,,
Meat preserving, freezing ..	Slaughtermen ..	..	25s. per 100 sheep
	Digestor hands, tallow-men	42s. to 50s. per week	..
	Boners	..	48s. per week
	Preservers' assistants	40s. to 50s. per week	45s. ,,
	Tinsmiths (canister makers)	..	46s. ,,
	Labourers, packers ..	36s. to 48s. per week	40s. ,,
	Chambermen ..	..	48s. ,,
Order 2.—Vegetable Food, including products not foods but usually associated with the manufacture of foods.			
Biscuit	Factory foremen ..	55s. to 80s. per week	..
	Forewomen ..	25s. to 40s. ,,	..
	Cake makers ..	46s. to 52s. ,,	..
	Biscuit bakers, mixers	43s. to 54s. ,,	..
	Machine hands ..	35s. to 42s. ,,	..
	Packers—male ..	37s. 6d. to 39s. ,,	36s. per week
	,, female ..	16s. to 20s. ,,	..
Confectionery	Confectioners ..	..	..
	Storemen	..	50s. per week
	,, assistants ..	..	45s. ,,
	Labourers	..	36s. ,,
	Chocolate dippers—male	..	30s. ,,
	female	..	30s. ,,
Flour mill	Millers and millwrights	..	17s. ,,
	Smuttermen, packermen	40s. to 45s. per week	55s. ,,
	Wheat shooters, truckers, &c.	..	..
	Engine-drivers ..	..	40s. per week
			48s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class VI.—Order 2—continued			
Jam, fruit-preserving, pickle, sauce, vinegar	Foremen	50s. to 80s. per week	..
	Tinsmiths	41s. 6d. to 46s. ,,	..
	Engine-drivers ..	..	48s. per week
	General hands—male	..	36s. ,,
	,, ,, female	14s. to 16s. per week	..
Oatmeal, cornflour, macaroni	,, ,, male	30s. to 60s. ,,	..
	,, ,, female	12s. to 25s. ,,	..
Starch	Foremen	..	48s. per week
	Millers, stonedressers	..	42s. ,,
	General hands—male	..	36s. ,,
	,, ,, female	..	22s.6d. ,,
	Engine-drivers ..	..	50s. ,,
Sugar, treacle refining ..	Vacuum hands and others	42s. to 115s. per week	..
Order 3.—*Drinks and Stimulants.*			
Aerated waters, cordials ..	Cordial makers ..	55s. to 80s. per week	60s. per week
	Bottlers	40s. to 42s. 6d. ,,	..
	Wirers, and washers ..	..	35s. per week
Malt	Persons engaged in turning floors, screening malt and barley, &c.	..	48s. ,,
Brewing	Top and cellarmen, cask washers, storemen, &c.	..	48s. ,,
	Carters, stablemen ..	..	48s. ,,
	Rackers, corkers ..	..	48s. ,,
	Packers, loaders ..	35s. to 42s. per week	..
	Syphoners	30s. to 35s. ,,	..
	Headers-up	..	30s. per week
	Wirers and clippers ..	..	25s. ,,
Distilling	Stillmen	..	60s. ,,
	Brewhouse millhouse hands (skilled)	..	48s. ,,
	Coopers	..	60s. ,,
	General labourers and bottling hands	42s. to 48s. per week	..
Condiments, coffee, chicory, cocoa, chocolate, spice, &c.	General hands—male	35s. to 60s. ,,	36s per week.
	,, ,, female	12s. to 25s. ,,	20s. ,,
Ice, refrigerating	Chamber hands ..	..	1s. per hour
	Ice pullers and stackers	..	1s. ,,
	General hands and rabbit packers	..	10½d. ,,
	Engine-drivers and firemen	42s. to 60s. per week	48s. per week
	Carters	42s. to 50s. ,,	45s. ,,
Order 4.—*Narcotics.*			
Tobacco, cigar, cigarette ..	Flake coverers ..	60s. to 80s. per week	65s. per week
	,, ,, (female)	32s. to 40s. ,,	37s. ,,
	General hands in pressrooms &c. (unskilled)	43s. to 54s. ,,	..
	Gangers in pressroom	50s. to 70s. ,,	60s per week.
	Cigar makers ..	40s. to 65s. ,,	52s. ,,
	Cigarette makers (hand)—female	20s. to 30s. ,,	25s. ,,
	Strippers, cigar, covering leaf	..	41s. ,,
	Strippers, cigar, bunch wrapper leaf	..	31s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class VII.—Clothing and Textile Fabrics and Fibrous Materials.			
Order 1.—Textile.			
Woollen, cloth, blanket, rug..	Foremen	50s. to 60s. per week	..
	Pattern weavers, tuners	46s. to 48s. ,,	..
	Power-loom weavers..	..	24s. per week
	Fettlers	..	38s. ,,
	Spinners	36s. to 40s. per week	..
	Wool scourers ..	..	36s. per week
	Dye house labourers..	..	36s. ,,
	Wool dryers, warpers	..	36s. ,,
	Willey house labourers	..	36s. ,,
	Warpers—female ..	..	25s. ,,
Order 2.—Dress.			
Clothing, tailoring	Cutters—order ..	60s. to 160s. per week	..
	,, stock ..	..	52s.6d. per wk
	Tailors	..	50s. ,,
	Trimmers, pressers ..	..	47s.6d. ,,
	Machinists, examiners	..	45s. ,,
	Folders	..	40s. ,,
	Seam pressers ..	..	30s. ,,
	Brushers—male ..	..	25s. ,,
	Tailoresses, machinists, and buttonhole makers	..	21s. ,,
	Pressers and seam pressers—female	21s. to 30s. per week	..
Corset	Corset makers—female	17s.6d.to27s 6d.,,	22s. 6d. per wk
Dressmaking, millinery ..	Dressmakers in charge	40s. to 120s. ,,	..
	Dressmakers' assistants —female	..	16s. per week
	Mantlemakers—female	40s. to 80s. per week	..
	Mantlemakers' assistants—female	..	16s. per week
	Milliners in charge ..	40s. to 80s. per week	..
	Milliners' assistants—female	..	22s. 6d. per wk
	Pressers—female ..	21s. to 30s. per week	..
Shirtmaking, underclothing ..	Shirt, pyjama, and collar makers—female	..	20s. per week
	Underclothing makers —female	..	16s. ,,
	Laundry ironers, &c.— —female	20s. to 25s. per week	20s. ,,
Hat, cap	Body makers, and finishers—silk hats	50s. to 60s. ,,	55s. ,,
	Shapers, silk hats ..	60s. to 70s. ,,	65s. ,,
	Crown sewers, silk hats —female	20s. to 30s. ,,	25s. ,,
	Trimmers, silk hats— female	22s. 6d. to 26s. ,,	25s. ,,
	Bodymakers, felt hats	70s. to 90s. ,,	77s.6d. ,,
	Blockers ,,	65s. to 70s. ,,	..
	Finishers ,,	70s. to 100s. ,,	75s. per week
	Shapers ,,	..	65s. ,,
	Binders and trimmers, felt hats—female	20s. to 25s. per week	..
	Machinists, straw hats —female	20s. to 30s. ,,	25s. per week
	Trimmers straw hats— female	20s. to 25s. ,,	22s. 6d. ,,
	Blockers, pressers— women's hats	..	42s.6d. ,,
	Machinists, caps— female	15s. to 25s. per week	20s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class VII.—Order 2—continued.			
Hosiery	Machinists, knitting—female	22s. 6d. to 35s. per week	27s. 6d. per wk.
	Machinists, sewing—female	20s. to 35s. ,,	22s. 6d. ,,
	Linkers—female ..	20s. to 30s. ,,	24s. ,,
	Pressers—male ..	48s. to 60s. ,,	50s. ,,
	,, female ..	20s. to 30s. ,,	25s. ,,
	Winders—female ..	16s. to 20s. ,,	18s. ,,
	Menders, &c.—female	18s. to 25s. ,,	20s. ,,
Oilskin, waterproof clothing	Cutters	..	45s. ,,
	Stickers—male ..	..	35s. ,,
	Stickers and machinists—female	..	20s. ,,
	Needle hands, female	..	16s. ,,
Boot, shoe	Makers, finishers, clickers, stuff-cutters, &c.	..	48s. ,,
	Machine operators ..	..	48s. ,,
	Assistant stuff-cutters	..	45s. ,,
	Lining cutters, and all others	..	42s. ,,
	Machinists—female ..	..	21s. ,,
Furrier	Cutters	50s. to 70s. per week	60s. ,,
	Machinists—female ..	18s. to 25s. ,,	20s. ,,
	Sewers—female ..	15s. to 20s. ,,	17s. ,,
Umbrella, parasol	Frame makers ..	40s. to 50s. ,,	40s. ,,
	Cutters	40s. to 55s. ,,	40s. ,,
	Finishers—male ..	25s. to 40s. ,,	30s. ,,
	Machinists—female ..	17s. 6d. to 25s. ,,	20s.6d. ,,
	Tippers ,, ..	15s. to 20s. ,,	17s.6d. ,,
Dye works	Dyers	60s. to 80s. ,,	70s. ,,
	Dyers' assistants and cleaners	35s. to 50s. ,,	40s. ,,
	Pressers	..	47s.6d. ,,
	Pressers—female ..	21s. to 30s. per week	..
Ostrich feather	Feather dyers ..	60s. to 70s. ,,	65s. per week
	,, ,, assistants	35s. to 40s. ,,	37s.6d. ,,
	Feather curlers, dressers, finishers—female	15s. to 30s. ,,	20s. ,,
Order 3.—*Fibrous Materials and Textiles not elsewhere included.*			
Bag, sack (including calico bag)	Bagmenders ..	20s. to 35s. per week	30s. per week
	Calico bag-makers—female	15s. to 20s. ,,	17s.6d. ,,
Rope, twine	Undefined—male ..	36s. to 70s. ,,	40s. ,,
	,, female ..	15s. to 25s. ,,	18s. ,,
Tarpaulin, tent, sail ..	Tarpaulin and tent makers	40s. to 50s. ,,	48s. ,,
	Sailmakers	..	60s. ,,
	Tarpaulin, tent, sail makers—female	15s. to 22s.6d.per week	20s. ,,
Class VIII.—Books, Paper, Printing, Engraving, &c.			
Printing (including lithographic printing, electrotyping, stereotyping)	Printers—Compositors	..	60s. per week
	,, machinists	..	60s. ,,
	Proof readers ..	..	64s. ,,
	Printers—Linotype and monoline operators	70s. to 84s. per week	..

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class VIII.—continued.			
Printing, &c.—*continued.*	Printers—monotype perforating machine operators	63s. to 77s. per week	..
	Persons employed on monotype casting machines	..	45s. 6d. per wk.
	Feeders and others—male	..	36s. ,,
	Feeders and others—female	..	20s. ,,
	Lithographers ..	..	56s. ,,
	Stereotypers ..	..	60s. ,,
Bookbinding, account book making, stationery, &c.	Bookbinders ..	..	56s ,,
	Feeders and others—male	..	36s. ,,
	Pagers, folders, staplers, &c.—female	..	18s. ,,
	Sewers and feeders—female	..	20s. ,,
	Paper rulers, guillotine machine cutters	..	56s. ,,
Ink, printing ink	Ink makers ..	45s. to 70s. per week	50s. ,,
Paper	Paper, &c., makers ..	..	60s. ,,
	Beatermen	54s. to 60s. per week	..
	Breakermen ..	45s. to 48s. ,,	..
	General hands ..	36s. to 45s. ,,	..
	Engine-drivers ..	..	54s. per week
Paper bag, box, &c. ..	Machine box cutters..	..	56s. ,,
	Other workers—male	..	45s. ,,
	Box-makers—female	22s. to 25s. per week	..
	Cardboard carton cutters	..	52s. per week
	All other carton workers—male	..	45s. ,,
	Stitchers, folders, &c.—female	..	18s. ,,
	Paper bag machinists	55s. to 56s. per week	..
	,, ,, guillotine cutters	..	40s. per week
	,, ,, makers—female	..	16s. ,,
Die sinking, engraving, &c. ..	Copper plate engravers	..	80s. ,,
	Die sinkers ..	..	60s. ,,
	Engravers, general ..	52s. 6d. to 70s. per week	..
	Process engravers ..	50s. to 90s. ,,	..
Class IX.—*Musical Instruments.*			
Organ, pianoforte	Organ builders ..	..	58s. per week
Class X.—*Arms and Explosives.*			
Ammunition	Cartridge operators—female	12s. to 23s. per week	17s. per week
	Mechanics (fitters, &c.)	55s. to 65s. ,,	..
	Labourers	36s. to 45s. ,,	..
Explosive	Nitro-glycerine workers	42s. to 55s. ,,	48s. per week
	Acid workers ..	..	45s. ,,
	Labourers and carters	36s. to 42s. per week	36s. ,,
Fireworks, fuse	Fireworks makers—male	37s. 6d. to 45s. ,,	..
	Fireworks makers—female	12s. 6d. to 16s. ,,	..

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class XI.—Vehicles, Fittings, Saddlery, Harness, &c.			
Coach, waggon, tramcar, spoke and felloe, wheelwright	Bodymakers, painters, trimmers	..	52s. per week
	Vycemen	..	42s. ,,
	Wheelwrights, wheelers' machinists, axle makers, blacksmiths, face plate workers and screw-cutting turners	..	52s. ,,
	Centre turners, strikers, steam hammer drivers	..	42s. ,,
	Labourers	..	42s. ,,
	Trimmers and machinist—female	..	25s. ,,
Carriage lamp	Lamp makers ..	..	48s. ,,
Cycle	Foremen	57s.6d. to 60s. per week	..
	Assemblers ..	..	42s. per week
	Filers	..	38s. ,,
	Frame builders ..	..	50s. ,,
	General repairers ..	..	45s. ,,
	Screw cutters and turning lathe men	..	52s. 6d. ,,
	Wheel builders ..	..	35s. ,,
	Foremen rim makers	..	55s. ,,
	Braziers	..	48s. ,,
	Other workers ..	..	42s. ,,
Perambulator	Wickerworkers ..	..	50s. ,,
	Upholsterers ..	..	48s. ,,
	Fitters up	30s. to 40s. per week	35s. ,,
Saddlery, harness	Saddle and collar makers	..	48s. ,,
	Harness makers ..	..	48s. ,,
	Machinists—female ..	..	20s. ,,
Saddle-tree, saddlers' ironmongery, &c.	Saddle-tree makers ..	48s. to 60s. per week	50s. ,,
Whip	Thong makers—male	..	44s. ,,
	,, ,, female	..	30s. ,,
Class XII.—Ship Building, Fitting, &c.			
Dock, slip	Shipwrights ..	..	12s. per day
	Foundry and shipsmiths	10s. to 11s. per day	..
	Painters	..	9s. per day
	Labourers	..	8s. ,,
	Stevedores' men and lumpers	..	1s. 3d. per hr.
	Wharf labourers ..	..	1s. 1½d. ,,
Boat building	Boat builders (skilled)	48s. to 60s. per week	48s. per week
Class XIII.—Furniture, Bedding, &c.			
Bedding flock, upholstery ..	Bedding and mattress makers	..	50s. per week
	All females over four years' experience	..	25s. ,,
	Upholsterers ..	..	56s. ,,
Carpet	Carpet planners ..	60s. to 65s. per week	..
	Carpet and linoleum layers	..	56s. per week
	Makers and repairers—female	..	25s. ,,
Curled hair	Curled hair, horsehair workers	30s. to 45s. per week	36s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rat .
Class XIII.—continued.			
Furniture, cabinet making, chair, billiard table	Cabinet, chair, and couch makers	..	56s. per week
	Carvers, turners, polishers	..	56s. ,,
	Billiard table and cushion makers	..	56s. ,,
	Machinists	57s. to 64s. per week	..
Picture frame	Joiners, gilders ..	45s. to 50s. ,,	..
	Machinists	..	52s. per week
	Mount cutters ..	45s. to 48s. per week	..
	Compo workers and stainers	37s. 6d. to 50s. ,,	..
	Compo workers and fitters-up—female	..	21s. per week
Venetian blind, window blind	Venetian blind makers	42s. to 48s. per week	42s. ,,
Class XIV.—Drugs, Chemicals, By-products.			
Baking powder	Skilled, undefined ..	36s. to 60s. per week	..
	Wrappers—female	12s. 6d. to 20s. ,,	..
Blacking, blue, washing powder, soda	Skilled, undefined ..	36s. to 60s. ,,	..
	Unskilled ,, ..	25s. to 32s. 6d. ,,	..
	Wrappers—female ..	12s. 6d. to 20s. ,,	..
Chemical, drug, horse and cattle medicine	Makers of pharmaceutical preparations	60s. to 80s. ,,	60s. per week
	Others (unskilled) working in drugs, &c.; disinfectant makers	30s. to 50s. ,,	40s. ,,
	Packers—female ..	15s. to 22s. 6d. ,,	20s. ,,
Essential oil	Essence blenders ..	35s. to 55s. ,,	40s. ,,
Fertilizer	Artificial manure workers	..	36s. ,,
Paint, varnish, white-lead ..	Paint and varnish makers	55s. to 70s. per week	55s. per week
	Paint and varnish makers' assistants	..	40s. ,,
Class XV.—Surgical and Scientific Appliances.			
Optical, philosophical instrument &c.	Opticians, &c. ..	40s. to 60s. per week	50s. ,,
Surgical appliance, instrument	Surgical instrument makers	40s. to 65s. ,,	45s. ,,
Class XVI.—Timepiece, Jewellery, Platedware.			
Electroplating	Electroplaters ..	..	62s. per week
	,, assistants	..	54s. ,,
	Metal polishers ..	46s. to 55s. per week	..
Goldsmithing, jewellery, goldbeating	Engravers and chasers	50s. to 60s. ,,	..
	Chainmakers, mounters, ringmakers, setters, silversmiths, &c.	..	50s. per week
	Other workers ..	..	36s. ,,
	Female workers ..	..	30s. ,,
Watchmaking, &c. ..	Watchmakers ..	45s. to 70s. per week	..
Class XVII.—Heat, Light, and Energy.			
Electric apparatus	Engine fitters and turners	60s. to 66s. per week	..
	Winders	48s. to 60s. ,,	54s. per week

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class XVII.—continued.			
Electric light	Engine-drivers		10s. per day
	,, ,, assistants		8s. 6d ,,
	Firemen		9s. ,,
	Dynamo attendants		7s. 6d. ,,
	Electrical fitters		10s. ,,
	Switchboard attendants		9s. 6d. ,,
	Linemen		8s. 6d. ,,
	Carboners		8s. ,,
	Patrolmen		9s. 6d. ,,
	Wirers		9s. ,,
	Trimmers	7s. 6d. to 8s. per day	
	Labourers		7s. 6d. per day
Gas and coke	Stokers	8s. 9d. to 9s. per day	8s. 9d. ,,
	Enginemen		8s. 6d. ,,
	Purifiers	7s.3d. to 7s.6d. per day	
	Sulphate workers		8s. 6d. per day
	Stove repairers and fitters	8s. to 8s. 6d. per day	
	Service layers		8s. 7d. per day
	Main layers	7s. 9d. to 10s. per day	
	Inspectors	9s. to 13s. ,,	
	Labourers	7s. to 7s. 3d. ,,	
Match	Vesta makers—female	12s. 6d. to 29s. per week	17s. 6d. per week
	Box makers—female	12s. to 24s. ,,	15s. ,,
	Storemen, casemakers, &c.	35s. to 45s. ,,	40s. ,,
Ironfounders' dust, charcoal dust	Labourers	45s. to 48s. ,,	45s. ,,
Hydraulic power	Enginemen		10s. per day
	Firemen	8s. to 10s. per day	
	Fitters		10s. per day
	Main layers		9s. ,,
	Special labourers		8s. ,,
	Ordinary labourers		7s. ,,
Class XVIII. — Leatherware (excluding Saddlery and Harness.)			
Leather Belting	Foremen		60s. per week
	Belt makers	48s. to 50s. per week	48s. ,,
	Machinists	45s. to 48s. ,,	
Portmanteau, gladstone bag	Leather bag and portmanteau makers	48s. to 50s. ,,	
	Bagmakers—female	18s. to 20s. ,,	
Class XIX.—Wares not elsewhere included.			
Basket, wickerware	Wicker and bamboo workers		50s. per week
	Upholsterers		48s. ,,
Broom, brushware	Millet broom sorters	37s. 6d. to 47s. 6d. per week	
	Storemen and labourers		40s. per week
	Brush machinists	48s. to 64s. per week	
	Paint brush makers		60s. per week
	Brush finishers		50s. ,,
	Bottle, flue, wire, and bass brush makers		48s. ,,
	Draw-bench and treadle knot machine workers		21s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class XIX.—continued.			
Rubber goods (including cycle tires)	Calendar hands ..	..	54s. per week
	Mill hands, mixers ..	..	48s. ,,
	Compound scale hands	..	45s. ,,
	Spreaders, hose, belting &c., hands	..	45s. ,,
	Tire makers, repairers, wrappers	..	45s. ,,
	Press hands ..	..	43s. ,,
	Heaters, textile cutters, lathe, surgical and tube makers	..	42s.6d. ,,
	Drum tire and forcing machine hands	..	42s. ,,
	General workers ..	..	40s. ,,
	Female workers ..	..	22s. 6d. ,,
Quarry	Hammerman ..	51s. to 63s. per week	..
	Pitcher and cube dressers	..	63s. per week
	Facemen	..	54s. ,,
	Spallers	46s. to 54s. per week	..
	Machine borers ..	..	54s. per week
	Pluggers and machine feeders	..	48s. ,,
	Loaders and truckers	..	46s. ,,
	Strippers and labourers	..	42s. ,,

WAGES IN MELBOURNE, 1909—*continued.*

B.—WAGES FOR SERVANTS AND ADULT WORKERS IN UNCLASSIFIED CALLINGS, TRADES AND INDUSTRIES.

Industry or Service.	Occupations.	Wages.	
		Range.	General Rate.
Educational*	Governesses ..	£20 to £40 per annum	..
	,, advanced	£40 to £80 ,,	..
	Teachers in private schools—		
	Males (elementary)	£70 to £120 ,,	..
	,, (advanced) ..	£120 to £300 ,,	..
	Females (elementary)	£20 to £40 ,,	..
	,, (advanced)	£50 to £150 ,,	..
Clerical	Bookkeepers ..	40s. to 70s. per week	..
	Shorthand clerks and typists	30s. to 60s. ,,	..
	Shorthand clerks and typists—female	20s. to 40s. ,,	..
Domestic servants*—males ..	Coachmen, footmen, grooms, gardeners	20s. to 30s. ,,	..
	Butlers	25s. to 40s. ,,	25s. per week
females	Cooks	16s. to 30s. ,,	20s. ,,
	Laundresses ..	16s. to 20s. ,,	16s. ,,
	Housemaids ..	12s. to 15s. ,,	13s. ,,
	Nursemaids ..	8s. to 15s. ,,	12s. ,,
	General servants ..	10s. to 17s. 6d. ,,	14s. ,,
	Girls	5s. to 10s. ,,	7s. ,,
Hotel servants*—males ..	Barmen	25s. to 40s. ,,	30s. ,,
	Waiters	20s. to 30s. ,,	25s. ,,
	Boots	12s. to 20s. ,,	15s. ,,
	Ostlers	17s 6d. to 25s. ,,	20s. ,,
	Cooks	25s. to 60s. ,,	35s. ,,
females ..	Barmaids	15s. to 25s. ,,	20s. ,,
	Waitresses	15s. to 25s. ,,	17s.6d. ,,
	Housemaids ..	15s. to 25s. ,,	17s.6d. ,,
	Cooks	25s. to 35s. ,,	30s. ,,
Building, &c.	Bricklayers ..	..	12s per day
	Bricklayers' labourers	..	9s. ,,
	Foremen carpenters ..	..	73s. per week
	Carpenters and joiners	..	67s. ,,
	Labourers	..	54s. ,,
	Masons	..	56s 3d. ,,
	Painters and glaziers	..	9s. per day
	Paperhangers ..	..	9s. ,,
	Plasterers	10s. to 11s. per day	..
	Plumbers (ordinary) ..	..	10s. per day
	Plumbers licensed sanitary	11s. to 12s. per day	..
	Signwriters and decorators	10s. to 11s. ,,	..
	Slaters	..	10s per day
Baking	Bakers, bread (foremen)	..	54s. per week
	,, ,, ..	..	50s. ,,
	Carters, bread ..	..	40s. ,,
	Pastrycooks ..	46s. to 56s. per week	..
	General workers—male	..	30s. per week
	,, female	..	17s 6d. ,,
	Ornamental workers—female	20s. to 32s. per week	..
Butchering	Slaughtermen ..	..	60s. per week
	Shopmen	..	57s 6d. ,,
	General butchers ..	..	47s 6d. ,,
	Lorry drivers ..	..	45s. ,,
	Delivery cart drivers	..	40s. ,,

* With board and lodging.

WAGES IN MELBOURNE, 1909—*continued.*

Industry or Service.	Occupations.	Wages. Range.	Wages. General.
Drapery	Senior assistants—male	..	50s. per week
	,, ,, female	..	50s. ,,
	Junior assistants—male	37s. 6d. to 43s. per week	..
	Junior assistants (dress and manchester department)	37s. 6d. to 43s. ,,	..
	Junior assistants (other)	20s. to 27s. 6d. ,,	..
Farriery	Foremen	..	52s. per week
	Other	..	48s. ,,
Grocery	Managers	..	60s. ,,
	Employés over 24 years of age	..	50s. ,,
	Employés, other ..	40s. to 45s. per week	..
	Storemen, packers ..	..	42s.6d.per week
	Carters	40s. to 45s. per week	..
Hairdressing	Employés—male, full hands	..	55s. per week
	Employés—male, other	45s. to 50s. per week	..
	,, female ..	40s. to 46s. ,,	..
Laundry	Laundresses ..	20s. to 24s. ,,	20s. per week
Photography	Operators	50s. to 120s. ,,	..
	Printers	30s. to 60s. ,,	50s. per week
	Retouchers—female ..	15s. to 40s. ,,	..
	Finishers—female ..	10s. to 20s. ,,	15s. per week
	Makers of photographic materials	36s. to 80s. ,,	45s. ,,
	Finishers, packers—female	17s. 6d. to 25s. ,,	17s.6d. ,,

There were in operation at the close of 1909, 93 tanning, fellmongering and wool washing establishments. The average number of persons employed was 1,999, and the wages paid during the year to the employés (excluding working proprietors) amounted to £163,853. The following table shows the approximate value of the machinery, plant, land, buildings, and improvements during each of the last ten years:— Tanneries &c.

VALUE OF TANNERIES: 1900 TO 1909.

Year.	Approximate Value of— Machinery and Plant in Use.	Land.	Buildings and Improvements.
	£	£	£
1900	91,530	51,250	117,960
1901	99,710	47,750	98,950
1902	103,329	54,179	104,114
1903	110,796	48,341	112,407
1904	109,095	41,979	104,005
1905	114,863	46,301	112,714
1906	114,951	47,139	110,155
1907	124,064	51,194	123,124
1908	133,376	53,713	129,664
1909	142,429	54,208	125,700

The quantity of bark used in connexion with tanning operations in 1909 was 10,018 tons. The output of tanneries for each of the last ten years was as follows:—

OUTPUT OF TANNERIES, ETC.: 1900 TO 1909.

Year.	Number Tanned of—			Sheep Skins Stripped.	Wool Washed (weight after washing).
	Hides.	Calf Skins.	Sheep and other Skins.		
				No.	lbs.
1900 ...	500,549	165,802	1,395,600	1,431,811	6,866,383
1901 ...	406,260	181,522	676,936	615,614	8,511,171
1902 ...	424,786	189,886	313,166	453,660	5,279,916
1903 ...	397,367	179,425	629,465	925,263	6,197,723
1904 ...	381,473	134,003	674,105	651,672	5,285,409
1905 ...	393,695	139,506	544,145	562,705	4,543,927
1906 ...	485,620	132,210	518,139	612,598	5,676,464
1907 ...	492,572	188,007	548,765	851,516	7,230,675
1908 ...	498,947	127,798	1,027,460	1,253,875	7,803,992
1909 ...	495,964	175,563	1,020,656	1,090,967	8,089,643

The figures for 1909 do not include skins and wool dealt with in small tanneries. The work done in such tanneries in 1908 was the tanning of 1,540 hides, 1,620 calf skins, and 4,916 sheep and other skins. The value of the leather imported into Victoria in 1909 was £333,608, and of that exported, £415,464. The export of Victorian leather was valued at £335,966.

Soap and candle works.

There were seventeen soap and candle works in operation in 1909. These factories employed 563 persons, of whom 13 were working proprietors. The amount of wages paid to the employés in that year was £56,382. The value of the machinery, plant, land, buildings, and improvements, and the quantity of soap and candles produced in each of the last ten years were as follows:—

SOAP AND CANDLE WORKS—VALUE AND PRODUCTS: 1900 TO 1909.

Year.	Approximate Value of—			Products.	
	Machinery and Plant in Use.	Land.	Buildings and Improvements.	Soap.*	Candles.
	£	£	£	cwt.	cwt.
1900 ...	95,114	42,675	58,049	122,458	46,624
1901 ...	97,260	42,870	60,940	132,031	47,313
1902 ...	91,325	39,967	56,852	150,698	49,406
1903 ...	103,411	42,288	64,354	138,045	45,052
1904 ...	101,486	38,295	62,961	162,126	41,521
1905 ...	105,529	36,605	61,588	150,261	42,049
1906 ...	104,244	36,171	59,829	154,570	43,094
1907 ...	106,326	35,921	60,239	153,478	47,688
1908 ...	109,768	36,517	62,379	162,757	37,705
1909 ...	111,252	36,029	63,565	176,162	45,460

* Not including soap made in small soap works not classified as factories, viz., 11,220 cwt. in 1900, 11,109 cwt. in 1901, 14,490 cwt. in 1902, 13,369 cwt. in 1903, 7,902 cwt. in 1904, 7,185 cwt. in 1905, 11,706 cwt. in 1906, 10,527 cwt. in 1907, 7,125 cwt. in 1908, and 5,458 cwt. in 1909.

The quantity of tallow used in 1909 in the manufacture of soap and candles was 140,195 cwt. in factories, and 2,386 cwt. in minor works.

The quantity of soap, perfumed and other, imported during 1909 was 3,086,059 lbs., and its value was £59,434; during the same year there were exported 6,697,990 lbs. valued at £85,564, including 5,520,587 lbs. of Victorian manufacture valued at £61,767. The quantity of candles imported was 1,053,619 lbs., and the value £21,758; those exported weighed in the aggregate 1,836,947 lbs. and were valued at £39,856, included in the exports being 1,576,824 lbs. of Victorian-made candles, valued at £34,016.

Brickyards, potteries, earthenware, &c.

The brickyards and potteries at which work was carried on during the year numbered 108. The persons employed numbered 1,695, of whom 107 were working proprietors. The sum of £164,192 was paid to the employés in wages; and the value of land, plant, buildings, &c., was £347,561. The estimated value of the bricks made in these brickyards in 1909 was £240,320.

The number of bricks made, and the value of pottery and of pipes and tiles manufactured during each of the last ten years, were returned as follows:—

BRICKS, POTTERY, PIPES, AND TILES: 1900 TO 1909.

Year.	Number of Bricks Made.*	Value of	
		Pipes and Tiles.	Pottery.
		£	£
1900	83,477,275	55,751	19,870
1901	84,898,000	73,060	23,695
1902	90,545,280	71,074	27,289
1903	77,826,631	81,732	34,572
1904	80,026,511	53,454	31,438
1905	90,990,284	56,086	27,205
1906	112,966,270	58,349	27,570
1907	123,281,100	66,390	29,070
1908	124,985,542	72,024	33,029
1909	129,302,810	77,305	32,624

* In addition there are bricks made in small brickyards not tabulated as factories.

The expansion of building operations, especially in Melbourne and suburbs, during the last four years, is demonstrated by the number of bricks made.

Forest saw-mills &c.

The number of forest saw-mills being worked in 1909 was 133. The employés numbered 1,635, and the working proprietors 159; while the wages paid amounted to £131,108. The approximate value of machinery, plant, land, buildings and improvements, together with the quantity and value of timber sawn, during each of the last ten years, appears in the following statement:—

FOREST SAW-MILLS: 1900 TO 1909.

Year.	Approximate Value of—			Timber Sawn.	
	Machinery and Plant in use.	Land.*	Buildings and Improvements.	Quantity.	Value
	£	£	£	Super. ft.	£
1900	104,500	7,520	27,350	44,782,330	125,121
1901	91,810	6,170	13,500	46,495,885	134,310
1902	81,898	6,380	11,854	40,494,660	128,430
1903	80,039	1,495	10,797	38,841,322	116,845
1904	89,760	1,966	12,301	49,250,000	147,750
1905	87,757	2,553	10,861	47,635,358	142,905
1906	90,305	1,168	9,286	51,103,000	153,309
1907	99,723	1,421	11,199	55,873,500	181,590
1908	98,804	2,669	13,095	54 602,200	177,460
1909	115,121	2,609	15,551	56,039,200	189,130

* Value of land occupied by saw-mills only since 1902.

The other factories in which operations on wood were carried on numbered 183, and comprised cooperage works (11), employing 72 persons and 12 working proprietors, and paying £7,294 in wages; cork-cutting works (3), engaging 5 working proprietors, and 36 employés who were paid £2,360 in wages; dairy and domestic implements and bellows works (4), employing 57 persons and 4 working proprietors, and paying £5,515 in wages; saw-milling, moulding, and joinery works (128), employing 2,679 persons and 141 working proprietors, and paying £263,287 in wages; mantelpiece works (12), employing 240 persons and 16 working proprietors, and paying £18,757 in wages; and wood carving and turnery works (38), employing 216 persons and 48 working proprietors, and paying £16,541 in wages. The total amount paid in wages to workers in wood, other than those employed in forest saw-mills, was £313,754; and the approximate value of land, buildings, machinery, &c., in use in the works was £391,435.

Firewood, &c.

It is estimated that the approximate value of the production of firewood for consumption in a year is £403,000. In addition, there are supplies of railway sleepers, piles, posts and rails, shingles, and timber for mines obtained from the forests, but it has been found impossible to procure reliable information as to their value.

There were 26 establishments curing bacon and hams in 1909. The persons employed numbered 337, of whom 27 were working proprietors. The wages paid to employés amounted to £28,454. Further details of the industry for the last ten years are as follows:— Bacon and ham curing

BACON CURING: 1900 TO 1909.

Year.	Approximate Value of—			Pigs Slaughtered for Curing.	Weight of Bacon and Hams Cured.
	Machinery and Plant.	Land.	Buildings and Improvements.		
	£	£	£	No.	lbs.
1900 ...	23,210	7,680	25,200	102,086	9,761,553
1901 ...	27,900	8,690	27,670	109,283	11,485,460
1902 ...	29,611	9,231	30,625	112,244	11,507,224
1903 ...	26,810	5,721	23,415	88,541	9,633,206
1904 ...	27,822	5,641	25,730	104,604	11,229,768
1905 ...	28,335	5,941	25,650	117,582	11,360,698
1906 ...	28,217	6,031	29,140	135,492	12,910,575
1907 ...	25,530	5,245	26,575	145,513	13,609,144
1908 ...	26,448	5,190	27,653	129,677	11,518,404
1909 ...	26,092	5,190	28,650	123,067	11,245,195

This table does not include pigs slaughtered for curing, nor bacon and hams cured in small curing works; the pigs so slaughtered numbered 7,533 in 1900, 3,145 in 1901, 2,295 in 1902, 2,438 in 1903, 2,124 in 1904, 2,801 in 1905, 2,680 in 1906, 2,771 in 1907, 2,263 in 1908, and 2,691 in 1909; the quantity (in pounds) of bacon and hams cured was 506,225 in 1900, 211,250 in 1901, 195,098 in 1902, 181,745 in 1903, 194,102 in 1904, 246,374 in 1905, 252,348 in 1906, 244,837 in 1907, 194,328 in 1908, and 294,088 in 1909.

In addition, the following quantities of bacon and hams were returned as having been cured on farms:—2,936,769 lbs. in 1900, 3,314,906 lbs. in 1901, 2,736,048 lbs. in 1902, 2,689,900 lbs. in 1903, 3,428,074 lbs. in 1904, 4,826,593 lbs. in 1905, 4,888,243 lbs in 1906, 3,691,739 lbs. in 1907, 2,698,669 lbs. in 1908, and 2,375,290 lbs. in 1909. The total quantity of bacon and hams cured in 1909 was thus 13,914,573 lbs.—a falling off of 302,500 lbs. as compared with 1908.

The quantity and value of the imports of bacon and hams in 1909 were 163,864 lbs., and £6,310 respectively; there were exported 2,600,409 lbs., valued at £106,937, including 2,335,207 lbs., valued at £96,046, cured in Victoria. Imports and exports of bacon and hams.

The number of butter and cheese factories, exclusive of creameries, was 211 in 1909. Of these factories, 158 made butter, 12 made butter and cheese, 4 made butter and concentrated milk, 36 made cheese only, and 1 made concentrated milk only. There were 98 creameries attached to the factories. The number of persons employed was 1,190, of whom 56 were working proprietors, representing a decrease of 112 as compared with the previous year. Butter and cheese factories.

The approximate value of machinery, plant, land, buildings, and improvements was £515,966. The quantity of milk received at the factories and creameries was 146,656,005 gallons in 1906, 137,866,515 gallons in 1907, 104,980,863 gallons in 1908, and 116,034,058 gallons in 1909. The output from butter and cheese factories during each of the last ten years was as follows:—

BUTTER AND CHEESE FACTORIES: 1900 TO 1909.

Year.	Butter.	Cream Sold.	Cheese.	Concentrated Milk.
	lbs.	gallons.	lbs.	gallons.
1900 ...	48,839,996	38,274	2,508,843	263,138
1901 ...	40,824,928	50,092	2,073,940	266,083
1902 ...	32,927,546	23,739	2,128,835	243,904
1903 ...	40,707,377	17,882	3,602,988	236,581
1904 ...	55,058,391	7,242	2,599,443	226,810
1905 ...	52,274,639	16,513	2,447,938	232,310
1906 ...	63,231,222	20,332	2,852,687	309,138
1907 ...	59,050,231	25,442	2,691,957	390,388
1908 ...	44,383,168	17,527	2,473,682	315,129
1909 ...	49,554,628	19,417	3,167,955	332,125

Butter and cheese made on farms.

In addition to the quantity of butter and cheese made in the factories, the following quantities were returned as having been made on farms:—Butter, 6,764,122 lbs. in 1900, 6,032,644 lbs. in 1901, 6,300,208 lbs. in 1902, 5,978,350 lbs. in 1903, 5,944,450 lbs. in 1904, 5,332,182 lbs. in 1905, 4,856,946 lbs. in 1906, 4,696,123 lbs. in 1907, 4,078,230 lbs. in 1908, and 5,611,927 lbs. in 1909; cheese, 1,775,327 lbs. in 1900, 1,900,728 lbs. in 1901, 1,720,726 lbs. in 1902, 2,078,527 lbs. in 1903, 2,148,408 lbs. in 1904, 1,849,412 lbs. in 1905, 2,024,906 lbs. in 1906, 1,705,952 lbs. in 1907, 1,854,962 lbs. in 1908, and 1,857,879 lbs. in 1909.

Total butter and cheese made.

Taking the returns of butter from all sources, the largest quantity, 68,088,168 lbs., was made in 1906, the returns for 1907, 1908, and 1909 being 63,746,354 lbs., 48,461,398 lbs., and 55,166,555 lbs. respectively.

The largest quantity of cheese returned as having been made in factories and on farms was 5,681,515 lbs. in 1903. The quantities made in 1907, 1908, and 1909 were 4,397,909 lbs., 4,328,644 lbs., and 5,025,834 lbs. respectively.

Imports and exports of butter and cheese.

In 1909 there were imported 3,239,486 lbs. of butter valued at £147,589, and there were exported 31,079,944 lbs., valued at £1,365,149, of which 30,092,970 lbs. valued at £1,316,823 were

produced in Victoria. The quantity of cheese imported was 576,546 lbs., and the value £16,169; the total exports weighed 1,022,068 lbs., and their value was £32,664; the weight and value of Victorian made cheese included in these exports being 915,609 lbs., and £29,143 respectively.

Meat freezing and preserving works.

The works for freezing and preserving meat numbered 14 in 1909, and employed 666 persons and 9 working proprietors, the wages of the employés amounting to £54,042. The approximate value of machinery, plant, land, buildings, and improvements in 1909 was £317,557. The output in each of the last ten years was as follows:—

MEAT FREEZING AND PRESERVING, 1900 TO 1909.

Year.	Frozen.			
	Cattle.	Sheep.	Rabbits.	Poultry.
	Qrs.	No.	No.	No.
1900...	16,096	437,242	4,840,128	44,050
1901...	6,395	417,721	3,990,460	71,490
1902...	1,338	375,178	6,218,422	34,228
1903...	1,424	294,906	7,003,022	41,460
1904...	3,394	459,963	8,086,776	46,820
1905...	5,656	649,107	10,259,904	51,705
1906...	4,248	651,914	9,538,535	72,410
1907...	10,760	866,498	6,413,560	56,275
1908...	16,508	773,396	4,057,896	22,826
1909...	17,360	941,309	2,832,924	22,440

Year.	Preserved.			
	Beef.	Mutton.	Rabbits.	Other Meats, Fish, &c.
	Cwt.	Cwt.	Cwt.	Cwt.
1900...	5,593	2,198	24,874	915
1901...	3,304	2,417	26,303	2,758
1902...	7,705	14,913	16,537	6,102
1903...	8,796	2,653	17,380	4,725
1904...	4,248	491	14,977	1,301
1905...	4,866	1,435	6,665	776
1906...	6,011	1,700	496	1,512
1907...	11,944	2,478	64	2,229
1908...	7,557	2,309	1,730	1,391
1909...	8,382	2,349	540	1,267

NOTE.—In addition to the above, 15,249 calves, 1,959 pigs, and 25,952 hares were treated at freezing works in 1905; 6,947 calves, 2,580 pigs, and 38,397 hares in 1906; 8,047 calves, 2,196 pigs, and 55,196 hares in 1907; 11,662 calves, 2,296 pigs, and 29,796 hares in 1908; and 3,059 calves, 225 pigs, and 8,724 hares in 1909.

mports and exports of meats.

The following statement shows the imports and exports (including Inter-State transfers) of frozen and preserved meats, exclusive of bacon and ham, during 1909:—

MEAT IMPORTED AND EXPORTED, 1909.

—	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Meats, Frozen—				
Mutton	5,707 lbs.	81	31,238,136 lbs.	403,053
Beef	3,142,799 "	25,163	1,939,308 "	19,608
Pork	55,719 "	1,490	45,951 "	1,102
Rabbits and Hares	53,462 "	553	...	82,794
Poultry	5,977 "	305	...	4,807
Game	16,476 "	503	21,716 "	601
Other	52,230 "	484	79,492 "	1,248
Meats—Fresh and smoked ...	7,742 "	208	450,829 "	5,388
,, Potted and concentrated	...	5,433	...	1,166
,, Preserved in tins ...	1,516,442 "	31,102	1,513,441 "	33,484
,, Not elsewhere included	890 cwt.	1,446	11,462 cwt.	39,860
Total value ...	...	66,768	...	593,111

Flour mills.

The number of flour mills in 1909 was 59, and the number of persons employed in them 734, of whom 46 were working proprietors. The wages paid to employés amounted to £79,547. Further particulars for ten years are given in the following table:—

FLOUR MILLS: 1900 TO 1909.

Year.	Approximate Value of—			Wheat Ground into Flour.	Flour Made.
	Machinery and Plant.	Land.	Buildings and Improvements.		
	£	£	£	bushels.	tons.
1900	297,880	74,442	184,470	8,387,323	169,739
1901	280,130	70 530	175,520	9,482,175	190,845
1902	256,980	76,121	171,125	8,491,224	170,696
1903	261,530	68,917	166,869	5,762,849	115,368
1904	235,508	52,220	147,559	10,012,476	202,314
1905	238,139	56,910	157,785	10,282,491	209,058
1906	243,149	59,540	163,322	10,892,056	219,166
1907	264,566	63,157	174,150	11,731,183	235,185
1908	254,671	57,167	167,573	9,564,068	192,687
1909	226,571	50,801	155,728	10,644,123	215,547

In addition to the flour made, the wheat ground produced 6,220,812 bushels of bran and 3,514,784 bushels of pollard. Other grain operated on amounted to 81,658 bushels in 1900, 75,704 bushels in 1901, 126,765 bushels in 1902, 139,702 bushels in 1903, 157,403 bushels in 1904, 75,595 bushels in 1905, 111,719 bushels in 1906, 123,885 bushels in 1907, 123,879 bushels in 1908, and 45,487 bushels in 1909.

Imports and exports of breadstuffs.

During the year 1909, 2,819,532 lbs. of Victorian biscuits valued at £56,214, and 80,538 tons of Victorian flour valued at £733,916, were exported, as well as 162,367 lbs. of biscuits, valued at £4,003, and 1,856 tons of flour, valued at £17,697, which were the produce of places outside the State. The imports in the same year consisted of 188,994 lbs. of biscuits, valued at £5,362, and 1,843 tons of flour, valued at £17,388.

Jam, pickle, and sauce works.

There were in 1909, 24 establishments in which the manufacture of jams, pickles, and sauces was carried on; the number of persons employed therein was 1,409, of whom 16 were working proprietors. The wages paid to the employés amounted to £81,958, and the value of machinery, plant, land, and buildings was £139,408. The materials used and the output for each of the last six years were as follows:—

JAM, PICKLE, AND SAUCE WORKS: 1904 TO 1909.

Year.	Fruit used.	Sugar used.	Jams and Jellies made.	Fruit Preserved.	Fruit Pulped.	Sauce made.	Pickles made.
	cwt.	cwt.	cwt.	cwt.	cwt.	pints.	pints.
1904 ...	199,306	97,057	190,151	22,408	115,295	2,143,555	920,163
1905 ...	175,119	107,382	192,579	35,395	44,450	2,029,644	859,160
1906 ...	195,902	107,194	203,038	43,138	56,619	2,943,380	889,938
1907 ...	218,276	105,518	190,211	33,819	95,885	3,257,471	1,253,280
1908 ...	191,282	133,283	226,481	31,336	18,783	3,014,835	1,187,136
1909 ...	265,353	143,427	268,927	40,746	49,797	3,607,968	1,324,392

These works also candied fruit peel amounting to 3,283 cwt. in 1908, and to 4,802 cwt. in 1909.

Imports and exports of jams, sauces, &c.

In 1909, 2,672,828 lbs. of jams and jellies, valued at £33,935 were imported, as well as preserved fruit, valued at £30,301, and pickles and sauces, &c., valued at £17,293. In the same year there were exported 8,712,892 lbs. of jams and jellies, and 88,940 lbs. of fruit pulped; also preserved fruits valued at £59,422, and pickles and sauces valued at £22,597. Of these exports the following represented the production of Victoria:—7,041,940 lbs. of jams and jellies, and 4,580 lbs. of fruit pulped, preserved fruit valued at £49,368, and pickles and sauces valued at £18,083.

Sugar refineries.

Only one sugar refinery was at work in 1909, and, as it is the practice to refrain from disclosing the details of a single business, information relating to this industry cannot be given for that year. The following are the particulars for each of the eight years, 1900 to 1907 :—

SUGAR REFINERIES : 1900 TO 1907.

Year.	Number of Sugar Refineries.		Actual Horse-power of Engines Used.	Average Number of Persons Employed.	Approximate Value of—			Cane Sugar Treated (Raw).	Sugar Refined.	Treacle Refined.
	Total.	Using Steam Engines.			Machinery and Plant.	Land.	Buildings and Improvements.			
					£	£	£	cwt.	cwt.	cwt.
1900	2	2	424	301	74,500	7,000	56,000	1,004,913	944,049	34,080
1901	2	2	424	324	74,500	7,000	56,000	1,129,586	1,052,742	40,320
1902	2	2	424	346	82,000	10,000	76,500	952,801	879,521	51,052
1903	2	2	474	344	83,500	10,000	76,500	1,087,005	1,025,583	51,109
1904	2	2	506	343	83,500	10,000	76,500	1,123,381	1,071,995	36,803
1905	2	2	526	352	87,500	10,000	76,900	1,143,742	1,079,454	42,219
1906	2	2	776	409	88,550	10,000	83,400	1,317,172	1,238,010	47,109
1907	2	2	777	495	88,550	10,000	90,050	1,157,751	1,092,876	33,470

The raw sugar treated is imported. The quantity of cane sugar imported into Victoria during 1909 was 1,523,197 cwt., of which 1,253,044 cwt. came from Queensland, and 166,254 cwt. from Java. During the same year 105,721 cwt. of cane sugar was exported, of which 97,441 cwt. was sent to other States of Australia.

Production of sugar in Victoria.

The effort now being made to revive the beet sugar industry in Victoria directs attention to a possible new source of wealth to the farmer. It will be remembered that some twelve years ago Parliament passed an Act devoting £100,000 towards promoting the establishment of the industry on the basis of £2 for every £1 of private capital subscribed. A company was formed, and a substantial building, equipped with a modern plant, was erected at Maffra, in Gippsland. Starting with every essential for success, and with a guarantee of some 2,000 acres of beet from local landholders, the industry after various vicissitudes, was compelled to cease operations after two manufacturing campaigns. The Government, under the terms of its mortgage, took over the building and plant, which, since 1899, has remained idle.

In seeking for the causes of past failures, the more extended knowledge now possessed of the problems surrounding the industry indicates that such failures were mainly attributable to want of experience on the part of beet-growers, combined with unprecedently dry seasons and an unsuitable class of field labour. While there is no particular art in beet-growing, the crop demands prompt attention at the period of thinning or spacing, and, moreover, calls for the exercise of particular care in keeping it clean during growth. In this,

beet-growing is not singular. Onion-growing necessitates the most painstaking care if maximum crops are to be secured. Potato and maize crops also call for the assistance of a large amount of unskilled labour for digging and picking respectively. The beet-growers at Maffra were imperfectly equipped with suitable implements and vehicles, and were severely handicapped by flooded roads during the period of delivery to the factory. At the time these conditions were abundantly sufficient to deter beet-growers from persevering with the crop.

During the past ten years, efforts have been made from time to time by successive Governments to recreate interest in beet-growing and re-open the Maffra factory. Proposals of a most liberal character have been put forward, but up to the present time they have not been acceptable to Gippsland farmers, principally for the reason that they did not provide for some assistance in the shape of field labour.

Some time ago the Government secured the services of Dr. Walter Maxwell, a sugar expert of high repute, who, after exhaustive inquiries, strongly recommended that a fresh attempt should be made to revive the industry upon such a basis that the work which the dairyman and small farmer found himself unable to attend to would be undertaken on his behalf by an organized system of field labour, superintended by the Beet Expert attached to the Department of Agriculture (Mr. Lee).

Numerous experimental plots were established throughout Gippsland, in order to familiarize a large number of land-holders with beet-growing. Meanwhile, an active campaign of lectures, explanatory of the Government proposals and different phases of the industry, was carried on. Farmers living within three miles of the Gippsland railway line from Bairnsdale to Traralgon have been invited to grow small areas of beet, not exceeding five acres, for factory purposes. With a clear twelve months in which to work up interest in the matter, undue haste has been avoided, and no person will engage in beet-growing without a full understanding of what it demands of him. A price of 16s. per ton will be paid for all beets delivered at Maffra. Beet will be bought at all stations on the line at a reduced price to compensate for cost of carriage by rail to the factory.

Prime seed has been provided at cost price, and growers are being further assisted by the provision of suitable implements. The by-product in the shape of beet pulp will be an invaluable aid to the dairying industry, and there is little doubt that this factor has induced many dairymen to grow small areas of beet for the factory. Another by-product from the factory is lime scum. The majority of Gippsland soils are deficient in lime, which, at present prices, has a very restricted use.

It is anticipated that an area of 900 acres will be placed under beet during the present season. Skilled officers of the Department of Agriculture are superintending every detail of the field operations, and no effort will be spared to organize the labour necessary

to carry out the operations of thinning and subsequently harvesting. It is recognised that the industry must show itself capable of paying a fair wage, and contracts for all operations in the field are being based upon ability to earn from 6s. to 7s. per day.

The machinery within the factory is undergoing an expert overhaul by the Public Works Department, and will be in order for a start about April, 1911.

Mr. H. T. Easterby, lately Director of Sugar Experiment Stations in Queensland, has been appointed to relieve Mr. Lee of the active work of supervision, and has recently taken up his duties. An experienced sugar and mill manager, to take control of all factory operations will be selected in America by Dr. Elwood Mead, and should reach Maffra early next year.

As far as can be foreseen, every difficulty likely to arise in connexion with the planting, thinning, harvesting, and transport of beets has been provided for, and should the climatic conditions be even moderately favorable there should be approximately 10,000 tons of beets to turn into sugar.

From a purely agricultural point of view, beet-growing offers greater prospects of success than most other crops. There is an unlimited market for all the produce grown, and a fixed price per ton which is known to the grower before the seed is planted. This is not the case with such crops as onions, potatoes, or grain. Moreover, there are no costly items, such as bags, twine, &c., to provide for. The beet-grower is able to carry out every operation in the field himself, and thus can obtain the maximum of monetary advantage.

A review of the position of the State in regard to the consumption of sugar offers a most powerful argument in favour of the permanent establishment of beet-growing as an agricultural industry. Victoria consumed in round figures 70,000 tons of sugar in 1909, about 80 per cent. of which quantity was produced in Queensland.

Under the terms of the Sugar Bounty Act, the various States of the Commonwealth contribute each year a large sum of money to provide compensation for the loss of black labour in the cane-fields. This bonus is at the rate of £3 per ton of sugar produced by purely white labour conditions. Victoria's contribution has been as follows :—

1902-3	£18,923
1903-4	29,873
1904-5	38,935
1905-6	46,520
1906-7	100,456
1907-8	173,855
1908-9	143,820

In addition to the above sum of £143,820 in 1908-9, the imports of sugar into Victoria amounted in value to £775,067. The sugar bill thus reaches the enormous figure of £918,887.

Part at least of this sum could be kept within the State. The production of sugar in Victoria would considerably increase the Excise dues, and at the same time would lead to the distribution of a very large sum in the shape of wages, stores, freight, &c., besides extending the markets for other agricultural products. As a factor towards successful settlement on small holdings, sugar beet has no rival. Its cultivation can be carried on in conjunction with an already established farm practice, and need not supersede any crops now grown. The growing of root crops of any kind calls for a higher standard of farming than the growing of cereals, and by introducing a much needed system of rotation, it provides for the maximum utilization of the resources of the soil. Under irrigation, beet-growing in the northern districts of Victoria has very bright prospects of success. Experimental plots are being established in several localities this year, and if it be found that successful crops can be grown there is little doubt that capital will be found for the erection of factories to treat the product

Breweries.

In 1909 work was carried on in 32 breweries or in three less than in the previous year, and there were employed 1,022 persons or 113 less than in 1908. The approximate value of the machinery, plant, land, buildings, and improvements, the materials used, and the quantity of beer made during each of the last ten years were as follows:—

BREWERIES: 1900 TO 1909.

Year.	Approximate Value of—			Materials Used—			Beer Made.
	Machinery and Plant.	Land.	Buildings and Improvements.	Sugar.	Malt.	Hops.	
	£	£	£	cwt.	bushels.	lbs.	gallons.
1900 ...	204,840	230,530	269,410	111,863	598,094	648,648	16,162,550
1901 ...	212,280	236,310	271,600	113,686	608,445	650,214	16,563,068
1902 ...	211,036	228,990	273,325	115,258	625,441	677,262	17,162,680
1903 ...	209,492	229,965	277,383	102,651	552,042	569,981	15,423,149
1904 ...	231,687	229,965	291,180	100,430	530,771	544,524	14,927,873
1905 ...	232,354	198,760	291,738	99,230	529,067	582,012	15,176,439
1906 ..	235,980	197,985	289,982	101,692	533,531	623,249	16,409,465
1907 ...	249,579	212,785	316,262	106,004	542,806	665,236	16,900,336
1908 ...	268,009	155,922	273,273	109,347	556,040	684,879	17,582,833
1909 ...	245,606	65,775	231,546	103,146	503,761	632,339	16,552,594

Distilleries.

The number of distilleries in 1909 was 5, or one less than in 1908; but the persons employed increased from 91 to 99 during the year. The estimated value of the machinery, plant, land, buildings, and improvements was £141,405. Although there has been some improvement in the last eight years, the industry is still behind

what it was in 1900 and 1901. The materials used in manufacture, and the quantity of spirits distilled in each of the last ten years, were as follows:—

DISTILLERIES: 1900 TO 1909.

Year.	Materials Used.							Spirits Distilled.
	Wine.	Malt.	Wheat.	Maize.	Other Grain.	Sugar and Molasses.	Beer.	
	Gal.	Bush.	Bush.	Bush.	Bush.	lbs.	Gal.	Proof gal.
1900	160,301	91,223	2,353	3,692	26	4,652,480	...	439,117
1901	148,584	123,394	1,541	16,000	2,464	2,853,760	2,265	490,550
1902	128,272	16,744	87	11,880	2,507	1,780,016	...	190,644
1903	207,621	...	...	...	...	...	1,187	41,083
1904	293,836	...	...	...	...	...	...	58,745
1905	348,791	...	...	...	...	199,360	...	85,690
1906	324,005	13,038	...	...	...	101,024	...	94,674
1907	413,242	141,876	...	...	...	49,280	...	375,183
1908	591,248	53,761	...	...	...	...	...	220,690
1909	379,979	117,197	..	...	...	..	...	314,370

Spirits made by vine-growers for fortifying wine are not included in this table. The following quantities were distilled for that purpose during the last ten years in vineyards:—30,554 gallons in 1900, 38,058 gallons in 1901, 49,867 gallons in 1902, 56,851 gallons in 1903, 73,210 gallons in 1904, 78,163 gallons in 1905, 60,521 gallons in 1906, 53,517 gallons in 1907, 50,954 gallons in 1908, and 30,976 gallons in 1909.

Tobacco, &c. manufactories.

Fourteen tobacco manufactories were in operation in 1909, and in that year the employés numbered 2,436 and their wages amounted to £171,495. In addition to the employés there were 13 working proprietors. The value of machinery, plant, land, buildings, and improvements was £279,327. The output of these factories has materially increased, as will be seen from the particulars for the last ten years given in the following table:—

TOBACCO FACTORIES: 1900 TO 1909.

Year.	Unmanufactured Leaf Operated on.		Quantity Manufactured of—			
	Australian	Imported.	Tobacco.	Snuff.	Cigars.	Cigarettes.
	lbs.	lbs.	lbs.	lbs.	No.	No.
1900... ...	276,407	1,661,632	1,722,236	794	11,584,442	111,010,705
1901	230,113	2,542,580	2,365,831	1,133	13,025,840	125,693,600
1902... ...	205,434	1,379,905	1,630,510	550	11,936,455	100,817,104
1903... ...	304,049	2,052,100	2,390,976	813	9,336,975	58,928,535
1904... ...	266,053	2,768,873	3,166,767	1,122	12,419,426	73,304,100
1905	265,219	3,597,887	3,981,357	1,051	14,324,536	103,673,300
1906... ...	431,941	4,172,065	4,650,113	516	18,762,205	131,161,460
1907	332,271	4,479,073	4,782,061	993	17,740,782	146,699,600
1908... ...	269,354	5,566,522	5,331,117	605	19,741,355	178,776,650
1909... ...	202,723	4,759,856	5,162,959	610	19,368,491	141,105,750

NOTE.—The quantity manufactured in small factories (£5 licences) is included in the above table.

There were 9 woollen mills working in 1909, and the number of persons employed therein was 1,717, of whom 7 were working proprietors. The wages paid to employés amounted to £100,140, and the approximate value of the machinery, plant, land, buildings, and improvements to £383,785. The quantities of wool and cotton used and of goods manufactured in each of the last ten years were as follows:— Woollen mills.

WOOLLEN MILLS: 1900 TO 1909.

Year.	Quantity of Scoured Wool Used.	Quantity of Cotton Used.	Goods Manufactured—			
			Tweed and Cloth.	Flannel.	Blankets	Shawls and Rugs.
	lbs.	lbs.	yards.	yards.	No. of Pairs.	No.
1900 ...	1,831,000	178,332	971,267	1,596,120	56,340	3,500
1901 ...	2,023,509	250,184	818,975	2,229,617	49,302	4,600
1902 ...	2,149,897	273,335	708,749	2,612,343	67,609	5,718
1903 ...	2,130,100	368,749	662,381	3,201,275	77,601	6,565
1904 ...	2,368,871	211,256	697,726	3,301,004	86,253	8,431
1905 ...	2,663,587	499,630	738,924	3,355,013	145,106	8,516
1906 ...	2,825,218	658,882	840,649	3,637,846	146,628	8,383
1907 ...	3,311,097	914,003	867,789	4,088,383	199,743	12,089
1908 ...	3,210,925	965,042	922,176	4,396,862	228,621	15,222
1909 ...	3,093,383	880,934	949,674	4,713,571	225,148	15,189

The growth of the boot industry in the last thirty-nine years is shown in the next table:— Boot factories.

BOOT FACTORIES: 1871 TO 1909.

Year.	Number of Factories.	Number of Operatives, &c.	Value of Land, Buildings and Machinery.	Wages Paid.
			£	£
1871 ...	29	1,471	34,019	...
1876 ...	67	2,264	93,372	...
1880 ...	105	3,919	196,809	...
1885 ...	91	4,100	205,773	...
1890 ...	92	3,787	226,950	...
1894 ...	90	3,735	191,300	...
1898 ...	89	4,019	179,945	...
1900 ...	108	4,812	204,080	...
1903 ...	136	5,267	229,396	299,176
1904 ...	131	5,655	241,342	332,749
1905 ...	136	5,810	243,549	330,023
1906 ...	134	5,755	253,436	332,538
1907 ...	139	6,303	292,474	368,503
1908 ...	139	6,348	284,982	371,081
1909 ...	136	6,853	294,167	415,011

The following table shows the quantities of goods manufactured in each of the last ten years:—

OUTPUT OF BOOT FACTORIES: 1900 TO 1909.

Year.	Goods Manufactured— Boots and Shoes.	Slippers.
	No. of pairs.	No. of pairs.
1900	3,446,809	66,740
1901	3,125,799	92,174
1902	3,613,487	216,483
1903	3,574,761	150,012
1904	4,065,881	189,108
1905	3,951,033	165,892
1906	4,001,580	175,575
1907	4,290,122	182,039
1908	4,164,410	193,949
1909	4,649,130	231,791

NOTE.—The number of slippers returned for 1902, and each year since, includes canvas shoes and house-boots, which were not returned prior to those years.

It was ascertained that the value, in round figures, of the boots and shoes produced in Victorian factories in the year 1900, at manufacturers' selling prices (that is, wholesale price) was £900,000, equal to 15s. per inhabitant. The value of the output of Victorian boot factories for 1909 was £1,487,789, giving an average of £1 3s. 2d. per head of the population, and the value of the imported boots in the same year was £117,784, or 1s. 10d. per head, more than half of these boots being re-exported. Of the locally-made boots more than one-third were exported.

The imports to and exports from Victoria of boots and shoes at different periods in the past 68 years are shown in the following table:—

TRADE IN BOOTS: 1842 TO 1909.

Year.	Imports.	Re-export of Imported Boots.	Victorian-made Exports.	Total Exports.
	£	£	£	£
1842	5,457	...	...	...
1865	632,448	118,646	4,894	123,540
1870	303,437	45,840	588	46,428
1875	202,532	61,941	14,106	76,047
1880	100,941	68,011	54,131	122,142
1885	109,998	21,263	25,482	46,745
1890	127,286	21,402	15,645	37,047
1893	40,993	12,467	6,828	19,295
1897	33,962	5,420	48,213	53,633
1900	49,295	6,489	61,463	67,952
1902	80,537	8,515	186,224	194,739
1903	79,704	14,537	237,127	251,664
1904	95,078	47,147	280,895	328,042
1905	93,879	45,733	294,016	339,749
1906	101,308	47,853	335,789	383,642
1907	111,292	58,458	414,640	473,098
1908	103,850	59,628	430,556	490,184
1909	117,784	67,025	511,188	578,213

It is interesting to note the value of boots exported from Victoria to each of the other States of the Commonwealth, and to observe the development of the trade with these States. The particulars for the last five years are as follows:—

EXPORTS OF BOOTS TO AUSTRALIAN STATES: 1905 TO 1909.

State to which exported.	1905.	1906.	1907.	1908.	1909.
	£	£	£	£	£
New South Wales	143,767	138,216	193,280	195,274	234,253
Western Australia	65,029	81,136	77,369	49,407	105,605
Tasmania ...	49,803	61,966	68,743	79,112	70,654
South Australia ...	39,947	54,032	75,041	86,979	106,093
Queensland ...	32,407	34,700	40,093	66,850	55,035
Total ...	330,953	370,050	454,526	477,622	571,640

Electric light and power works.

The number of electric light and power stations in 1909 was 13, and the persons employed therein numbered 442. The horse-power of the engines used was increased from 11,702 to 13,293 during that year. Other particulars relating to this class of works for the last ten years are given in the following table:—

ELECTRIC LIGHT AND POWER WORKS: 1900 TO 1909.

Year.	Approximate Value of—			Electricity Supplied.
	Machinery and Plant.	Land.	Buildings and Improvements.	
	£	£	£	British Units.
1900 ...	145,580	16,060	37,700	6,100,519
1901 ...	220,690	15,240	86,730	6,680,214
1902 ...	204,022	10,000	67,661	6,450,560
1903 ...	198,751	9,750	76,733	5,626,568
1904 ...	374,850	12,085	98,809	6,644,343
1905 ...	416,847	13,709	107,543	7,698,394
1906 ...	491,171	14,378	129,951	9,760,046
1907 ...	496,314	10,048	130,836	12,542,614
1908 ...	541,489	9,823	147,634	14,310,482
1909 ...	577,403	9,803	152,108	16,471,368

Gasworks.

Forty-seven gasworks were in operation in 1909. These employed 1,390 persons, the wages, &c., paid to employés amounted to £181,965, and the machinery and plant in use was valued at

£1,241,906. The quantities of coal used, of gas made, and of coke produced, during each of the last ten years are shown hereunder :—

GASWORKS: 1900 TO 1909.

Year.	Coal Used.	Gas Made.	Coke Produced.
	tons.	cubic feet.	tons.
1900 ...	153,455	1,516,531,100	77,255
1901 ...	159,374	1,567,649,380	84,546
1902 ...	169,356	1,642,652,799	92,308
1903 ...	166,018	1,628,889,400	94,947
1904 ...	166,307	1,649,396,000	97,357
1905 ...	168,007	1,707,184,000	98,559
1906 ...	178,251	1,810,405,800	105,909
1907 ...	189,190	1,975,892,500	112,050
1908 ...	206,408	2,144,834,000	126,530
1909 ...	217,473	2,292,988,400	131,695

Oil was used as well as coal in the manufacture of gas, the number of gallons consumed each year being 108,531 in 1902, 105,651 in 1903, 117,114 in 1904, 137,247 in 1905, 154,486 in 1906, 163,215 in 1907, 187,237 in 1908, and 196,176 in 1909.

Total production.

The following is a return of the value of production in Victoria for each of the last three years. This shows for 1909 a total of £40,411,305, or, compared with the previous year, an increase of £4,128,896, or 10 per cent.

VALUE OF VICTORIAN PRODUCTION: 1907 TO 1909.

Produce.	Value in—		
	1907.	1908.	1909.
Cultivation.	£	£	£
Wheat	2,443,906	4,405,303	5,501,605
Oats	791,162	989,844	777,547
Barley, Malting	185,498	192,964	121,365
Barley, Other	56,009	60,345	43,816
Maize	87,973	116,402	119,725
Other Cereals	45,947	47,404	36,844
Grass and Clover Seed ...	2,671	4,540	3,290
Potatoes	383,145	411,840	517,775
Onions	108,155	138,408	98,325
Other Root Crops	36,842	42,811	29,245
Hay	3,023,128	3,256,308	2,432,840
Straw	133,898	246,682	239,385
Green Forage	149,742	157,665	141,465
Tobacco	3,967	4,748	3,691
Grapes, not made into wine, raisins, &c.	37,243	33,103	31,181
Raisins, ordinary	56,737	41,489	35,919
" sultanas	53,511	60,994	94,639
Currants	19,296	21,472	49,334
Wine	68,280	89,819	61,996
Hops	5,502	5,105	4,322

VALUE OF VICTORIAN PRODUCTION: 1907 TO 1909—*continued.*

Produce.	Value in—		
	1907.	1908.	1909.
	£	£	£
Cultivation—continued.			
Other Crops	36,082	37,468	39,117
Fruit grown for Sale in Orchards and Gardens	411,412	400,055	449,497
Fruit in Private Orchards and Gardens	9,798	8,542	9,060
Market Gardens	225,550	231,975	255,350
Total	8,375,454	11,005,286	11,097,333
Dairying and Pastoral.			
Milk Consumed in natural state	749,618	760,658	805,480
Butter made	2,855,305	2,388,743	2,493,990
Cheese made	109,948	126,252	130,670
Cream made (not for butter) ...	22,430	21,320	19,850
Concentrated Milk	78,078	63,026	66,425
Horses produced	273,700	15,274	261,268
Cattle "	2,056,198	298,606	1,602,858
Sheep "	1,716,908	597,880	1,317,320
Pigs "	424,660	380,650	470,081
Wool "	3,878,431	3,556,168	4,044,755
Total	12,165,276	8,208,577	11,212,697
Mining.			
Gold	2,954,617	2,849,838	2,778,956
Coal	79,731	64,778	76,945
Stone from Quarries (including limestone)	70,945	84,479	88,610
Other Metals and Minerals ...	41,766	31,950	26,257
Total	3,147,059	3,031,045	2,970,768
Forest Produce.			
Timber (Forest Saw-mills only)	181,590	177,460	189,130
Firewood (estimated) ...	391,000	396,750	402,600
Bark for Tanning	62,580	56,694	66,520
Total	635,170	630,904	658,250
Miscellaneous.			
Honey and Beeswax	14,380	28,488	19,768
Poultry production (estimated)	1,525,000	1,547,000	1,570,000
Rabbits and Hares	132,823	85,506	58,734
Fish	66,621	71,910	75,101
Total	1,738,824	1,732,904	1,723,603
Total Value of Primary Products	26,061,783	24,608,716	27,662,651
Manufacturing.—Added Value*	11,212,871	11,673,693	12,748,654
Grand Total... ...	37,274,654	36,282,409	40,411,305

* Exclusive of value of output of bark mills, butter and cheese factories, and forest saw-mills as regards Victorian timbers) included above.

In comparison with 1908, dairy and pastoral production shows great improvement, and there has been considerable development in manufacturing industries. The increase in value of pastoral production is entirely due to more favorable weather conditions, as a result of which there has been a larger quantity of butter and wool produced, and a satisfactory net production of live stock. In 1908 the gain due to rearing stock was to a very large extent counteracted by losses on account of adverse weather. The value of production per head of the total population in each of the last three seasons was as follows :—

VALUE OF PRODUCTION PER HEAD OF POPULATION: 1907 TO 1909.

Produce.	Value of Produce per head in—		
	1907.	1908.	1909.
	£ s. d.	£ s. d.	£ s. d.
Cultivation	6 14 4	8 13 11	8 12 10
Dairying and Pastoral... ...	9 15 2	6 9 9	8 14 8
Mining	2 10 6	2 7 11	2 6 3
Forest	0 10 2	0 10 0	0 10 3
Miscellaneous	1 7 11	1 7 5	1 6 10
Total Primary Produce	20 18 1	19 9 0	21 10 10
Manufactures	8 19 10	9 4 6	9 18 7
Grand Total	29 17 11	28 13 6	31 9 5

By Authority: J. KEMP, Government Printer, Melbourne.