

**Principal Agricultural and Pastoral Features of the various Districts of the State of Victoria, Season 1930-31.**

Districts.	Acres occupied.	Number of Occupiers.	CULTIVATION.								PASTORAL.				PRODUCE.				
			Wheat.	Oats.	Barley.	Potatoes.	Onions.	Maise for Grains.	Vines.	Orchards growing Fruit for sale.	Dairy Cows.	Other Cattle.	Horses.	Pigs.	Sheep.	Wheat.	Butter.	Wool.	Honey.
	Acres.		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	No.	No.	No.	No.	bu.	lb.	lb.	lb.		
Central ..	2,754,929	16,782	61,760	19,737	30,790	35,081	1,994	1,093	78	38,023	130,693	117,133	74,646	48,061	1,568,877	1,033,406	13,813,396	11,007,304	42,844
North Central ..	2,218,493	6,435	35,473	11,134	2,239	13,128	..	39	70	4,200	30,743	46,856	18,261	11,781	1,579,073	733,103	5,566,877	12,906,012	129,707
Western ..	6,744,296	11,937	111,826	42,420	12,439	9,064	3,714	..	27	1,905	184,644	168,922	80,876	33,846	5,245,648	2,338,087	29,112,963	46,669,862	532,294
Wimmera ..	6,082,610	6,167	1,164,827	73,784	7,716	102	..	..	1,119	2,874	17,200	15,407	50,281	4,928	2,264,111	16,064,270	807,388	19,967,143	1,228,178
Mallee ..	6,205,385	8,274	2,367,297	108,873	8,453	5	4	..	30,616	4,291	16,095	12,519	66,835	10,433	655,553	30,231,888	2,190,673	4,959,776	38,620
Northern ..	6,369,384	12,051	792,327	101,815	15,840	32	4	54	1,825	23,210	79,978	89,664	70,841	41,021	2,472,996	11,297,901	13,488,148	18,269,473	581,127
North-Eastern ..	4,269,964	6,214	48,346	13,529	1,708	834	..	1,865	5,085	1,838	64,410	143,631	25,455	27,401	1,406,874	993,206	11,778,907	9,712,561	129,787
Gippsland ..	4,131,655	8,687	28,626	3,285	8,345	9,344	670	13,176	..	1,493	145,074	166,656	32,687	83,774	1,294,963	533,111	33,158,677	9,176,335	121,679
Total for State	37,306,016	74,537	4,600,200	371,024	87,518	67,990	6,286	16,227	88,720	77,840	669,132	760,788	379,872	281,245	16,477,995	63,314,369	110,006,619	133,511,468	2,504,186

Minor Crops of Special Interest—Acres: Chicory, 344; Hops, 185; Tobacco, 2,690; Millet (Broom), 1,332; Sugar Beet, 3,045; Beans, 1,837; these are confined to the Central, North-Eastern, and Gippsland Districts.

**KARKAROO**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**WIMMERA**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**WESTERN**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**NORTHERN**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**NORTH CENTRAL**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**CENTRAL**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**BULN BULN**

Year	Acres	Area	Wheat	Oats	Barley	Potatoes	Onions	Maise	Vines	Orchards	Dairy Cows	Other Cattle	Horses	Pigs	Sheep
1926	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1927	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1928	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1929	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10
1930	17	1,020	10	10	10	10	10	10	10	10	10	10	10	10	10

**TOTALS.**

Year.	Average Rainfall.	WHEAT.		Wool Total Production.		LIVE STOCK.	
		Acres.	Bush.	lb.	No.	Cattle.	Sheep.
1926	29.62	2,915,316	16,068	131,269,921	1,455,761	14,915,668	
1927	18.58	3,064,172	8,541	118,503,036	1,327,077	15,557,067	
1928	30.04	3,718,904	12,760	149,878,888	1,304,496	16,495,222	
1929	21.80	3,566,135	7,113	146,066,889	1,335,242	17,427,300	
1930	23.78	4,600,200	11,700	133,511,466	1,439,980	16,477,996	

**VICTORIA.**

Showing

Statistics of Wheat, Wool, Live Stock, and Rainfall in each District for 5 years; and Agricultural and Pastoral Statistics in detail, for the Season 1930-31.



## PRODUCTION.

### LAND SETTLEMENT, ETC.

The total area of the State is 56,245,760 acres. This comprises—

	Acres.
Lands alienated in fee simple .. ..	26,316,492
Lands in process of alienation .. ..	7,280,000
Crown lands .. ..	22,649,268
	22,649,268
Total .. ..	56,245,760

The Crown lands comprise—

Permanent forests (under Forests Act) ..	3,942,163
Timber reserves (under Forests Act) ..	735,889
State forests and Timber reserves (under Land Act) .. ..	329,585
Water reserves .. ..	313,532
Reserves for Agricultural Colleges, &c. ..	87,003
Reserves in the Mallee .. ..	410,000
Other reserves .. ..	365,944
Roads .. ..	1,794,218
Water frontages, beds of rivers, lakes, &c. ; unsold land in cities, towns, and boroughs }	3,308,649
Land in occupation under—	
Perpetual leases .. ..	89,309
Other leases and licences .. ..	49,629
Temporary grazing licences .. ..	6,480,169
Unoccupied .. ..	4,743,178
	4,743,178
Total .. ..	22,649,268

**Alienation of land.** In the following table are shown the area of Crown lands sold absolutely and conditionally, and the area of lands alienated in fee simple during the last five years.

A portion of the area conditionally sold reverts to the Crown each year in consequence of the non-fulfilment of conditions by the selectors. The lands alienated each year include areas selected in previous years.

### ALIENATION OF CROWN LANDS, 1926 TO 1930.

Year.	Area of Crown Lands Sold.			Crown Lands alienated in Fee Simple.	
	Absolutely, at Auction, &c.	Conditionally to Selectors.		Area.	Purchase Money.
		Mallee.	Other.		
	Acres.	Acres.	Acres.	Acres.	£
1926 ..	2,832	388,559	93,469	125,765	87,740
1927 ..	3,824	214,609	85,409	214,173	203,414
1928 ..	5,807	344,571	68,686	213,519	188,339
1929 ..	4,825	310,174	65,294	187,752	114,965
1930 ..	5,344	137,242	40,691	111,564	89,703

**Amount realized by sale of Crown lands.** From the period of the first settlement of the State to the end of 1930 the amount realized by the sale of Crown lands was £35,319,883, which represents an average of £1 1s. 0d. per acre for all lands alienated or in process of alienation. Payment of a considerable portion of this amount extended over a series of years without interest, upon very easy terms.

**Lands remaining for disposal.**

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

CROWN LANDS REMAINING FOR DISPOSAL ON 31ST  
DECEMBER, 1930.

Location.	Classification.					Auri-ferous.	Total.
	Agricultural and Grazing.						
	First.	Second.	Third.	Fourth.	Un-classed.		
County.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bulu Bulu .. ..	7,728	43,806	98,496	160			150,190
Croajingolong .. ..	2,510	1,756	545,880		841,576	13,850	1,405,572
Dargo .. ..			96,013		431,100	71,000	598,113
Tambo .. ..			199,077		363,050	900	563,027
Tanjil .. ..			104,317		360,650	67,000	531,967
Wonnangatta .. ..		39	146,065		941,563		1,087,667
Bogong .. ..	714	11,409	192,603	1,269	153,724	84,518	449,237
Benambra .. ..		408	268,435		137,384	87,810	495,992
Delatite .. ..	100	12,405	179,882	11,800	295,750	60,416	560,353
Moirá .. ..	546	149	3,479	1,029			5,203
Anglesey .. ..		2,364	58,592			2,540	63,496
Bourke .. ..		162					162
Dalhousie .. ..	20	450	754			455	1,679
Evelyn .. ..	19	11,845					11,864
Mornington .. ..		1,469	11,093				12,562
Bendigo .. ..	79	537	3,545			4,027	8,188
Rodney .. ..		88					88
Borong .. ..		502	57,068			3,913	61,483
Gladstone .. ..	475	1,435	2,956	2,495		10,735	18,096
Lowan .. ..		654	155,586	36,662	9,614		202,516
Kara Kara .. ..	86	166	2,344		2,040	3,530	8,166
Talbot .. ..	219	1,267	182		4,524	22,083	28,275
Tatchera .. ..	20	70					90
Heytesbury .. ..		685	126,196				126,881
Polwarth .. ..	16,244	16,136	29,657	142			62,179
Grant .. ..		175	26,105			8,239	34,519
Grenville .. ..		221				6,615	6,836
Ripon .. ..		380	23,486			3,781	27,647
Normanby .. ..			123,406				123,406
Dundas .. ..			70,000	4,799	15,754		90,553
Villiers .. ..			2,058			7,550	9,608
Follett .. ..			140,292		29,136		169,428
Karkaroc .. ..		39					39
<b>Total .. ..</b>	<b>28,760</b>	<b>108,612</b>	<b>2,667,567</b>	<b>60,316</b>	<b>3,590,865</b>	<b>458,962</b>	<b>6,915,082</b>
Throughout the State .. ..	Swamp or reclaimed lands .. ..						1,045
" .. ..	Lands which may be sold by auction .. ..						6,647
The north-western portion of the State .. ..	Mallee lands available for selection .. ..						40,264
	" " (such as are suitable to be eventually classified for selection) .. ..						4,260,309
<b>Total area remaining for disposal .. ..</b>							<b>11,223,347</b>

Much of the land included in the above statement is temporarily licensed under grazing licences.

The Lands Inquiry Branch gives information as to persons eligible to select under the Land Acts, area and conditions of selection, and concessions to land seekers.

The "Torrens System," whereby persons acquiring possession of land may receive a clear title, was introduced into Victoria in 1862. The system 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 reduces 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 (5,142,321 acres), application must be made accompanied by strict proofs of the applicant's interest in the property. During 1930 there were submitted 250 applications to have brought under the Act land amounting to 8,922 acres in extent, and to £676,154 in value; while the land actually brought under the Act during the year by application was 18,034 acres valued at £1,115,145. Up to the end of 1930 there had been brought under the Act 3,199,168 acres valued at £70,025,765. The area of the land still under the Old Law System at the end of 1930 was 1,943,153 acres.

**Assurance  
Fund.**

When application is made to have land brought under the Transfer of Land Act, a contribution to the assurance fund of  $\frac{1}{2}$ d. 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. Receipts during 1930-31 comprised contributions £3,486, interest on stock £4,992, and interest on £75,073—advanced under *The Protection of Public Buildings Act 1885*—£3,003. During the year £261 was paid out of the fund in settlement of claims, and £5,095 as interest on securities under the *Special Funds Act 1920*, No. 3067. The balance at the credit of the Assurance Fund on 30th June, 1931, was £160,323. The amount paid up to 30th June, 1931, as compensation and for judgments recovered, including costs, was £8,999.

## CLOSER SETTLEMENT AND DISCHARGED SOLDIERS' SETTLEMENT.

Details relating to the operations of the Closer Settlement Board and to the conditions under which settlers may acquire blocks and advances will be found on pages 507 to 510 of the 1928-29 issue of this work.

**Estates purchased.** A complete statement of all estates acquired by the Closer Settlement Board including those purchased by the State Rivers and Water Supply Commission (*i.e.*, estates in irrigable areas), will be found in the report of the Closer Settlement Board for the year ended 30th June, 1930. No properties were purchased during the year ended 30th June, 1931.

A summary of the lands acquired is given in the following statement:—

### LANDS ACQUIRED FOR CLOSER SETTLEMENT AND DISCHARGED SOLDIERS' SETTLEMENT TO 30TH JUNE, 1931.

	Closer Settlement.		Discharged Soldiers' Settlement.	
	Area.	Cost.	Area.	Cost.
	acres.	£	acres.	£
Lands purchased .. ..	1,054,308	8,528,912	1,841,141	14,158,877
Crown Lands taken over ..	112,703	55,225	660,394	539,599
Total area and cost of purchase .. ..	1,167,011	8,584,137	2,501,535	14,698,476
Expenses prior to disposal ..	..	90,375	..	114,889
Public Works effected ..	..	454,755	..	963,388
Interest capitalized ..	..	58,164	..	137,297
Total cost to 30th June, 1931 .. ..	..	9,187,431	..	15,914,050
Less land transferred to—				
Discharged Soldiers' Settlement .. ..	77,927	797,875	..	..
Closer Settlement .. ..	..	..	234,983	2,459,299
Total net area and cost ..	1,089,084	8,389,556	2,266,552	13,454,751

**Financial Summary of Closer Settlement and Discharged Soldiers' Settlement.**

The liabilities and assets of Closer Settlement and Discharged Soldiers' Settlement at 30th June, 1931, are shown hereunder:—

**FINANCIAL SUMMARY OF CLOSER SETTLEMENT AND DISCHARGED SOLDIERS' SETTLEMENT AT 30TH JUNE, 1931.**

	Closer Settlement.	Discharged Soldiers' Settlement.	Total.
Number of settlers—			
At present receiving assistance .. ..	8,116	5,910	14,026
Repaid in full .. ..	4,050	541	4,591
Cancelled, transferred and surrendered ..	4,087	4,945	9,032
Total settlers who have received assistance	16,253	11,396	27,649
Loan liability—	£	£	£
Loans raised—State .. ..	11,040,482	12,598,074	23,638,556
Commonwealth .. ..	857,201	11,968,176	12,825,377
Total .. ..	11,897,683	24,566,250	36,463,933
Redemptions .. ..	1,355,582	174,101	1,529,683
Outstanding liability .. ..	10,542,101	24,392,149(a)	34,934,250
Repayment of principal used for payment of interest and working expenses .. ..	1,088,077	4,259,069	5,347,146
Payments to State Loans Repayment Fund..	382,123	372,775	754,898
Average rate of interest payable on loans ..	£4 13s. 2d. %	£5 4s. 3d. %	..
Principal outstanding on land, advances and consolidated debts—			
Selling value of land .. ..	9,189,436	13,301,146	22,490,582
Advances to settlers .. ..	4,974,979	7,653,304	12,628,283
Consolidated Debt Accounts .. ..	4,819	4,155,228	4,159,547
	14,168,734	25,109,678	39,278,412
Less arrears of interest included in Consolidated Debt Accounts .. ..	852	441,910	442,762
	14,167,882	24,667,768	38,835,650
Less Principal repaid .. ..	4,157,224(c)	5,435,399(b)	9,592,623
Outstanding Capital Liability of settlers	10,010,658	19,232,369	29,243,027
Total payments by settlers—			
Principal .. ..	3,651,393	4,550,665	8,202,058
Interest .. ..	3,684,120	3,328,682	7,012,802
Total .. ..	7,335,513	7,879,347	15,214,860
Arrears of settlers—			
Principal .. ..	1,189,141	1,298,669	2,487,810
Interest .. ..	1,206,793	2,021,135	3,227,928
Total .. ..	2,395,934	3,319,804	5,715,738
Amounts written off settlers' accounts—			
Interest—Adverse circumstances .. ..	..	1,330,676	1,330,676
Excess cost of buildings .. ..	..	39,448	39,448
Reduction in valuation of land and improvements .. ..	191,876	233,032	424,908
Bad debts .. ..	162,833	1,356,286	1,519,119
	354,709	2,959,442	3,314,151
For financial year 1930-1931—			
Interest paid .. ..	546,775	1,204,631	1,751,406
Administration expenses .. ..	86,280	96,090	182,370
Interest due by settlers and others .. ..	500,313	980,531	1,480,844
Interest paid by settlers and others .. ..	268,722	533,609	802,331

NOTES.—(a) Includes £2,160,960 to be written off liability to Commonwealth Government. Interest is not being charged on this amount.

(b) Includes—

	£
(i) Payment by Closer Settlement for land taken over .. ..	884,734
(ii) Payment by settlers .. ..	4,550,665
	<u>5,435,399</u>

(c) Includes—

(i) Payment by soldier settlement for land taken over .. ..	505,831
(ii) Payment by settlers .. ..	3,651,393
	<u>£4,157,224</u>

**Extent of Closer Settlement.** The extent of the settlement effected by the Board up to 30th June, 1931, is given in the next statement:—

**SUMMARY OF CLOSER SETTLEMENT TO 30TH JUNE, 1931.**

Classification of Holdings.	Number.	Average Capital Value.	Average Area.	Total Area.
<b>Dry Areas.</b>				
Areas settled—	No.	£	Acres.	Acres.
Farms .. .. .	3,525	1,612	240	865,355
Agricultural Labourers' Allotments ..	154	131	16	2,593
Workmen's Homes .. .. .	1,080	89	3	796
Allotments disposed of under Discharged Soldiers Settlement Acts .. .. .	182	1,859	252	45,862
Public Competition, Auction, &c. ..	..	..	..	47,786
<b>Total area of land settled.. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>962,392</b>
Area of land available for—				
Farm Lands and Agricultural Labourers' Allotments .. .. .				27,969
Workmen's Homes .. .. .				8
Public Competition, Auction, &c. .. .. .				713
Area of land acquired but not yet available .. .. .				..
Loss of area on subdivision (roads, channels, reserves, &c.) .. .. .				1,597
<b>Total dry areas acquired .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>992,679</b>
<b>Irrigation Areas.</b>				
Areas settled—	No.	£	Acres.	Acres.
Farms .. .. .	2,196	882	58	129,845
Agricultural Labourers' Allotments ..	152	116	6	916
Allotments disposed of under Discharged Soldiers Settlement Acts .. .. .	501	917	64	32,065
Public Competition, Auction, &c. ..	..	..	..	5,738
<b>Total area of land settled .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>168,564</b>
Area of land available for—				
Farm Lands and Agricultural Labourers' Allotments .. .. .				1,139
Public Competition, Auction, &c. .. .. .				475
Area of land acquired but not yet available .. .. .				1,920
Loss of area on subdivision (roads, channels, reserves, &c.) .. .. .				2,234
<b>Total irrigation areas acquired .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>174,332</b>
<b>TOTAL AREAS acquired to 30th June, 1931 .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>1,167,011</b>



Extent of  
Soldier  
Settlement.

The extent of settlement at 30th June, 1931, is given in the table which follows:—

SUMMARY OF DISCHARGED SOLDIERS' SETTLEMENT TO  
30TH JUNE, 1931.

	Dry Areas.	Irrigation Areas.
	acres.	acres.
Area of land settled—Soldiers .. .. .	2,102,369	72,093.
Area of land settled—Civilians (Closer Settlement Acts) .. .. .	214,218	20,765.
Area of land available .. .. .	1,280	1,049
Area of land acquired but not yet available ..	..	19,483
Sales by Auction, &c. .. .. .	64,717	5,561
Total land acquired to 30th June, 1931 ..	2,382,584	118,951
Farms, Number of .. .. .	7,666	1,999
Average area—acres .. .. .	302	46
Average capital value .. .. .	£1,707	£809

Inquiry into  
Soldier Land  
Settlement.

The condition of Soldier Land Settlement in Victoria was the subject of an inquiry by a Royal Commission appointed in 1925, and was followed by an investigation into the position in all the States by His Honour Mr. Justice Pike, who was appointed by the Commonwealth Government in 1927.

Particulars of the findings of the various Boards, and their recommendations, will be found in the Annual Reports of the Closer Settlement Board.

### WATERWORKS.

State  
Expenditure  
on  
Waterworks.

All Victorian waterworks are controlled by official bodies, either State or local. In the following table is given a statement of State expenditure on works under the control of the State Rivers and Water Supply Commission, as well as grants and loans to local bodies. In addition to their receiving free grants, large sums have been written off the liabilities of local bodies. The information appearing below has been largely taken from the Annual Report of the State Rivers and Water Supply Commission.

## STATE EXPENDITURE ON WATERWORKS TO 30TH JUNE, 1931.

	Total Advances, including Cost of Loan Flotation.	Redemption Paid.	Capital Written Off.	Free Head-works.	Amount standing at Debit, 30th June, 1931.
	£	£	£	£	£
State Rivers and Water Supply Commission—					
Completed Works—					
Waterworks Districts ..	4,934,645	49,775	175,055	..	4,739,815
Irrigation and Water Supply Districts ..	4,442,869	31,730	575,152	..	3,835,987
Goulburn Channel Works (Free Headworks excluded) ..	1,410,949	106	..	..	1,410,843
Pyke's Creek, Melton and Distributary Works ..	235,016	..	..	..	235,016
Uncompleted or Unallotted Works—					
Mornington Peninsula ..	836,569	..	..	..	836,569
Koo-wee-rup, Cardinia, and other Flood Protection Schemes ..	396,087	..	..	..	396,087
Eildon Reservoir and Waranga Reservoir Enlargement ..	2,475,835	1,000	..	..	2,474,835
Maffra-Sale Irrigation and Water Supply Districts ..	1,218,914	..	..	..	1,218,914
Millewa Waterworks Districts ..	510,356	..	..	..	510,356
Red Cliffs Irrigation and Water Supply District ..	779,368	..	..	..	779,368
Bellarine Peninsula ..	312,959	..	..	..	312,959
Campaspe and Loddon River Storages (proposed) ..	88,054	..	..	..	88,054
Free Headworks ..	1,257,136	420	..	1,256,716	..
River Murray Agreement Works ..	2,209,422	..	..	..	2,209,422
Surveys, &c. ..	296,524	..	..	..	296,524
Total State Rivers and Water Supply Commission ..	21,434,703	83,031	750,207	1,256,716	19,344,749
First Mildura Irrigation Trust and Mildura Urban Trust ..	119,782	31,125	..	..	88,657
Other Waterworks Trusts ..	2,014,770	296,674	316,537	..	1,401,559
Ballarart Water Commissioners ..	396,990	92,777	2,111	..	302,102
Other Local Bodies (Municipalities) ..	446,771	89,583	163,760	..	193,428
Abolished Irrigation and Waterworks Trusts ..	32,754	30	32,724	..	..
Free Grants to Local Authorities ..	147,046	..	..	147,046	..
Melbourne and Metropolitan Board of Works ..	3,189,934	3,189,934*	..	..	..
Geelong Waterworks and Sewerage Trust ..	459,797	300,235	..	..	159,562
Total ..	28,242,547	4,083,389	1,265,339	1,403,762	21,490,057

\* Of this amount £800,000 was provided out of Consolidated Revenue, the balance being payments by the Melbourne and Metropolitan Board of Works.

In addition to the capital written off, as shown above, an amount of £579,786 representing arrears of interest was written off by Act No. 1625 of 1899, making the total actually written off the liabilities of the Trusts (Irrigation and Waterworks) and Municipal Corporations, £1,845,125.

The State expenditure on waterworks, as shown in the above table, does not include large sums which have been spent by other controlling bodies out of their own funds. Up to 30th June, 1931, the additional

capital expenditure of the bodies mentioned was as follows :—Melbourne and Metropolitan Board of Works, £7,702,410 ; Geelong Waterworks and Sewerage Trust, £448,612 ; and the Ballarat Water Commissioners, £254,691. Smaller amounts have been expended by other municipalities, details of which are not readily available.

### IRRIGATION.

**Progress of Irrigation.** Prior to 1905 the management of irrigation in Victoria was in the hands of various Irrigation Trusts, which were financed by the State. These Trusts drifted into financial difficulties and the State was compelled to assume control. In the year mentioned, by the authority of Parliament, the State Rivers and Water Supply Commission was constituted and entrusted with the management of all irrigation works, except those controlled by the First Mildura Trust. This authority is embodied in the *Water Act 1928*—which consolidates the Water Acts of 1915, 1916, and 1918, the *Ballarat Water Commissioners Act 1921*, and Section 5 (2) of the *Closer Settlement Act 1922*.

The particulars in the following statement, while not covering the whole of the activities of the State Rivers and Water Supply Commission, will furnish a general idea of the development of water conservation and distribution in Victoria under its administration :—

—	At 30th June, 1907.	At 30th June, 1931.
<b>Irrigation Districts—</b>		
Number of Districts administered .. ..	10	33
Number of Districts having Water Rights .. ..	Nil	25
Total of such Water Rights .. ..	Nil	412,000 ac. ft.
Area under Irrigated Culture .. ..	108,000 acres	463,000 acres
Valuation for Rating purposes .. ..	£196,000	£787,000
<b>Rural Waterworks Districts—</b>		
Number of Districts administered (excluding Coliban) .. ..	3	32
Valuation for Rating purposes .. ..	£125,000	£1,722,000
<b>Urban Districts—</b>		
Number of Districts administered .. ..	1	75
Valuation for Rating purposes .. ..	£5,600	£576,000

An illustration of the influence of closer settlement and the allotment of water rights in extending irrigation is contained in the following table, which shows, for the districts having water rights, most of which are directly affected by the Commission's Closer Settlement policy, the areas irrigated in 1909-10—the year in which these two factors were first put into operation—and the average areas for the last five years :—

PROGRESS OF IRRIGATION IN CLOSER SETTLEMENT AREAS.

District (having allotted Water Rights).	Area Irrigated.	
	1909-10.	Average for last Five Years.
	acres.	acres.
Supplied from the Goulburn—		
Shepparton .. .. .	..	15,068
South Shepparton .. .. .	..	4,322
Rodney .. .. .	32,356	64,472
Stanhope .. .. .	2,000	12,870
Tongala .. .. .	3,000	20,530
Rochester .. .. .	500	46,101
Echuca North .. .. .	..	4,953
Dingee .. .. .	..	4,248
Tragowel Plains .. .. .	20,000	51,033
Supplied from the Werribee—		
Bacchus Marsh .. .. .	31	2,639
Werribee .. .. .	..	7,541
Supplied from the Macallister—		
Maffra (three years) .. .. .	..	7,375
Sale (three years) .. .. .	..	4,011
Supplied from the Murray—		
Leitchville .. .. .	..	3,778
Cohuna .. .. .	12,000	20,237
Gannawarra .. .. .	7,825	19,986
Koondrook .. .. .	5,029	19,981
Swan Hill .. .. .	5,410	18,849
Nyah .. .. .	569	2,742
Red Cliffs (three years) .. .. .	..	10,466
Merbein .. .. .	202	7,458
Third Lake .. .. .	..	3,274
Mystic Park .. .. .	..	2,948
Tresco .. .. .	..	1,326
Fish Point (four years) .. .. .	..	1,948
Total .. .. .	88,922	358,156

The area under irrigated culture for all kinds of crops in 1930-31 was 463,098 acres, being 103,479 acres less than the area irrigated in the previous year, and 9,900 acres above the average of the previous five years.

The subjoined table shows the total extent of irrigated land in the State in 1909-10 and each of the last five years, and the purposes for which the land was utilized :—

## IRRIGATED AREAS: HOW UTILIZED.

Crop.	1909-10.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	acres.	acres.	acres.	acres.	acres.	acres.
Cereals .. ..	23,715	40,655	91,538	60,880	93,803	69,694
Lucerne .. ..	24,124	119,721	121,540	122,441	135,111	136,502
Sorghum and other annual fodders ..	8,094	29,476	60,104	41,130	59,401	29,787
Pastures .. ..	50,541	131,725	118,153	154,459	186,249	144,903
Vineyards and orchards	17,524	69,042	71,043	70,681	70,265	68,426
Fallow .. ..	4,988	9,992	6,727	11,120	12,596	6,447
Miscellaneous ..	785	5,921	8,395	10,934	9,152	7,339
<b>Total .. ..</b>	<b>129,771</b>	<b>406,532</b>	<b>477,500</b>	<b>471,695</b>	<b>566,577</b>	<b>463,098</b>

NOTE.—In 1909-10, 8,000 acres, details of which are not available, were irrigated by private diversions, making a total area for that year of 137,771 acres.

Of the total area irrigated in 1930-31—463,098 acres—the percentages devoted to different purposes were as follows :—Pastures, 31 ; lucerne, 29 ; cereals, 15 ; vineyards, orchards, and gardens, 15 ; sorghum and other annual fodder crops, 6 ; fallows and miscellaneous, 4.

Notwithstanding that the Commission did not purchase any additional land for settlement during the year 1930-31, 37 applications from new settlers for irrigation farms were approved on farm allotments which from time to time became available. Additional areas were granted to 34 established settlers.

Applications from 77 leaseholders for transfer and 32 who desired to sub-let their farms were approved.

A statement showing the total area of irrigable land purchased and subdivided by the State, and the extent of settlement on each estate, appears on page 359 of the *Year-Book* for 1929-30.

Closer Settlement in irrigation areas commenced in 1909, and under the *Closer Settlement Act* 1912, administration in these areas was placed under the direct control of the State Rivers and Water

Supply Commission. At 30th June, 1931, 236,170 acres had been purchased, and 4,118 families settled, or about 17 times as many as resided thereon prior to their subdivision for Closer Settlement.

Dairying is still the main source of production in the irrigation areas, and these areas are proving most suitable for this industry. In the Standard Herd Test conducted by the Department of Agriculture there were 27 herds whose average yield per cow of butter fat exceeded 450 lb., and 9 of these were from the irrigation areas, though these areas contain only 11 per cent. of the cows in the State.

Tobacco is being profitably grown in the Goulburn Valley Irrigation district, and a great expansion in the area planted has taken place.

Following on the exceptionally heavy crops in the dried grape districts in 1929 and 1930, the yield this year, as is usual with this class of fruit after years of heavy bearing, was much lighter, being 31,000 tons as against 48,000 and 47,500 tons respectively for the two previous years. The prices obtained to date, however, together with the "exchange" benefit, have much more than compensated for the reduction in the yield.

The appointment of the Trade Commissioner in Canada and the Trade Treaty made with that country have proved very beneficial, the quantity of dried fruit exported there having increased from 776 tons in 1926 to over 9,000 tons in 1931.

The production of citrus in the irrigation areas was satisfactory, and very large crops were harvested.

In addition to waterworks for purposes of irrigation, extensive schemes for the supply of water for domestic and stock purposes are under the control of the State Rivers and Water Supply Commission. Altogether, the area within the State so supplied is approximately 24,232 square miles—about 28 per cent. of the total area of the State. The major portion so supplied is in the Mallee and Wimmera districts.

The number of towns supplied with water, exclusive of the City of Melbourne and its suburbs, is as follows:—96 towns of a total population of 120,100 supplied by the Commission, 109 towns with a total population of 193,200 supplied by Waterworks Trusts, and 17 towns with a total population of 77,200 supplied by Local Governing Bodies.

### STORAGE AND SUPPLY SCHEMES.

In 1902 the total capacity of storages in the State was 172,000 acre feet. The present capacity is 1,301,520 acre feet. When the Wimmera Storages, Glenmaggie, Drysdale, and Eumemmering Reservoirs are completed, the total capacity will be

Total Storages  
in State.

about 1,387,250 acre feet. The Hume Reservoir, in course of construction, will, unless otherwise decided by the Commonwealth and State Governments, contain 2,000,000 acre feet, half of which can, subject to the provisions of the River Murray Agreement, be credited to the State of Victoria. The following statement sets out the capacities of the various storages in the State :—

EXISTING STORAGES.						Capacities in Acre Feet.
<i>Goulburn System—</i>						
Goulburn Weir	..	..	..	..	..	20,700
Waranga	..	..	..	..	..	333,400
Eildon (200,000 acre feet during repair)	..	..	..	..	..	306,000
						660,100
<i>Murray-Loddon System—</i>						
Hume Reservoir (part of 2,000,000 acre feet—half share)						77,500
Kow Swamp	..	..	..	..	..	40,860
Laanecoorie	..	..	..	..	..	14,000
Kerang North-west Lakes	..	..	..	..	..	92,000
Lake Boga	..	..	..	..	..	28,000
Long Lake	..	..	..	..	..	3,820
						256,180
<i>Wimmera-Mallee System—</i>						
Lake Lonsdale	..	..	..	..	..	45,480
Wartook	..	..	..	..	..	23,800
Fyans Lake	..	..	..	..	..	17,100
Taylor's Lake	..	..	..	..	..	30,000
Pine Lake (part of 62,000 acre feet)	..	..	..	..	..	52,000
Lower Wimmera Weirs	..	..	..	..	..	2,870
Batyo Catyo (Avon Regulator)	..	..	..	..	..	5,000
Lake Whitton	..	..	..	..	..	1,300
Earthen Storages, Township Reservoirs, and Mallee Tanks						5,710
						183,260
<i>Maffra-Sale System—</i>						
Glenmaggie Reservoir (part of 150,000 acre feet)					..	104,500
<i>Coliban System—</i>						
Upper Coliban	..	..	..	..	..	25,700
Malmsbury	..	..	..	..	..	12,300
Subsidiary Reservoirs	..	..	..	..	..	6,930
						44,930
<i>Werribee—</i>						
Pykes Creek	..	..	..	..	..	21,000
Melton	..	..	..	..	..	17,000
						38,000
<i>Bellarine Peninsula System—</i>						
Wurdee Boluc	..	..	..	..	..	10,000
Service Basins	..	..	..	..	..	260
						10,260
<i>Mornington Peninsula System—</i>						
Beaconsfield, Frankston, and Mornington Reservoirs	..	..	..	..	..	1,560
Service Basins	..	..	..	..	..	180
Eumemmerring Reservoir (part of 3,100 acre feet)	..	..	..	..	..	1,000
						2,740
<i>Miscellaneous—</i>						
Wonthaggi	..	..	..	..	..	1,550
Total capacity of existing Storages						1,301,520

ADDITIONAL STORAGE BEING PROVIDED BY WORKS IN COURSE OF CONSTRUCTION.

	Capacities in Acre Feet.
<i>Wimmera-Mallee System—</i>	
Lake Lonsdale Enlargement .. .. .	7,810
Pine Lake (balance of 62,000 acre feet) .. .. .	10,000
Green Lake .. .. .	20,000
	37,810
<i>Maffra-Sale System—</i>	
Glenmaggie Reservoir (balance of 150,000 acre feet) .. .. .	45,500
<i>Bellarine Peninsula System—</i>	
Drysdale Service Basin .. .. .	320
<i>Mornington Peninsula System—</i>	
Eumemmerring Reservoir (first stage—balance of 3,100 acre feet)	2,100
<i>Murray System—</i>	
Hume Reservoir, at junction with Mitta River, half-share of balance of 2,000,000 acre feet .. .. .	922,500
Total capacity of storages when works in hand are completed .. .. .	2,309,750

Detailed descriptions of the various systems which have been instituted for irrigation and for supplying water for domestic and stock purposes appear in the *Year-Book* for 1928-29 (pp. 526 to 534).

**Mildura Irrigation Settlement.** The Mildura Irrigation Settlement, on the River Murray was established in 1887 under the management of the Chaffey Brothers Limited, and in 1895 the control of the water supply was vested in the First Mildura Irrigation Trust. Water is obtained by pumping from the river. The extent of watering done represented 42,134 acres in 1926-27, 48,536 acres in 1927-28, 52,726 acres in 1928-29, 51,780 acres in 1929-30 and 47,418 acres in 1930-31.

The receipts and payments of the Mildura Irrigation Trust during the year ended 30th June, 1931, were as follows :—

RECEIPTS AND PAYMENTS OF FIRST MILDURA IRRIGATION TRUST, 1930-31.

<i>Receipts.</i>	£	<i>Payments.</i>	£
Horticultural Rates ..	44,887	Wages and Salaries ..	15,798
Special Waterings, &c. ..	1,136	Firewood .. .. .	7,514
Miscellaneous .. .. .	3,917	Interest, Sinking Fund and Depreciation .. .. .	2,753
		Miscellaneous .. .. .	6,036
Total .. .. .	49,940	Total .. .. .	32,101



## METEOROLOGY.

Particulars in regard to climate and weather conditions have been furnished by the Commonwealth Meteorologist, and are given in the following tables. In the first are shown the rainfall for each of the years 1928, 1929, and 1930, and the average yearly amount of rainfall deduced from all available records to December, 1930, in each of the 26 river basins or districts constituting the State of Victoria:—

## RAINFALL.—YEARLY RECORDS AND AVERAGES.

Basin or District,	Rainfall.			
	During the Year—			Yearly Average to December, 1930.
	1928.	1929.	1930.	
	Inches.	Inches.	Inches.	Inches.
Glenselg and Wannon Rivers ..	29.86	26.89	28.65	26.40
Fitzroy, Eumeralla, and Merri Rivers	28.10	30.80	28.53	28.09
Hopkins River and Mt. Emu Creek ..	28.53	26.25	28.79	24.95
Mt. Elephant and Lake Corangamite	28.17	25.25	27.48	25.78
Cape Otway Forest ..	42.28	45.84	38.14	39.32
Moorabool and Barwon Rivers ..	25.92	23.95	25.90	23.90
Werribee and Maribyrnong Rivers ..	24.77	23.55	26.21	23.37
Yarra River and Dandenong Creek ..	33.71	39.56	37.20	33.99
Koo-wee-rup Swamp ..	34.18	37.80	33.78	35.73
South Gippsland ..	41.66	38.35	36.98	38.78
Latrobe and Thomson Rivers ..	40.68	39.73	39.67	38.24
Macallister and Avon Rivers ..	24.64	20.80	27.76	24.34
Mitchell River ..	29.29	21.11	28.49	26.00
Tambo and Nicholson Rivers ..	27.80	22.76	30.42	27.43
Snowy River ..	35.79	31.95	31.74	34.32
Murray River ..	20.88	14.62	18.45	16.79
Mitta Mitta and Kiewa Rivers ..	33.45	25.56	31.03	33.18
Ovens River ..	37.98	27.75	34.70	33.44
Goulburn River ..	29.62	22.25	27.24	26.22
Campaspe River ..	27.56	18.76	26.64	22.82
Loddon River ..	23.98	15.35	22.30	20.04
Avoca River ..	18.92	11.13	20.45	16.96
Avon and Richardson Rivers ..	16.73	10.63	18.64	15.33
Eastern Wimmera ..	21.71	18.72	23.33	21.24
Western Wimmera ..	20.09	17.97	21.74	19.85
Mallee ..	12.79	8.23	15.48	12.54
Weighted Averages ..	26.04	21.80	25.78	24.15

The wettest portion of the State is the Cape Otway Forest, which is closely followed by the South Gippsland district and the Latrobe and Thomson Basin. The lowest rainfall occurs in the Mallee district, where it averages 12.54 inches per annum, as compared with 24.15 inches for the whole State.

An estimate of the areas of the State, in square miles, subject to different degrees of rainfall was first made in 1910. More comprehensive data has since become available, and in 1925 the Commonwealth Meteorologist issued the following revised figures:—

DISTRIBUTION OF AVERAGE RAINFALL.

Rainfall.						Area.
Inches.						Square Miles.
Under 15 ..	..	..	..	..	..	19,270
15 to 20 ..	..	..	..	..	..	13,492
20 to 25 ..	..	..	..	..	..	14,170
25 to 30 ..	..	..	..	..	..	15,579
30 to 40 ..	..	..	..	..	..	14,450
40 to 50 ..	..	..	..	..	..	7,338
50 to 60 ..	..	..	..	..	..	2,980
Over 60 ..	..	..	..	..	..	605

The rainfall recorded for each quarter of 1930 and the quarterly averages up to 1930 deduced from all available records are as follows:—

RAINFALL—QUARTERLY RECORDS AND AVERAGES.

Basin or District.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.	
	Amount.	Average.	Amount.	Average.	Amount.	Average.	Amount.	Average.
	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.
Gleng and Wannon Rivers ..	3·18	3·63	3·85	7·81	12·05	9·02	9·57	5·94
Fitzroy, Eumeralla, and Merri Rivers ..	3·12	4·27	4·94	8·18	11·67	9·41	8·80	6·23
Hopkins River and Mt. Emu Creek ..	2·85	4·22	5·54	7·05	9·81	7·76	10·50	5·92
Mt. Elephant and Lake Corangamite ..	2·93	4·58	5·53	7·01	9·96	7·99	9·06	6·20
Cape Otway Forest ..	2·98	5·94	7·75	11·61	14·56	13·18	12·85	8·61
Moorabool and Barwon Rivers ..	3·02	4·75	6·21	6·41	7·09	6·75	9·58	5·99
Werribee and Marlbyrnong Rivers ..	3·58	5·14	6·44	5·95	5·60	6·20	10·59	6·08
Yarra River and Dandenong Creek ..	3·48	6·98	9·08	8·68	8·91	9·12	15·73	9·21
Koo-wee-rup Swamp ..	3·42	6·80	8·30	9·76	9·42	9·97	12·64	9·20
South Gippsland ..	3·07	7·84	10·25	10·72	8·77	11·14	14·89	9·08
Latrobe and Thomson Rivers ..	3·97	7·23	9·44	9·78	10·59	11·03	15·67	10·20
Macallister and Avon Rivers ..	3·81	6·35	7·85	5·49	5·27	5·89	10·83	6·61
Mitchell River ..	3·45	6·65	8·54	6·90	5·26	6·64	11·24	6·81
Tambo and Nicholson Rivers ..	3·43	6·97	8·99	6·52	5·12	6·61	12·88	7·33
Snowy River ..	3·37	8·03	10·56	8·96	5·52	8·91	12·29	8·42
Murray River ..	1·03	3·25	3·03	4·84	4·30	4·77	10·09	3·93
Mitta Mitta and Kiewa Rivers ..	1·77	6·08	7·40	8·88	8·91	10·29	12·95	7·93
Ovens River ..	1·14	5·45	6·87	9·76	10·23	10·78	16·46	7·45
Goulburn River ..	1·91	4·69	5·38	7·46	7·43	7·88	12·52	6·19
Campaspe River ..	2·06	4·07	5·40	6·85	6·40	6·93	12·78	4·97
Loddon River ..	2·41	3·60	4·20	5·86	5·96	6·11	9·73	4·47
Avoca River ..	1·80	2·87	3·12	5·07	5·55	5·31	9·98	3·71
Avon and Richardson Rivers ..	0·81	2·55	2·98	4·53	4·79	4·85	10·06	3·40
Eastern Wimmera ..	1·44	2·99	3·30	6·36	8·65	7·12	9·94	4·77
Western Wimmera ..	1·57	2·49	2·65	6·09	8·80	6·94	8·72	4·33
Mallee District ..	0·82	2·26	2·11	3·53	3·49	3·74	9·06	3·01
The whole State ..	2·19	4·41	5·25	6·73	7·31	7·27	11·03	5·74

The averages of the climatic elements for the seasons in Melbourne deduced from all available official records are given below :—

### AVERAGES OF CLIMATIC ELEMENTS IN MELBOURNE.

Meteorological Elements.	Spring.	Summer.	Autumn.	Winter.
Mean pressure of air in inches .. ..	29·970	29·922	30·080	30·077
Monthly range of pressure of air—Inches	0·891	0·765	0·817	0·975
Mean temperature of air in shade—°Fahr.	57·7	66·6	59·3	50·0
Mean daily range of temperature of air in shade—°Fahr. .. ..	18·6	21·1	17·3	13·9
Mean relative humidity. Saturation=100	66	60	69	75
Mean rainfall in inches .. ..	7·23	5·96	6·55	5·75
Mean number of days of rain .. ..	38	24	34	42
Mean amount of spontaneous evaporation in inches .. ..	10·28	17·34	7·91	3·67
Mean daily amount of cloudiness—Scale 0 to 10 .. ..	6·0	5·2	5·9	6·4
Mean number of days of fog .. ..	1	1	6	12

In the subjoined statement are shown the yearly averages of the climatic elements in Melbourne for 1930 and for the last 75 years, as well as the extremes between which the yearly average values of such elements have oscillated in the latter period :—

### YEARLY AVERAGES AND EXTREMES OF CLIMATIC ELEMENTS.

Meteorological Elements.	Yearly Averages and Extremes.			
	Year 1930.	Average for 75 Years.	Extremes between which the Yearly Average Values have oscillated in 75 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ..	30·064	30·012	30·106	29·945
Highest " " " " ..	30·705	30·607	30·770	30·488
Lowest " " " " ..	29·322	29·250	29·495	28·942
Range (inches) .. ..	1·383	1·358	1·719	1·104
Mean temperature of air in shade (°Fahr.) .. ..	59·5	58·4	59·9	57·3
Mean daily maximum .. (°Fahr.)	68·7	67·3	69·0	65·4
Mean daily minimum .. ..	50·3	49·6	51·2	47·2
Absolute maximum .. ..	103·5	105·0	111·2	96·6
Absolute minimum .. ..	33·8	30·9	34·2	27·0
Mean daily range .. ..	18·4	17·7	20·4	15·0
Absolute annual range .. ..	69·7	74·1	82·6	66·0
Solar Radiation (mean maxima) ,,	116·4	117·7	127·6	106·0
Terrestrial Radiation (mean minima) .. .. (°Fahr.)	45·1	43·9	46·8	39·5
Rainfall (in inches) .. ..	25·41	25·49	38·04	15·61
Number of wet days .. ..	145	138	171	102
Year's amount of free evaporation (in inches) .. ..	40·72	39·20	45·66	31·59
Percentage of humidity (saturation =100) .. ..	64	68	76	61
Cloudiness (scale 10 = overcast, 0 = clear) .. ..	5·8	5·9	6·4	4·8
Number of days of fog .. ..	15	20	48	5

## AGRICULTURAL RESEARCH AND EDUCATION.

**Department of Agriculture.** This Department is controlled by a Minister of the Crown, under whom there is a large staff of experts with the Director of Agriculture as permanent head. These officers are actively engaged in supervising all matters relating to the Agricultural, Pastoral, Fruit and Dairying Industries of the State, and in giving instructions to those engaged therein. The Department publishes a monthly journal.

**Melbourne University School of Agriculture.** Melbourne University has a well-equipped School of Agriculture, for the maintenance of which a special grant is provided by the State. This School affords opportunity for the training of students in science as applied to practical agriculture and kindred industries. The course occupies four years ; the first is devoted to pure science ; during the second the students are in residence at the State Research Farm, Werribee, engaged in practical farming with lectures on preparatory subjects. The remaining two years are devoted to a more specialized study of agriculture and allied subjects on a scientific basis.

**Government Experimental Farms.** The Department of Agriculture conducts research and experimental work at the State Research Farm at Werribee, the Rutherglen Experimental Farm, the Longerenong Agricultural College, and at the School of Primary Agriculture, Burnley. In addition, there are experiments and demonstrations conducted on 43 selected farms throughout the State.

At the State Research Farm, Werribee, the main work is the improvement of wheat and other cereals, grasses, clovers and various economic plants, investigations into the methods and problems relating to irrigated agriculture, and the breeding and feeding of dairy cattle, horses, sheep and poultry.

Work at the Rutherglen Farm, which serves as a research station for the North-East, includes various aspects of cereal growing and pasture improvement. It was here that the initial experiments were conducted (1911-1918) which resulted in the widespread adoption of the topdressing of pastures with phosphates. At the substation at Longerenong experiments are conducted on wheat and oat cultivation for Wimmera conditions. At the School of Primary Agriculture, Burnley, a Plant Research Laboratory mainly devoted to plant pathological and entomological research has been established. Extension research work on the breeding and selection of grasses and clovers is also carried on.

The Government experimental plots on selected farms embrace investigations into pasture improvement, grazing trials, the cultivation of wheat, oats, potatoes, maize, broom millet and vegetables, and horticultural problems.

The pasture experiments are largely responsible for recent rapid advances made in pasture improvement throughout Victoria, in which approximately 1,000,000 acres are now annually topdressed with an estimated increase of approximately 50 per cent. in carrying capacity.

**Experimental  
Farms and  
Agricultural  
Colleges.**

Various particulars relating to the State Experimental Farms and Agricultural Colleges are embodied in the next statement:—

### GOVERNMENT EXPERIMENTAL FARMS AND AGRICULTURAL COLLEGES, 1930.

Particulars.	Central Research Farm, Werribee.	Ruther- glen Farm, &c.	Dookle Agri- cultural College.	Longer- enong Agri- cultural College.	Burnley School of Primary Agricul- ture, &c.
	acres.	acres.	acres.	acres.	acres.
Area under crop .. .. .	830	410	991	1,287	13
Other arable land .. .. .	1,320	613	1,170	816	14
Balance of area .. .. .	61	330	3,794	283	6
Total area of farm .. .. .	2,211	1,353	5,955	2,386	33
	£	£	£	£	£
Value of produce for year .. .. .	9,641	2,189	8,000	3,975	578
<b>Receipts—</b>					
Government Grant .. .. .	12,036	4,350	..	..	2,500
Council of Agricultural Education Grant .. .. .	..	574	7,266	5,048	..
Other .. .. .	9,620	2,329	11,619	5,634	1,110
Total receipts .. .. .	21,656	7,253	18,885	10,682	3,610
Total expenditure .. .. .	11,284	7,253	18,885	10,682	3,517
Number of students .. .. .	7	7	86	51	85

**Inspection of  
Orchards,  
Nurseries, &c.**

The orchards, nurseries, and gardens of the State are systematically inspected by the officers of the Horticultural Division of the Department of Agriculture. Nurseries are inspected periodically, and action is taken in accordance with the

condition of the plants in relation to disease or freedom therefrom. Old, worn-out, and infected orchards are destroyed.

The fear of introducing the fruit-flies and diseases arising from other causes has necessitated a thorough examination of fruit from Queensland, New South Wales, and elsewhere.

Plants and cuttings coming from foreign parts are subject to strict examination and to fumigation where it is considered necessary.

**Forestry.** The State forests are controlled by a Commission of three, which was first appointed in 1919. The State has a wooded area of about 14,000,000 acres, of which 4,678,063 acres are set aside as permanent State forests and timber reserves.

To encourage the growth of softwoods or conifers in both State and private plantations three large nurseries have been established at Creswick, Macedon, and Broadford. In addition to providing trees for the plantations, the nurseries supply considerable numbers of plants at low rates to State schools, public bodies and private applicants. This has proved of great benefit to the community by fostering an interest in tree planting generally, and especially by encouraging farmers to plant in order to afford protection to their homesteads and to provide shade and shelter for their flocks and herds.

The Forestry Fund was established in 1918 by Act No. 2976, and made applicable only to expenditure on the improvements and reforestation of State forests and the development of forestry. In each year the Treasurer makes a grant of £40,000 out of the Consolidated Revenue to the Fund, and also half of the amount in excess of £80,000 received from royalties, leases, licences, and permits.

The revenue derived from forest sources during the financial year 1930-31 was £74,583, and the expenditure was £267,055—£125,466 of which was paid out of the Unemployment Relief Fund, £74,682 out of the Consolidated Revenue, £28,104 under the Forests Loan Act No. 3386, and the balance—£38,803—from the Forestry Fund. The balance at the credit of the Fund at 30th June, 1931, was £19,840.

It is estimated that the quantity of timber produced in the rough, from Crown Lands, in 1930-31 was 3,748,189 cubic feet. In addition, 186,667 tons measurement (9,333,350 cubic feet) of fuel timber was produced.

Particulars of sawn timber and firewood, from all sources, will be found on pages 387 and 388 of this volume.

**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 items of State expenditure from consolidated revenue by the responsible departments in connexion with these industries, and the amount of revenue received by them, during the last five years, are summarized in the appended table:—

**EXPENDITURE AND REVENUE CONNECTED WITH  
AGRICULTURE, 1926-27 to 1930-31.**

—	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<i>Expenditure.</i>	£	£	£	£	£
Administrative Branch ..	14,620	13,770	13,142	13,338	13,125
Agricultural Branch ..	31,270	38,018	36,330	37,400	33,327
Horticultural Branch ..	32,984	31,763	31,740	29,655	24,453
Stock and Dairy Branch ..	85,853	89,077	99,232	103,924	83,899
Maffra Beet Sugar Factory ..	55,891	89,941	73,288	90,553	135,650
Technical Agricultural and Viti- cultural Education, &c. ..	29,418	27,294	27,009	27,134	21,282
Development of Export Trade Rabbit and Vermin Extermina- tion .. ..	60,875	60,946	62,625	56,425	53,996
Advances to Settlers for losses by bush fires, floods, &c. ..	91,929	85,200	81,377	71,277	57,168
Grants to Agricultural and Horticultural Societies, &c... ..	32,987	21,150	14,004	5,241	3,918
Miscellaneous .. ..	675	675	675	500	..
	12,355	488	2,222	498	195
Total .. ..	448,857	458,322	441,644	435,945	427,013
<i>Revenue.</i>					
Maffra Beet Sugar Factory ..	79,435	58,900	84,183	81,694	138,929
Victoria Dock Cool Stores ..	32,455	28,205	52,558	34,486	45,382
Interest on and Repayment of Loans .. ..	19,229	15,334	22,087	13,763	27,809
All Other .. ..	52,985	50,432	58,908	54,478	59,015
Total .. ..	184,104	152,871	217,736	184,421	271,135

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, for relief to farmers on account of bush fires and flood losses, and for purchase of seed wheat and fodder. These advances are gradually being repaid.

The expenditure from Loan Funds in 1930-31 was £1,389,439—£296,088 having been expended on discharged soldiers' land settlement, £812,755 on closer settlement, £41,182 on wire netting, and £239,414 on cultivation advances.

## AGRICULTURE.

**Progress of cultivation.** All divisions of the State are suitable for cultivation. The area cultivated in 1930-31 was 9,306,289 acres, as compared with an annual average of 7,616,031 acres for the previous five seasons, 5,032,359 acres for the seasons 1905-15, and 3,547,111 acres for the seasons 1895-1905. At the beginning of the 1930-31 season, an appeal was made, by the Prime Minister of the Commonwealth and the Premiers of the various States, to farmers to substantially increase the area sown. Victorian wheat-growers responded to the appeal by sowing over 1,000,000 acres more than in the previous season. Notwithstanding the great increase in the area cultivated, the dairying and pastoral industries show a considerable expansion. This is evidenced by a comparison of the exports of the principal products to oversea countries in the year 1900 with the annual average in the last five seasons. The values have risen as follows:—Butter and cheese from £1,252,277 to £2,787,973; milk and cream from £5,455 to £1,046,975; and meats from £502,285 to £1,607,055.

The following table shows the progress of cultivation from period to period during the last 76 years:—

## ACREAGE CULTIVATED ANNUALLY, 1855 to 1931.

Period or Year (ended March).	Annual Average.		
	Crop. acres.	Fallow. acres.	Total Cultivation. acres.
1855-65 .. .. .	325,676	12,146	337,822
1865-75 .. .. .	624,377	57,274	681,651
1875-85 .. .. .	1,306,920	137,536	1,444,456
1885-95 .. .. .	2,109,326	364,282	2,473,608
1895-1905 .. .. .	3,022,914	524,197	3,547,111
1905-15 .. .. .	3,756,211	1,276,148	5,032,359
1915-25 .. .. .	4,594,244	1,852,145	6,446,389
1926 .. .. .	4,433,492	2,457,136	6,890,628
1927 .. .. .	4,735,173	2,569,021	7,304,194
1928 .. .. .	4,942,258	2,692,044	7,634,302
1929 .. .. .	5,505,651	2,683,462	8,189,113
1930 .. .. .	5,579,258	2,482,662	8,061,920
1931 .. .. .	6,715,660	2,590,629	9,306,289

**Principal Crops (Area, Production, and Average Yield).** The principal crops grown in the State are wheat, oats, barley, potatoes, and hay. The following tables contain particulars of the average annual area, production, and yield per acre for periods from 1855 to 1925, and for each of the last six seasons:—



ACREAGE, PRODUCTION, AND AVERAGE YIELD OF  
FIVE PRINCIPAL CROPS, 1855 TO 1931.

Period or Year (ended March).	Wheat.*	Oats.*	Barley.	Potatoes.	Hay.
AVERAGE ANNUAL AREA.					
	acres.	acres.	acres.	acres.	acres.
1855-65 ..	119,001	83,296	4,843	24,123	80,117
1865-75 ..	278,077	129,384	19,262	36,744	117,393
1875-85 ..	776,031	147,343	41,188	39,089	226,775
1885-95 ..	1,236,501	210,901	64,310	48,009	437,087
1895-1905 ..	1,898,280	340,957	52,829	45,243	540,472
1905-15 ..	2,190,336	390,642	60,378	56,272	848,587
1915-25 ..	2,633,945	428,372	84,205	61,195	1,122,978
1926 ..	2,513,494	437,696	103,395	63,369	1,013,613
1927 ..	2,915,315	303,424	88,896	66,185	1,080,993
1928 ..	3,064,172	529,392	76,768	77,649	908,804
1929 ..	3,718,904	347,021	75,451	68,412	1,005,063
1930 ..	3,566,135	630,234	97,678	58,789	865,015
1931 ..	4,600,200	371,024	87,518	67,590	1,277,398
AVERAGE ANNUAL PRODUCTION.					
	bushels.	bushels.	bushels.	tons.	tons.
1855-65 ..	2,198,874	2,068,648	103,575	62,723	111,806
1865-75 ..	4,385,814	2,636,747	390,337	111,800	153,852
1875-85 ..	8,593,308	3,297,468	799,938	135,614	276,771
1885-95 ..	12,268,905	4,649,393	1,187,007	170,905	547,092
1895-1905 ..	14,032,145	6,649,453	947,580	134,357	672,982
1905-15 ..	22,906,743	7,342,468	1,243,442	158,445	1,084,726
1915-25 ..	39,171,358	7,965,864	1,923,654	169,864	1,511,298
1926 ..	29,255,534	4,998,165	1,774,963	160,729	929,068
1927 ..	46,886,020	4,884,006	1,920,722	162,909	1,387,971
1928 ..	26,160,814	4,682,724	1,552,109	230,348	1,001,251
1929 ..	46,818,833	5,602,409	1,556,118	140,158	1,267,437
1930 ..	25,412,587	5,058,541	2,183,325	171,747	963,089
1931 ..	53,814,369	6,893,827	1,983,130	173,341	1,605,900
AVERAGE ANNUAL YIELD PER ACRE.					
	bushels.	bushels.	bushels.	tons.	tons.
1855-65 ..	18·48	24·83	21·39	2·60	1·40
1865-75 ..	15·77	20·38	20·27	3·04	1·31
1875-85 ..	11·07	22·38	19·42	3·47	1·22
1885-95 ..	9·92	22·05	18·46	3·56	1·21
1895-1905 ..	7·39	19·50	17·94	2·97	1·25
1905-15 ..	10·46	18·79	20·59	2·82	1·28
1915-25 ..	14·87	18·60	22·84	2·78	1·35
1926 ..	11·64	11·42	17·17	2·54	0·92
1927 ..	16·08	16·10	21·61	2·46	1·29
1928 ..	8·54	8·85	20·22	2·97	1·10
1929 ..	12·59	16·14	20·62	2·05	1·26
1930 ..	7·13	8·03	22·35	2·92	1·11
1931 ..	11·70	18·58	22·66	2·56	1·26

\* For grain.

The area and produce of the principal crops per head of population are given in the next table for each of the last five years :—

AREA AND PRODUCTION OF FIVE PRINCIPAL CROPS PER HEAD OF POPULATION, 1926-27 to 1930-31.

Year ended March—			Wheat.	Oats.	Barley.	Potatoes.	Hay.
			Area per Head of Population.				
			acres.	acres.	acres.	acres.	acres.
1927	..	..	1·70	·18	·05	·04	·63
1928	..	..	1·76	·30	·04	·04	·52
1929	..	..	2·11	·20	·04	·04	·57
1930	..	..	2·01	·35	·05	·03	·49
1931	..	..	2·59	·21	·05	·04	·72
			Produce per Head of Population.				
			bushels.	bushels.	bushels.	tons.	tons.
1927	..	..	27·39	2·85	1·12	·10	·81
1928	..	..	15·02	2·69	89	·13	·57
1929	..	..	26·59	3·18	88	·08	·72
1930	..	..	14·30	2·85	1·23	·10	·54
1931	..	..	30·28	3·88	1·12	·10	·90

Except in the three seasons 1895-96, 1902-03, and 1914-15, the wheat produced during each year since 1870 has been more than sufficient to supply home consumption.

The following table gives the annual value of each of the five principal crops, based upon prices realized upon farms, also the value of each crop per acre for each of the last five years :—

## VALUES OF FIVE PRINCIPAL CROPS.

Year ended March—	Annual Value of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	£	£	£	£	£
1927 .. ..	9,546,812	653,291	295,739	671,673	4,719,925
1928 .. ..	4,724,369	688,804	297,327	388,537	3,683,272
1929 .. ..	8,364,675	627,521	222,504	1,189,349	3,502,862
1930 .. ..	3,559,063	554,547	300,202	691,273	2,998,282
1931 .. ..	3,600,190	340,673	154,853	328,305	2,369,865
	Annual Value Per Acre of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1927 .. ..	3 5 6	2 3 1	3 6 6	10 3 0	4 7 4
1928 .. ..	1 10 10	1 6 0	3 17 6	5 0 1	4 1 1
1929 .. ..	2 5 0	1 16 2	2 19 0	17 7 8	3 9 8
1930 .. ..	1 0 0	0 17 7	3 1 6	11 15 2	3 9 4
1931 .. ..	0 15 8	0 18 4	1 15 5	4 17 2	1 17 1

The value of the five principal crops was £6,793,886 in 1930-31, as against £8,103,367 in 1929-30, £13,906,911 in 1928-29, £9,782,309 in 1927-28, and £15,887,440 in 1926-27.

The principal wheat growing areas are the Wimmera, Mallee, and Northern districts. Although other districts provide only small proportions of the total area they are not to be regarded as unsuitable for wheat growing, as their average

Wheat  
growing in  
counties.

yield per acre is usually greater than in the areas mentioned. The production of wheat for grain in different counties for each of the last three seasons is shown in the following table :—

**WHEAT YIELDS IN COUNTIES FOR THE LAST THREE SEASONS.**

Districts and Counties.	Year ended March.								
	Area.			Produce.			Average per Acre.		
	1929.	1930.	1931.	1929.	1930.	1931.	1929.	1930.	1931.
	acres.	acres.	acres.	bushels.	bushels.	bushels.	bush.	bush.	bush.
<b>Central—</b>									
Bourke ..	17,569	19,142	20,597	187,705	465,098	311,968	10·68	24·30	15·15
Grant ..	28,473	27,679	33,747	334,394	661,521	597,817	11·74	23·90	17·71
Mornington ..	9,796	5,696	7,224	241,735	132,083	120,773	24·68	23·19	16·72
Evelyn ..	484	277	192	5,906	5,880	2,848	12·20	21·23	14·83
<b>Total ..</b>	<b>56,322</b>	<b>52,794</b>	<b>61,760</b>	<b>769,740</b>	<b>1,264,582</b>	<b>1,033,406</b>	<b>13·67</b>	<b>23·95</b>	<b>16·73</b>
<b>North-Central—</b>									
Anglesey ..	1,233	1,187	2,002	21,712	21,185	41,534	17·61	17·85	20·75
Dalhousie ..	2,778	2,626	2,399	44,360	51,658	37,552	15·97	19·67	15·65
Talbot ..	24,497	24,713	31,072	531,674	424,746	654,017	21·70	17·19	21·05
<b>Total ..</b>	<b>28,508</b>	<b>28,526</b>	<b>35,473</b>	<b>597,746</b>	<b>497,589</b>	<b>733,103</b>	<b>20·97</b>	<b>17·44</b>	<b>20·67</b>
<b>Western—</b>									
Grenville ..	14,393	17,330	21,704	222,574	437,147	404,672	15·46	25·22	18·65
Polwarth ..	192	427	434	3,855	12,792	7,375	20·08	29·06	16·99
Heytesbury ..	129	47	13	2,882	1,059	98	22·34	23·17	7·54
Hampden ..	15,208	18,062	23,624	304,866	492,035	497,173	20·05	27·24	21·05
Ripon ..	35,315	43,712	52,240	858,598	1,364,893	1,220,062	24·31	31·22	23·35
Villeirs ..	2,286	2,502	3,116	47,695	63,647	53,734	20·86	25·44	17·24
Normanby ..	1,689	1,769	3,196	34,227	38,893	42,998	20·26	21·70	13·46
Dundas ..	3,227	4,322	6,519	62,232	88,917	103,476	19·28	20·57	15·17
Follett ..	456	205	679	7,266	4,060	8,500	16·00	19·80	12·52
<b>Total ..</b>	<b>72,895</b>	<b>88,376</b>	<b>111,825</b>	<b>1,544,220</b>	<b>2,502,973</b>	<b>2,338,087</b>	<b>21·18</b>	<b>28·32</b>	<b>20·91</b>
<b>Wimmera—</b>									
Lowan ..	244,527	225,450	268,979	4,987,673	4,117,933	5,153,926	20·40	18·27	19·16
Borong ..	535,993	458,327	661,666	9,733,168	3,312,575	9,090,659	18·16	7·23	13·74
Kara Kara ..	169,932	159,996	233,882	2,942,927	951,862	2,419,685	17·32	5·95	10·35
<b>Total ..</b>	<b>950,452</b>	<b>843,773</b>	<b>1,164,527</b>	<b>17,663,768</b>	<b>8,382,370</b>	<b>16,664,270</b>	<b>18·58</b>	<b>9·93</b>	<b>14·31</b>
<b>Mallee—</b>									
Millewa ..	182,497	222,320	268,975	626,812	5,460	2,975,594	3·43	0·02	11·06
Weeah ..	229,109	240,707	298,159	1,893,443	598,709	3,012,842	8·26	2·49	10·10
Karkaroc ..	848,101	870,597	1,117,592	6,608,066	1,963,605	9,006,939	7·79	2·26	8·06
Tatchera ..	532,496	494,448	672,561	4,706,895	1,136,326	5,236,513	8·84	2·30	7·79
<b>Total ..</b>	<b>1,792,203</b>	<b>1,828,072</b>	<b>2,357,287</b>	<b>13,835,216</b>	<b>3,704,100</b>	<b>20,231,888</b>	<b>7·72</b>	<b>2·03</b>	<b>8·58</b>

WHEAT YIELDS IN COUNTIES FOR THE LAST THREE  
SEASONS—*continued.*

Districts and Counties.	Year ended March.								
	Area.			Produce.			Average per Acre.		
	1929.	1930.	1931.	1929.	1930.	1931.	1929.	1930.	1931.
	acres.	acres.	acres.	bushels.	bushels.	bushels.	bush.	bush.	bush.
<b>Northern—</b>									
Gunbower ..	50,859	38,569	40,950	500,229	278,260	316,755	9·84	7·21	7·74
Gladstone ..	151,151	128,972	188,422	2,303,107	722,520	2,626,574	15·24	5·60	13·94
Bendigo ..	160,727	143,679	167,123	2,516,889	1,216,389	2,556,167	15·66	8·47	15·30
Rodney ..	98,644	89,706	103,900	1,643,880	1,170,328	1,629,794	16·66	13·05	15·69
Motra ..	282,211	257,234	231,962	4,166,493	4,156,583	4,168,011	14·76	16·16	14·28
<b>Total ..</b>	<b>743,592</b>	<b>658,160</b>	<b>792,357</b>	<b>11,130,598</b>	<b>7,544,080</b>	<b>11,297,801</b>	<b>14·97</b>	<b>11·46</b>	<b>14·26</b>
<b>North-Eastern—</b>									
Delatite ..	9,091	7,987	9,797	137,554	191,098	181,746	15·13	23·93	13·55
Bogong ..	37,698	32,846	33,270	630,317	732,952	806,875	16·72	22·31	21·08
Terangra ..	281	300	279	4,469	7,606	4,582	15·90	25·35	16·42
Wonnangatta ..	11	..	..	240	..	..	21·82	..	..
<b>Total ..</b>	<b>47,081</b>	<b>41,133</b>	<b>48,346</b>	<b>772,580</b>	<b>931,656</b>	<b>993,203</b>	<b>16·41</b>	<b>22·65</b>	<b>20·54</b>
<b>Gippsland—</b>									
Croajingolong ..	5	22	17	70	323	296	14·00	14·68	17·41
Tambo ..	493	312	537	8,533	9,464	7,534	17·31	30·33	14·03
Dargo ..	1,562	1,324	1,731	30,391	39,068	35,769	19·46	29·51	20·66
Tanjil ..	21,109	21,191	23,677	380,310	488,018	431,677	18·02	23·03	18·23
Bulla Bull ..	4,682	2,462	2,663	85,661	48,364	47,835	18·30	19·72	17·96
<b>Total ..</b>	<b>27,851</b>	<b>25,301</b>	<b>28,625</b>	<b>504,965</b>	<b>535,237</b>	<b>523,111</b>	<b>18·13</b>	<b>23·18</b>	<b>18·27</b>
<b>Total (State)</b>	<b>3,718,904</b>	<b>3,566,135</b>	<b>4,600,200</b>	<b>46,818,833</b>	<b>25,412,587</b>	<b>53,814,369</b>	<b>12·59</b>	<b>7·13</b>	<b>11·70</b>

The production of wheat in the other Australian States in 1930-31 was as follows:—New South Wales, 65,811,000 bushels; South Australia, 34,871,526 bushels; Western Australia, 52,891,492 bushels; Queensland, 4,755,282 bushels; and Tasmania, 455,000 bushels. The total production for the Commonwealth was 212,628,669 bushels.

**Classification of Wheat Areas and Production.**

For the season 1930-31, analyses of the number of acres producing a given yield of wheat per acre, and the acreage according to area groups, were made for the several districts of the State. Detailed particulars may be obtained on application to the Government Statist. Summarized classifications are shown in the following tables:—

**CLASSIFICATION OF VICTORIAN WHEAT AREAS SHOWING ACREAGE, ACCORDING TO  
PRODUCTION PER ACRE, 1930-31.**

District.		Under 3 bushels.	3 and under 6 bushels.	6 and under 9 bushels.	9 and under 12 bushels.	12 and under 15 bushels.	15 and under 18 bushels.	18 and under 21 bushels.	21 and under 27 bushels.	27 and under 33 bushels.	33 bushels and over.	Total.	Average District Yield.
Central	.. acres	973	1,060	2,470	5,568	8,864	12,469	11,164	14,438	4,299	455	61,760	16.73
	.. per cent.	1.57	1.72	4.00	9.01	14.35	20.19	18.08	23.38	6.96	.74		
North-Central	.. acres	166	319	829	1,037	1,487	4,653	6,007	13,682	6,536	757	35,473	20.67
	.. per cent.	.47	.90	2.34	2.92	4.19	13.12	16.93	38.57	18.43	2.13		
Western	.. acres	849	1,811	2,142	4,496	6,897	12,196	15,726	40,874	23,194	3,640	111,825	20.91
	.. per cent.	.76	1.62	1.92	4.02	6.17	10.91	14.06	36.55	20.74	3.25		
Wimmera	.. acres	48,898	71,930	141,598	161,798	168,009	156,479	137,795	220,850	54,610	2,560	1,164,527	14.31
	.. per cent.	4.20	6.18	12.16	13.89	14.43	13.44	11.83	18.96	4.69	.22		
Mallee	.. acres	135,523	394,979	657,075	583,022	387,899	155,670	35,212	6,929	958	20	2,357,287	8.58
	.. per cent.	5.75	16.76	27.88	24.73	16.46	6.60	1.49	.29	.04	.00		
Northern	.. acres	6,819	39,016	79,327	125,676	141,260	152,214	123,515	104,758	17,921	1,851	792,357	14.26
	.. per cent.	.86	4.93	10.01	15.86	17.83	19.21	15.59	13.22	2.26	.23		
North-Eastern	.. acres	118	220	394	1,301	3,220	6,049	11,260	18,042	6,097	1,645	48,346	20.54
	.. per cent.	.24	.46	.82	2.69	6.66	12.51	23.29	37.32	12.61	3.40		
Gippsland	.. acres	715	449	430	2,379	3,968	4,491	5,311	7,273	3,181	428	28,625	18.27
	.. per cent.	2.50	1.57	1.50	8.31	13.86	15.69	18.55	25.41	11.11	1.50		
State	.. acres	194,061	509,784	884,265	885,277	721,604	504,221	345,990	426,846	116,796	11,356	4,600,200	11.70
	.. per cent.	4.22	11.08	19.22	19.24	15.69	10.96	7.52	9.28	2.54	.25	100.00	
	.. number of growers	549	1,394	2,562	3,003	2,830	2,743	2,358	3,021	1,004	158	19,622	..
Percentage of Total Pro- duction .. ..		.63	4.20	11.60	15.97	16.80	14.40	11.83	17.81	6.03	.73	100.00	..

Production.

CLASSIFICATION OF VICTORIAN WHEAT AREAS, IN AREA GROUPS, 1930-31.

Area Groups.			Districts.							State.	Average Yield for Group (bushels).	
			Central.	North-Central.	Western.	Wimmera.	Mallee.	Northern.	North-Eastern.			Gippsland.
1 and under	50	{ acres per cent.	16,149 26·15	7,566 21·33	11,464 25·25	10,445 ·89	2,332 ·10	29,139 3·67	10,604 21·94	6,282 21·95	93,981 2·05	16·26
50	100	{ acres per cent.	14,601 23·64	6,051 17·06	16,157 14·45	22,698 1·95	4,137 ·18	74,213 9·37	11,253 23·23	5,943 20·76	155,053 3·37	16·42
100	200	{ acres per cent.	16,298 26·39	9,268 26·13	30,234 27·04	114,123 9·80	40,835 1·73	230,997 29·15	12,891 26·66	7,355 25·69	462,006 10·04	16·08
200	321	{ acres per cent.	10,035 16·24	6,833 19·25	29,332 26·23	286,414 24·60	413,934 17·56	216,182 27·29	9,796 20·26	5,340 18·66	977,866 21·26	13·12
321	400	{ acres per cent.	1,060 1·72	1,085 3·06	7,098 6·35	96,261 8·27	258,371 10·96	48,070 6·07	1,413 2·92	725 2·53	414,083 9·00	11·46
400	500	{ acres per cent.	1,690 2·74	1,200 3·38	7,145 6·39	155,102 13·32	498,642 21·15	67,078 8·47	1,291 2·67	810 2·83	732,958 15·93	10·43
500	600	{ acres per cent.	599 ·97	1,000 2·82	2,630 2·35	129,152 11·09	340,223 14·43	42,450 5·36	1,098 2·27	550 1·92	517,702 11·25	10·65
600	700	{ acres per cent.	600 ·97	670 1·89	2,400 2·15	93,232 8·01	221,064 9·37	24,960 3·14	..	..	342,926 7·46	9·95
700	800	{ acres per cent.	728 1·18	..	3,210 2·87	64,134 5·50	129,195 5·48	21,610 2·73	..	720 2·52	219,597 4·77	9·78
800	1,000	{ acres per cent.	..	800 2·26	955 ·85	84,501 7·26	186,585 7·92	11,833 1·50	..	900 3·14	285,574 6·21	9·07
1,000	2,000	{ acres per cent.	..	1,000 2·82	1,200 1·07	94,060 8·07	214,969 9·12	25,825 3·25	..	..	337,054 7·33	8·83
2,000	4,001	{ acres per cent.	..	..	..	14,400 1·24	47,000 2·00	..	..	..	61,400 1·33	7·25
Area in District	..	acres	61,760	35,473	111,825	1,164,527	2,357,287	792,357	48,346	23,625	4,600,200	11·70
Percentage to Total Area for State	..	..	1·34	·77	2·43	25·42	51·24	17·23	1·05	·62	100·00	..
Number of Growers	..	..	1,311	644	1,334	4,024	5,498	5,354	901	561	19,622	..

Varieties of Wheat, etc., and Manure used.

Australian wheat is noted for its hard, white, and dry qualities, and, on account of the whiteness of the flour made therefrom, it is much sought after by oversea millers for the purpose of mixing with other wheats.

Enquiries in regard to the area sown under each variety of wheat, the quantity of seed sown, and the manure used, per acre, were made with the view of enabling the Agricultural Department to advise growers as to the most suitable varieties and the quantities to use in a particular district.

Analyses of the replies of the growers (approximately 70 per cent. replied) are given in the appended tables :—

VARIETIES OF WHEAT SOWN IN VICTORIA.

Variety.	1928-29.		1929-30.		1930-31.		1931-32.	
	Relative Order of Importance.	Percentage (according to acreage) of total area in the State.	Relative Order of Importance.	Percentage (according to acreage) of total area in the State.	Relative Order of Importance.	Percentage (according to acreage) of total area in the State.	Relative Order of Importance.	Percentage (according to acreage) of total area in the State.
Free Gallipoli ..	2	10.56	1	22.20	1	34.53	1	39.01
Ranee ..	3	10.10	3	12.74	3	13.13	2	16.70
Federation ..	1	33.41	2	19.80	2	13.93	3	7.23
Sepoy ..	17	.88	8	2.95	4	5.66	4	6.76
Nabawa ..	19	.47	16	1.34	10	1.85	5	4.49
Major ..	6	4.52	5	5.38	5	4.56	6	3.60
Nizam ..	7	3.28	7	3.69	8	3.27	7	3.11
Currawa ..	4	7.76	4	7.02	6	4.36	8	2.81
Penny ..	5	4.58	6	4.22	7	3.68	9	2.16
Rajah ..	8	2.95	10	2.44	11	1.65	10	2.01
Gluyas ..	12	2.05	14	1.61	15	.92	11	1.32
Joffre ..	10	2.69	9	2.48	9	1.95	12	1.28
Wannon ..	11	2.19	13	1.63	14	.99	13	1.09
Bald Early ..	9	2.80	12	1.75	13	1.13	14	.95
Ghurka ..	31	.13	21	.29	18	.60	15	.90
Waratah ..	18	.47	20	.48	20	.53	16	.84
Mac's White ..	15	1.42	15	1.57	17	.74	17	.80
Huf's Imperial ..	14	1.85	17	1.13	16	.78	18	.78
Yandilla King ..	13	2.00	11	1.90	12	1.37	19	.69
Strongbolt ..	27	.15	19	.49	21	.46	20	.49
Turvey ..	16	1.30	18	.94	19	.59	21	.41
Bena ..	25	.18	22	.29	22	.39	22	.33
Pusa ..	52	.03	35	.09	45	.05	23	.12
Union ..	36	.09	38	.07	30	.10	24	.11
Warden ..	24	.20	30	.13	28	.13	25	.10
Other Varieties ..	..	3.94	..	3.37	..	2.65	..	1.91
..	..	100.00	..	100.00	..	100.00	..	100.00

Approximately 100 varieties of wheat were sown. The number of these which were tried in the Mallee greatly exceeded the number experimented with in any other district. A more extended list showing the area and percentage of each variety, and the ten principal varieties grown in each district, can be obtained on application to the Government Statist.



**ESTIMATED PERCENTAGE OF TOTAL AREA UNDER WHEAT,  
AND SEED AND MANURE USED, 1931-32.**

District.	Percentage (according to acreage) of total area in the State.	Weight per acre of—	
		Seed Sown.	Manure Used.
	per cent.	lbs.	lbs.
Central .. .. .	1·09	89	93
North Central .. .. .	0·66	88	83
Western .. .. .	2·57	86	119
Wimmera .. .. .	25·46	71	66
Mallee .. .. .	54·90	55	48
Northern .. .. .	13·69	69	71
North Eastern .. .. .	1·01	76	85
Gippsland .. .. .	0·62	84	82
Total State .. .. .	100·00	63	59

The rate of sowing, in the principal wheat growing counties, ranged from 44 lbs. of seed per acre in the County of Millewa to 88 lbs. in Ripon. Manure used varied from 38 lbs. per acre in Millewa to 125 lbs. in Ripon.

The weight of an imperial bushel of wheat is 60 lbs., but the actual weight of a bushel of Victorian wheat of the fair average quality standard annually fixed by the Chamber of Commerce was 61.225 lbs. on the average of the last ten years. In 1931, the weight of a bushel (f.a.q.) was fixed at 58½ lbs., and this was the only time since 1872 (59 lbs.) that the weight of a bushel of Victorian wheat had been lower than that of an imperial bushel.

It is estimated that about 14,000,000 bushels of wheat are required locally for food and seed. The stocks of wheat and flour in the State at 31st October in each of the last five years were as follows:—

**WHEAT AND FLOUR ON HAND, 1927 to 1931.**

At 31st October—	Quantity in Bushels.		
	Wheat.	Flour (equivalent in Wheat).	Total.
1927 .. .. .	3,595,800	1,406,600	5,002,400
1928 .. .. .	2,995,000	995,400	3,990,400
1929 .. .. .	4,362,300	1,090,100	5,452,400
1930 .. .. .	6,126,500	1,305,400	7,431,900
1931 .. .. .	6,800,694	1,040,463	7,841,157

In addition to the area under oats harvested for grain last season as shown in the table on page 332, there were 1,049,019 acres cut for hay, so that the total area sown with oats was 1,420,043 acres. Enquiries in regard to the different kinds of oats

sown for the 1931-32 season showed that, of those growers who supplied the information, 87 per cent. planted principally Algerian, and 4 per cent. Mortgage Lifter oats, and 2 per cent. Mulga.

The area under barley in 1930-31 was 87,518 acres, of which 60,800 were under malting, and 26,718 under other barley. The figures in the subjoined table show the acreage, production, and yield per acre, for each of the last five years :—

BARLEY PRODUCTION, 1926-27 to 1930-31.

Year ended March—	Area under Crop.		Produce.		Average per Acre.		
	Malting.	Other.	Malting.	Other.	Malting.	Other.	Total.
	acres.	acres.	bushels.	bushels.	bushels.	bushels.	bushels.
1927 ..	59,935	28,961	1,186,733	733,989	19·80	25·34	21·61
1928 ..	50,005	26,763	866,213	685,896	17·32	25·63	20·22
1929 ..	49,345	26,106	945,865	610,253	19·17	23·38	20·62
1930 ..	65,740	31,938	1,378,022	805,303	20·96	25·21	22·35
1931 ..	60,800	26,718	1,401,306	581,824	23·05	21·78	22·66

During 1930-31, 1,425,765 bushels of barley were used locally in the production of 1,418,305 bushels of malt.

Of the total area under hay in 1931, as shown in the table on page 332, 1,049,019 acres under oats produced 1,322,120 tons, 188,360 acres under wheat produced 221,782 tons, and 40,019 acres under lucerne and other crops produced 61,998 tons; the yields per acre of these varieties of hay were 1.26, 1.18, and 1.55 tons respectively. The quantity of straw returned for the season 1930-31 was 25,737 tons.

Information is obtained direct from growers in regard to the prices of the leading agricultural products. The following table gives the average price of each product (value to the producer) for each of the last five seasons :—

PRICES OF AGRICULTURAL PRODUCTS, 1926-27 to 1930-31.

Average Prices realized for Season.	Wheat.	Oats.	Barley.		Hay.	Potatoes.	
			Malting.	Other.		Early Crop.	Main Crop (after March).
			per bushel. s. d.	per bushel. s. d.		per bushel. s. d.	per bushel. s. d.
1926-27 ..	3 9½	2 5½	3 0	2 6½	64 9	170 0	69 0
1927-28 ..	3 1½	2 5½	4 0½	3 1½	70 0	84 0	28 0
1928-29 ..	3 3	2 0	3 0	2 1½	52 0	158 0	169 0
1929-30 ..	2 3½	1 9½	2 9½	2 3	59 0	143 0	71 0
1930-31 ..	1 1	0 10½	1 7½	0 11½	27 5	79 0	30 0

NOTE.—The above prices represent the f.o.b. values, less the following deductions :—Freight and handling charges, and cost of bags, seed, and manure.

In the foregoing table, the value of agricultural products to the producer is given, after making allowance for certain deductions. The metropolitan (or seaboard) prices for the principal agricultural and pastoral products are shown in the following statement:—

**METROPOLITAN PRICES OF AGRICULTURAL AND PASTORAL PRODUCTS, 1926-27 TO 1930-31.**

Average Prices realized for Season—	Wheat.	Oats.	Barley.		Hay.	Potatoes.	Wool.		Butter.
			Malting.	Other.					
							per bushel.	per bushel.	
1926-27 ..	5 3	3 6	4 2	3 7	90 0	150 0	1 4.45	..	
1927-28 ..	5 4	4 2	5 3	4 2	92 6	82 0	1 8.56	..	
1928-29 ..	4 9	3 1	4 2	3 2½	75 0	217 0	1 5.37	1 8.66	
1929-30 ..	4 4	3 4	3 9	3 1	85 0	115 0	0 10.30	1 6.35	
1930-31 ..	2 6	1 9½	2 6	1 9	53 0	72 0	0 8.65	1 2.43	

The area under other than principal crops and the production since March, 1928, are shown in the subjoined table:—

**OTHER THAN PRINCIPAL CROPS, 1928-29 TO 1930-31.**

Crop.	1928-29.		1929-30.		1930-31.	
	Area.	Production.	Area.	Production.	Area.	Production.
Maize, for grain	16,077	bushels. 679,810	17,840	bushels 533,719	16,227	bushels. 692,896
Rye .. ..	711	10,994	854	11,068	959	10,199
Peas .. ..	6,743	108,607	8,438	193,640	7,724	153,124
Mangel-wurzel ..	429	5,301	486	5,539	360	5,167
Beet, Carrots, Parsnips and Turnips	243	2,079	243	1,798	248	3,003
Onions .. ..	7,673	29,700	7,828	43,646	6,286	41,193
Green Forage ..	107,351	..	169,253	..	126,347	..
Grass and Clover Seeds .. ..	1,486	bushels. 20,844	1,670	bushels. 25,696	2,000	bushels. 28,744
Hops .. ..	281	cwt. 3,676	201	cwt. 3,713	185	cwt. 2,660
Tobacco .. ..	1,317	9,375	1,822	11,353	2,650	†
Vines—Grapes	41,565	4,117,757	40,594	4,040,230	38,720	2,639,902
Flax .. ..	109	cwt. 826 seed 236 fibre 239 tow	703	cwt. 2,840 seed 760 fibre 980 tow	1,216	cwt. 3,583 seed § 1,760 fibre § 1,800 tow §
Gardens and Orchards .. ..	79,322	..	80,820	..	79,490	..
Minor Crops* .. ..	8,863	..	9,645	..	9,321	..
Land in Fallow	2,683,462	..	2,482,662	..	2,590,629	..
Lucerne † .. ..	127,175	..	138,781	..	133,610	..
Artificial Grasses †	1,027,543	..	1,002,376	..	1,101,002	..

\* For details see page 347.

† Not available.

‡ Not cut for seed or hay.

§ 357 tons of undressed flaxen straw awaiting treatment.

**Maize.** The area under maize for grain in 1930-31 was 16,227 acres, and the production was 692,896 bushels, which represented a yield of 42·70 bushels per acre. Of the total production for last season 91 per cent. was obtained from the Gippsland district. The area, total production, and produce per acre are given in the next table for each of the last five seasons.

MAIZE PRODUCTION, 1927 to 1931.

Period or Year (ending in June)	Annual Average.		
	Area under Maize for grain.	Production.	Produce per Acre.
	acres.	bushels.	bushels.
1927 .. .. .	20,046	6,5407	34·19
1928 .. .. .	17,645	757,780	42·95
1929 .. .. .	16,077	679,810	42·28
1930 .. .. .	17,640	533,719	30·26
1931 .. .. .	16,227	392,896	42·70

On the average of the last five seasons the yield per acre was 38·22 bushels, as against 45·0 in 1910-15, and 65·4 in 1900-05. The relatively light yield per acre for the latest five-year period was probably due to the cultivation of new areas, which are less fertile than the rich river flats upon which this cereal was grown exclusively in earlier periods.

**Onions.** Onions are grown in nearly every county south of the Dividing Range. The returns for last season show that in Villiers, the yield was 9,878 tons from 1,355 acres; in Grenville, 8,206 tons from 1,398 acres; in Polwarth, 5,950 tons from 875 acres; in Grant, 4,565 tons from 858 acres; in Bourke, 4,336 tons from 658 acres; in Buln Buln, 3,959 tons from 535 acres; and in Mornington, 3,283 tons from 465 acres. The following statement shows the area and yield for each of the last five years:—

ONION PRODUCTION, 1926-27 to 1930-31.

Year ended March—	Area.	Produce.
	acres.	tons.
1927 .. .. .	8,471	43,928
1928 .. .. .	7,659	32,936
1929 .. .. .	7,673	29,700
1930 .. .. .	7,828	43,645
1931 .. .. .	6,285	41,193

The value of onions grown was £52,018 in 1930-31, as compared with £74,704 in 1929-30, £187,233 in 1928-29, £188,186 in 1927-28, and £110,839 in 1926-27.

**Tobacco** Tobacco production reached its maximum in 1880-81, when 17,333 cwt. of dry leaf was produced. Subsequent years were marked by great variations in area and produce, but during the last three years a considerable improvement in the acreage planted has taken place—that for 1930-31 being the largest recorded in the history of the State. The area devoted to this product last

year was 2,650 acres, of which 1,257 were in Delatite, 1,042 in Bogong, 148 in Moira, and 89 in Borung. Particulars relating to the cultivation of tobacco for each of the last five years are as follows :—

#### TOBACCO PRODUCTION, 1926-27 to 1930-31.

Year ended June—					Area.	Produce.
					acres.	cwt. (dry).
1927	..	..	..	..	1,154	3,454
1928	..	..	..	..	1,176	9,055
1929	..	..	..	..	1,317	9,375
1930	..	..	..	..	1,822	11,353
1931	..	..	..	..	2,650	*

\* Not available.

**Vine Production.** The area under vines and the number of growers have shown a fairly large increase over the last fifteen years.

Vineyards are distributed fairly well over the State, and there are certain districts where the principal industries are connected with vine-growing. The Shire of Mildura produced last season 2,221,516 cwt. of grapes; Swan Hill, 220,935 cwt.; and Rutherglen, 123,672 cwt. At Mildura the crop is principally dried for raisins and currants. The results of five years' operations are given below :—

#### VINE PRODUCTION, 1927 to 1931.

Year ended June—	Number of Growers.	Area.		Produce.					
		Bearing.	Not Bearing.	Grapes gathered.	Wine made.	Dried Produce Made.			
						Raisins.		Currants.	
						Lexias.	Sultanas.		
		acres.	acres.	cwt.	gallons.	cwt.	cwt.	cwt.	
1927	..	2,832	37,340	8,272	3,587,224	2,346,314	75,296	582,418	135,464
1928	..	2,774	37,974	3,014	2,275,770	2,353,890	75,672	326,649	73,101
1929	..	2,746	38,689	2,876	4,117,757	1,942,701	94,520	676,599	189,985
1930	..	2,701	38,327	2,267	4,040,230	1,363,575	95,255	688,399	178,226
1931	..	2,610	37,528	1,192	2,639,902	1,254,615	84,210	363,336	156,689

Of the total quantity of grapes gathered in 1931, it is estimated that 188,835 cwt. were used for making wine and spirits, 2,375,087 cwt. for raisins and currants, and 75,980 cwt. for table consumption and export.

Of the dried fruit made, 79,893 cwt. of lexias, 325,845 cwt. of sultanas, and 144,500 cwt. of currants were made in the Mildura shire, and 4,222 cwt. of lexias, 36,851 cwt. of sultanas, and 11,170 cwt. of currants were made in the Swan Hill shire.

Raisins and currants are produced in Victoria upon a scale far in excess of the State's requirements. During 1930-31 the following quantities were exported oversea :—Sultanas, 552,255 cwt., value

at £1,149,782; lexias, 47,507 cwt., valued at £77,349; raisins, other, 395 cwt., valued at £1,456; and currants, 141,227 cwt., valued at £288,114.

The area of orchards growing fruit for sale in 1930-31 —77,840 acres—showed a decrease of 1,160 acres as compared with the area for the previous year. Orchards are distributed over the whole State, and the counties having the largest areas in the season 1930-31 were as follows:—Mornington, 14,693 acres; Bourke, 11,574 acres; Evelyn, 10,274 acres; Rodney, 10,119 acres; Moira, 8,764 acres; Talbot, 4,059 acres; and Bendigo, 2,982 acres. Details of the produce from such orchards in the last five years are given in the subjoined statement:—

ORCHARDS GROWING FRUIT FOR SALE,  
1926-27 TO 1930-31.

Year ended March—	Number of Fruit-growers.	Area of Gardens and Orchards.	LARGE FRUITS GATHERED.					
			Apples.	Pears.	Quinces.	Plums.	Prunes.	Cherries.
			bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1927	7,425	81,301	543,106	500,905	42,695	172,724	37,060	29,817
1928	7,209	79,293	3,712,350	1,053,481	115,606	231,728	79,481	47,795
1929	7,119	77,622	626,294	772,216	76,868	165,658	76,237	51,765
1930	7,241	79,000	2,779,107	1,166,418	84,894	204,583	86,298	46,060
1931	7,057	77,840	1,515,419	707,145	66,544	203,062	94,578	46,256

Large Fruits Gathered—continued.

	Peaches.	Apricots.	Oranges.	Lemons.	Figs.	Nectarines.	Passion.	Other.
	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
	1927	925,353	440,423	276,407	112,570	16,474	9,274	22,289
1928	1,350,701	416,277	378,101	162,860	18,125	23,142	22,072	3,608
1929	1,043,840	468,536	354,817	137,634	18,776	12,451	38,105	1,656
1930	1,191,253	447,131	385,106	114,081	17,898	19,210	13,063	6,313
1931	1,028,493	305,717	516,133	134,479	16,414	14,349	27,436	2,884

BERRY FRUITS GATHERED.

NUTS GATHERED.

	Rasp-berries.	Straw-berries.	Goose-berries.	Logan-berries.	Other.	Almonds.	Walnuts.	Filberts.	Chest-nuts.
	cwt.	cwt.	cwt.	cwt.	cwt.	lbs.	lbs.	lbs.	lbs.
	1927	1,283	1,877	1,322	1,304	346	68,315	31,254	59
1928	3,295	4,958	4,449	4,859	1,760	66,783	30,236	148	26,066
1929	2,210	6,522	3,038	3,403	1,269	115,835	47,094	205	22,965
1930	3,056	12,047	6,456	5,395	1,783	63,332	24,244	654	18,476
1931	3,014	9,184	4,121	3,642	1,032	97,538	26,999	433	21,048

The effects of the dry season and the ravages of the "thrip" pest, during 1926-27, are shown in the above table, except in the yields of apricots and passion fruit. In 1927-28, the yield for all fruits was exceptionally heavy; that for pome and citrus fruits constituting a record. In most cases, the yield for 1928-29 was very low, the apple crop, in particular, being little more than that for the 1926-27 season. In the seasons 1929-30 and 1930-31 there was a return to normal, the yield of practically all fruits being well up to the average.

In addition to the fruits shown, large quantities of melons, rhubarb, and tomatoes were produced in the orchards, the following being the quantities returned for 1930-31:—Melons, 6,339 cwt.; rhubarb, 15,806 dozen bundles; and tomatoes, 173,899 bushels. There were also 1,650 acres laid down in gardens growing fruit for private use; the value of the produce from these was estimated at about £8,250.

**Fruit Trees.** Information relating to the number of trees of each variety (bearing and non-bearing) for the years 1925-26 and 1928-29 appears on page 565 of the *Victorian Year-Book* for 1928-29.

**Value of fruit sold.** According to prices received by growers the value of fruit which reaches market was estimated to be £970,831 in 1926-27, £1,189,356 in 1927-28, £1,093,434 in 1928-29, £927,723 in 1929-30, and £751,716 in 1930-31. 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 £40,000.

**Market gardens.** The area under market gardens in the year 1930-31 was 20,197 acres. As these gardens are generally situated near large centres of population, the producers are able to dispose of the bulk of their goods with a minimum loss from waste, &c. An average return of £50 per acre is regarded as a fair estimate of their value, and on this basis the total value of the produce may be given as approximately £1,000,000. 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 (exclusive of Raisins and Currants).** The quantity of dried fruit (weight after drying) was first collected in 1895-96, when 179,460 lbs. were returned. During 1930-31 the quantity produced was 1,468,860 lbs., which was 50,902 lbs. less than the quantity for the previous year. The production of the various kinds of dried

fruit, with the exception of raisins and currants, the particulars of which appear on page 344, is shown in the following statement for each of the last five seasons:—

DRIED FRUIT, 1926-27 to 1930-31.

Year ended June—	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Pears.	Nectarines.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1927 ..	2,840	313,390	107,933	278,796	9,966	43,333	66	756,324
1928 ..	3,351	610,073	305,984	188,085	10,245	85,396	4,424	1,207,558
1929 ..	2,194	760,216	136,033	586,140	7,685	71,591	4,269	1,563,128
1930 ..	3,424	848,811	234,032	343,490	6,878	82,267	860	1,519,762
1931 ..	2,444	853,535	184,883	360,893	20,120	45,419	1,566	1,468,860

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 refer only to such as were taken cognisance of by the collectors. The return, therefore, indicates the nature of the crops rather than the full extent of their cultivation:—

MINOR CROPS, 1929-30 AND 1930-31.

Crop.	1929-30.		1930-31.	
	Area.	Produce.	Area.	Produce.
	acres.		acres.	
Artichokes .. ..	3	15 tons	6	20 tons
Beans .. ..	1,815	17,859 bushels	1,587	18,813 bushels
Chicory .. ..	469	319 tons (dry)	344	358 tons (dry)
Flowers .. ..	355	..	417	..
Garlic .. ..	2	4 tons	..	..
Flax—New Zealand ..	70	*	75	*
Herbs and Scent Plants ..	33	..	48	..
Millet—Broom .. ..	1,677	{ 5,428 cwt. fibre 3,583 cwt. seed }	1,232	{ 5,441 cwt. fibre 4,678 cwt. seed }
Nurseries .. ..	1,266	..	1,266	..
Pumpkins .. ..	1,231	5,174 tons	1,078	5,865 tons
Seeds—Agricultural and Garden .. ..	67	..	121	..
Sugar Beet .. ..	2,500	{ 26,525 tons clean beet, producing 3,472 tons marketable sugar 1,079 cwt. }	3,045	{ 38,291 tons clean beet, producing 5,095 tons marketable sugar 898 cwt. }
Sunflowers .. ..	157	..	102	..
Total .. ..	9,645	..	9,321	..

\* Only cut every third year.



The increase in the acreage in fallow and in the proportion of farmers using manures indicates the popularity and the value of these methods of treating the soil. The following table shows the acreage in fallow and the number of farmers using manure, and the quantity used, in various years :—

LAND IN FALLOW AND MANURE USED, 1901 TO 1931.

Year ended March—	Land in Fallow.	Manure used.			
		Number of Farmers using.	Area used on.	Natural.	Artificial.
	acres.		acres.	tons.	tons.
1901 ..	602,870	11,439	556,777	153,611	23,535
1911 ..	1,434,177	26,159	2,676,408	205,739	82,581
1921 ..	1,935,747	37,835	3,848,184	161,683	150,012
1930 ..	2,482,661	44,989	6,898,718	104,732	274,420
1931 ..	2,590,629	*	*	*	*

\* Not available.

NOTE.—The average weight of manure used per acre in each district will be found on page 340.

Nearly all of the fallowed area is devoted to wheat production. Of the 2,590,629 acres in fallow last season, 952,432 were in the Mallee, 779,805 in the Wimmera, and 567,278 in the Northern district. The total for these three districts represented 89 per cent. of the land fallowed in the State.

Portion of the increase in the area on which manure is used is accounted for by the increasing practice of treating pastures with artificial fertilizers. During 1930-31 the quantity of fertilizers imported into Victoria from oversea countries was 165,272 tons valued at £243,216. This included 161,938 tons of rock phosphates valued at £213,604, most of which came from the Pacific Islands.

Persons  
employed on  
Farming,  
Dairying, and  
Pastoral  
Holdings.

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 five years the numbers were as follows :—

**NUMBER OF PERSONS EMPLOYED UPON FARMING,  
DAIRYING, AND PASTORAL HOLDINGS, 1926 to 1930.**

Year.	Males.	Females.	Total.
1926 .. ..	96,791	17,619	114,410
1927 .. ..	95,639	13,841	109,480
1928 .. ..	98,296	14,508	112,804
1929 .. ..	101,044	11,553	112,597
1930 .. ..	103,227	10,906	114,133

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 in the above tabulation, neither are domestic servants nor cooks. Only females who are wholly engaged in outdoor duties are included. It is estimated that the temporary labour employed on farms and pastoral holdings is equivalent to about 30,000 men employed continuously throughout the year.

**Wages—  
agricultural  
and  
pastoral.**

In the next return will be found particulars of the rates of wages paid (with rations) upon farms and pastoral holdings during 1930-31. The information has been furnished by the occupiers of holdings.

**WAGES, AGRICULTURAL AND PASTORAL, 1930-31.**

Occupations.	Range.	Prevailing Rate.
Ploughmen .. ..	25s. to 60s. per week ..	40s. per week
Farm labourers .. ..	20s. to 60s. per week ..	30s. per week
Threshing machine hands .. ..	10d. to 18d. per hour ..	12d. per hour
Harvest hands .. ..	7s. to 12s. per day ..	10s. per day
Milkers .. ..	20s. to 40s. per week ..	27s. 6d. per week
Maize pickers (without rations)	5d. to 9d. per bag ..	6d. per bag
Married couples .. ..	40s. to 70s. per week ..	50s. per week
Female servants .. ..	15s. to 30s. per week ..	20s. per week
Shearers, hand (without rations)	30s. to 40s. per 100 sheep	32s. 6d. per 100 sheep
„ machine (without rations) .. ..	30s. to 40s. per 100 sheep	32s. 6d. per 100 sheep
Gardeners, market .. ..	20s. to 40s. per week ..	30s. per week
„ orchard .. ..	20s. to 40s. per week ..	30s. per week
Vineyard hands .. ..	20s. to 40s. per week ..	30s. per week

## PASTORAL AND DAIRYING INDUSTRIES.

**Live Stock.** The pastoral and dairying industries have always been important sources of wealth to the State, and their increasing value in recent years, despite the larger areas devoted to cultivation, indicates that both pastures and stock are, on the whole, steadily improving. The progress of stock breeding is shown in the next table, which gives the numbers of horses, dairy cows, other cattle, sheep and pigs, and their numbers per head of population and per square mile, in each of the last seven census years, also in the year 1931 :—

## LIVE STOCK IN VICTORIA, 1861 to 1931.

Year ended March—	Horses (including Foals).	Cattle—		Sheep.	Pigs.
		Dairy Cows.	Other.		
	number.	number.	number.	number.	number.
1861 .. ..	76,536	197,332	525,000	5,780,896	61,259
1871 .. ..	209,025	212,193	564,534	10,477,976	180,109
1881 .. ..	275,516	329,198	957,069	10,360,285	241,936
1891 .. ..	436,469	395,192	1,387,689	12,692,843	282,457
1901 .. ..	392,237	521,612	1,080,772	10,841,790	350,370
1911 .. ..	472,080	668,777	878,792	12,882,665	333,281
1921 .. ..	487,503	620,005	955,154	12,171,084	175,275
1931 .. ..	379,872	669,132	760,788	16,477,995	281,245
<i>Per Head of Population.</i>					
1861 .. ..	·14	·37	·97	10·70	·11
1871 .. ..	·29	·29	·77	14·32	·25
1881 .. ..	·32	·38	1·11	12·01	·28
1891 .. ..	·38	·35	1·22	11·13	·25
1901 .. ..	·33	·43	·90	9·03	·29
1911 .. ..	·36	·51	·67	9·79	·25
1921 .. ..	·32	·41	·63	7·99	·12
1931 .. ..	·21	·38	·43	9·27	·16
<i>Per Square Mile.</i>					
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
1911 .. ..	5·37	7·61	10·00	146·59	3·79
1921 .. ..	5·55	7·05	10·87	138·49	1·99
1931 .. ..	4·32	7·61	8·66	187·50	3·20

By reducing horses and cattle to an equivalent in sheep on the assumption that each head of large stock will eat as much as ten sheep, interesting comparisons of the stock carried on the land at different periods may be instituted. Calculations made on this basis show that each square mile carried an equivalent of 393 sheep in 1931, as compared with 373 in 1921, 350 in 1901, and 296 in 1881.

On pages 572 to 575 of the 1928-29 issue of this work will be found detailed information relating to the number and size of holdings and the live stock, cultivation, &c., on different sized holdings for the year 1929, also certain comparative figures for the years 1913, 1919, and 1925.

The following tables give information relating to land occupied in each district in March, 1931 :—

LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA,  
MARCH, 1931.

(Areas of 1 acre and upwards.)

Districts.	Total Area of Districts.	Number of Occupiers.	Acres Occupied.				Total.
			For Agricultural Purposes.	For Pasture.		Unproductive.	
				Sown Grasses, Clover, or Lucerne.	Natural Grasses.		
Central ..	4,065,280	16,782	473,487	264,178	1,793,664	223,600	2,754,929
North-Central ..	2,929,920	5,435	159,652	23,614	1,904,456	130,771	2,218,493
Western ..	8,775,040	11,937	469,066	359,578	5,296,854	618,798	6,744,296
Wimmera ..	7,394,560	6,157	2,247,339	19,496	3,294,477	521,198	6,082,510
Mallee ..	10,784,000	8,274	3,818,808	13,360	1,690,431	682,786	6,205,385
Northern ..	6,337,280	12,051	1,777,788	151,515	3,414,521	55,560	5,399,384
North-Eastern ..	7,220,480	5,214	173,727	12,887	3,662,093	421,257	4,289,964
Gippsland ..	8,739,200	8,687	186,422	389,984	2,445,759	1,108,890	4,131,055
Total ..	56,245,760	74,537	9,306,289	1,234,612	23,502,255	3,762,860	37,806,016
PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.							
Central ..	..	..	17·19	9·59	65·11	8·11	100·00
North-Central ..	..	..	7·20	1·06	85·85	5·89	100·00
Western ..	..	..	6·95	5·33	78·54	9·18	100·00
Wimmera ..	..	..	36·95	0·32	54·16	8·57	100·00
Mallee ..	..	..	61·54	0·22	27·24	11·00	100·00
Northern ..	..	..	32·93	2·80	63·24	1·03	100·00
North-Eastern ..	..	..	4·07	0·30	85·76	9·87	100·00
Gippsland ..	..	..	4·51	9·44	59·21	26·84	100·00
Total ..	..	..	24·62	3·27	62·16	9·95	100·00
PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.							
Central ..	7·23	22·52	5·09	21·40	7·63	5·94	7·29
North-Central ..	5·21	7·29	1·72	1·91	8·10	3·48	5·87
Western ..	15·60	16·01	5·04	29·12	22·54	16·44	17·84
Wimmera ..	13·14	8·26	24·15	1·58	14·02	13·85	16·09
Mallee ..	19·17	11·10	41·03	1·08	7·19	18·14	16·41
Northern ..	11·27	16·17	19·10	12·28	14·53	1·48	14·28
North-Eastern ..	12·84	7·00	1·87	1·04	15·58	11·20	11·29
Gippsland ..	15·54	11·65	2·00	31·59	10·41	29·47	10·93
Total ..	100·00	100·00	100·00	100·00	100·00	100·00	100·00

It will be seen from these tables that the largest areas under cultivation and the largest proportions of cultivation to land occupied are found in the Mallee, Wimmera, and Northern districts. Of the occupied land, 62 per cent. in the Mallee, 37 per cent. in the Wimmera, and

33 per cent. in the Northern districts are devoted to agriculture, and these divisions supply over 84 per cent. of the cultivation in Victoria. In the North-Central, Western, and North-Eastern districts the land occupied is largely devoted to grazing: in Gippsland, Western, and Central, considerable attention is given to the cultivation of grasses, 82 per cent. of all the sown grasses in the State being found in those districts.

In 1914, 60 per cent. of the sown grasses in the State were in Gippsland.

**Areas occupied and stock thereon, in districts.** The next table contains particulars of the distribution of horses, cattle, and sheep on agricultural and pastoral lands in March, 1931:—

#### AREA OCCUPIED AND STOCK THEREON, 1931.

Districts.	Area Occupied for—		Number of—		
	Agriculture.	Pasture.	Horses.	Cattle.	Sheep.
	acres.	acres.			
Central .. .. .	473,487	2,057,842	74,646	247,826	1,568,877
North-Central .. .. .	159,652	1,928,070	18,251	77,699	1,579,073
Western .. .. .	469,066	5,656,432	50,876	353,866	5,245,548
Wimmera .. .. .	2,247,339	3,313,973	50,281	32,607	2,254,111
Mallee .. .. .	3,818,808	1,703,791	56,835	28,614	655,553
Northern .. .. .	1,777,788	3,566,036	70,841	169,627	2,472,996
North-Eastern .. .. .	173,727	3,674,980	25,455	208,041	1,406,874
Gippsland .. .. .	186,422	2,835,743	32,687	311,640	1,294,963
Total .. .. .	9,306,289	24,736,867	379,872	1,429,920	16,477,995

The area occupied does not include 3,762,860 acres which are mostly in an unproductive state.

**Live stock in Victoria, 1927 to 1931.** The following return shows the live stock in Victoria in 1927 to 1931. each of the last five years:—

#### LIVE STOCK IN VICTORIA, 1927 to 1931.

Live Stock.	1927.	1928.	1929.	1930.	1931.
Horses (including foals) .. .. .	447,988	428,666	412,877	393,015	379,872
Cattle—					
Dairy Cows .. .. .	673,089	626,139	615,092	619,416	669,132
Other (including calves) .. .. .	762,672	700,938	689,334	715,826	760,788
Sheep .. .. .	14,919,653	15,557,067	16,498,222	17,427,203	16,477,995
Pigs .. .. .	281,271	212,785	222,084	265,978	281,245

Comparing 1931 with 1930, cattle increased by 7.1 per cent., and pigs by 5.7 per cent., while sheep decreased by 5.4 per cent., and horses by 3.3 per cent.

The peak period for horses was 562,331 in 1914, since when, owing to the increased use of motor vehicles for transport and tractors on farms, there has been a fairly constant decrease in the number each year. The decline in the last ten years amounted to 22 per cent.

The number of sheep in the State in 1930, 17,427,203, established a record.

In the subjoined table will be found a statement of the average and the range of prices of live stock ruling in Melbourne during the years 1929-30 and 1930-31. The information has been extracted from the Melbourne *Stock and Station Journal*:—

PRICES IN MELBOURNE OF LIVE STOCK,  
1929-30 AND 1930-31.

Stock.	Prices in 1929-30.			Prices in 1930-31.		
	Average.	Range.		Average.	Range.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<i>Horses.</i>						
Extra heavy draught	37 16 0	35 0 0 to	40 10 0	37 5 0	35 0 0 to	40 0 0
Medium draught ..	27 1 0	24 10 0 to	29 10 0	26 1 0	24 0 0 to	28 0 0
Delivery cart ..	15 4 0	14 0 0 to	17 10 0	14 0 0	..	..
Indian Remounts ..	16 14 0	15 0 0 to	18 10 0	17 6 0	17 0 0 to	18 0 0
Saddle and harness	7 9 0	6 10 0 to	9 0 0	7 10 0	..	..
Ponies ..	8 16 0	7 10 0 to	10 10 0	7 10 0	..	..
Order cart ..	12 7 6	12 0 0 to	13 10 0	12 0 0	..	..
<i>Fat Cattle.</i>						
<i>Bullocks—</i>						
Extra prime ..	24 4 0	20 6 0 to	28 7 0	18 5 9	13 9 4 to	24 18 9
Prime ..	21 10 0	19 5 0 to	25 0 0	16 5 9	12 4 5 to	22 9 8
Good ..	18 13 0	15 3 0 to	21 3 0	14 15 0	11 7 10 to	19 10 4
Good light and handy weights	16 17 0	13 15 0 to	19 0 0	13 4 0	10 4 7 to	16 17 6
Second ..	13 8 0	11 9 0 to	14 15 0	10 6 0	8 13 8 to	13 0 0
<i>Cows—</i>						
Best ..	15 5 0	13 12 0 to	16 12 6	12 1 0	9 7 6 to	15 15 1
Others ..	9 15 0	8 16 0 to	10 16 6	8 3 0	6 15 8 to	10 5 8
<i>Fat Sheep.</i>						
<i>Wethers (cross)—</i>						
Extra prime ..	1 7 1	1 3 2 to	1 15 11	1 1 11	0 17 2 to	1 12 4
Prime ..	1 4 0	1 0 5 to	1 12 1	0 19 0	0 14 10 to	1 8 7
Good ..	1 0 7	0 17 9 to	1 7 11	0 15 8	0 11 11 to	1 4 2
<i>Ewes (cross)—</i>						
Extra prime ..	1 0 6	0 17 2 to	1 8 4	0 17 8	0 12 5 to	1 6 5
Prime ..	0 17 9	0 14 4 to	1 4 6	0 14 11	0 11 0 to	1 2 7
Good ..	0 12 11	0 9 8 to	0 17 8	0 11 0	0 7 4 to	0 17 0
<i>Wethers (merino)—</i>						
Extra prime ..	1 4 9	0 18 4 to	1 14 8	..	..	..
Prime ..	1 0 11	0 16 0 to	1 11 1	0 16 8	0 11 10 to	1 6 2
Good ..	0 17 9	0 14 6 to	1 7 3	0 13 6	0 8 11 to	1 0 9
<i>Fat Lambs.</i>						
Extra prime ..	1 4 2	1 1 10 to	1 7 3	1 0 2	0 15 5 to	1 6 6
Prime ..	1 1 0	0 19 4 to	1 3 10	0 17 5	0 13 11 to	1 2 10
Good ..	0 17 6	0 15 10 to	1 1 0	0 14 3	0 11 6 to	0 18 3
<i>Pigs.</i>						
<i>Back Fatters—</i>						
Extra heavy prime	12 11 6	9 13 0 to	14 10 6	8 6 3	5 4 0 to	11 5 0
Extra prime and weighty ..	8 5 9	6 11 3 to	10 3 0	5 0 5	3 2 11 to	7 14 9
<i>Baconers—</i>						
Extra prime ..	4 14 5	3 18 2 to	5 11 6	3 8 10	2 13 10 to	4 10 4
Prime ..	4 3 9	3 10 3 to	4 17 9	2 14 2	2 1 9 to	3 14 1
Porkers ..	2 12 5	2 1 11 to	3 1 6	1 13 1	1 5 4 to	2 3 11

NOTE.—Prices for dairy cattle are not available.

The following is a statement of the stock slaughtered on farms and stations, as well as in municipal abattoirs, during the last four years.

### STOCK SLAUGHTERED, 1927-28 TO 1930-31.

Year ended June—	Number Slaughtered.		
	Sheep and Lambs.	Cattle.	Pigs.
1928 .. ..	4,732,494	469,610	358,135
1929 .. ..	5,286,642	466,576	354,339
1930 .. ..	6,024,702	387,662	347,688
1931 .. ..	5,945,475	328,032	399,241

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

### PURPOSES FOR WHICH STOCK WERE SLAUGHTERED, 1927-28 TO 1930-31.

Year ended June—	For Butcher and Private Use.*			For Export.		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1928 .. ..	3,800,938	460,668	147,224	915,545	4,877	81
1929 .. ..	3,681,251	456,829	156,049	1,590,573	6,297	..
1930 .. ..	4,162,987	381,743	128,557	1,825,019	1,946	81
1931 .. ..	4,228,033	323,945	176,753	1,697,947	2,700	13,606

Year ended June—	For Preserving and Salting.			For Boiling Down.		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1928 .. ..	2,830	2,353	210,547	13,181	1,712	283
1929 .. ..	6,470	1,298	198,131	8,348	2,152	159
1930 .. ..	9,931	126	218,799	26,765	3,847	251
1931 .. ..	7,568	72	208,593	11,927	1,315	289

\* Including carcasses held in Cool Stores at end of year.

Of the sheep and lambs slaughtered in Victoria in 1930-31, 29 per cent. were frozen, as compared with 30 per cent. in 1929-30 and 1928-29, and 19 per cent. in 1927-28. In 1930-31, the oversea exports included 12,798,586 lbs. of mutton, valued at £186,903, and 44,050,955 lbs. of lamb, valued at £1,075,532.

The importance of the mutton and lamb export trade to Victorian sheep owners is evidenced by the figures in the appended statement showing the particulars of exports in each of the last five years.

**Frozen Mutton  
and Lamb  
Exported.**

Seasonal influences are principally responsible for fluctuations in the various years.

### FROZEN MUTTON AND LAMB EXPORTED.

Year ended June—	Carcasses Exported.					
	Mutton.			Lamb.		
	Number.	Average Weight.	Value.	Number.	Average Weight.	Value.
		lbs.	£		lbs.	£
1927.. ..	149,358	49	141,998	1,197,067	33	1,053,502
1928.. ..	137,484	44	117,200	778,061	28	639,486
1929.. ..	422,215	50	431,440	1,168,358	32	1,096,891
1930.. ..	309,903	44	248,021	1,515,116	31	1,279,836
1931.. ..	291,382	44	186,903	1,406,565	31	1,075,532

**Dairying.** The dairying industry is one of the principal sources of the wealth of the community. The value of dairy produce in 1931 was £10,013,166, as compared with £10,923,180 in 1930, £11,959,500 in 1929, £11,186,070 in 1928, and £10,483,760 in 1927. The following table shows the numbers of cowkeepers and cows at the end of, and the total production of butter and cheese, in each of the last five years:—

### DAIRYING, 1926-27 to 1930-31.

Year ended March—	Number of Cowkeepers.	Number of Dairy Cows.	Butter made.*	Cheese made.*
			lbs.	lbs.
1927 .. ..	56,935	673,089	81,965,815	5,997,648
1928 .. ..	55,356	626,139	84,270,812	5,621,945
1929 .. ..	54,814	615,092	93,728,516	5,505,932
1930 .. ..	54,131	619,416	90,639,652	6,953,949
1931 .. ..	54,684	669,132	110,006,619	8,064,463

\* Year ended 30th June.

Information relating to the classification of sizes of dairy herds on various holdings appears in the 1928-29 issue of this work, page 581. Similar particulars for subsequent years may be had on application to the Government Statist.

Areas of holdings and numbers and sizes of dairy herds.



Butter and  
cheese made  
on farms.

The quantities of butter and cheese made on farms in the last five years were as follows:—

BUTTER AND CHEESE MADE ON FARMS,  
1926-27 to 1930-31.

Year ended June—				Butter.	Cheese.
				lbs.	lbs.
1927	..	..	..	3,887,324	516,063
1928	..	..	..	3,592,264	217,495
1929	..	..	..	3,434,539	246,854
1930	..	..	..	3,469,804	206,055
1931	..	..	..	3,761,087	218,630

Butter and  
cheese made  
in factories.

The quantities of butter, cheese, and concentrated, condensed, powdered milk, and casein made and of cream sold, in factories during the last five years were as follows:—

BUTTER, CHEESE, ETC., MADE IN FACTORIES,  
1926-27 to 1930-31.

Year ended June—	Butter made.	Cream sold.	Cheese made.	Concentrated, Condensed, and Powdered Milk made.	Casein made.
	lbs.	gallons.	lbs.	lbs.	lbs.
1927	.. 78,108,491	344,605	5,481,585	48,186,040	1,803,049
1928	.. 80,678,548	381,794	5,404,450	53,876,662	2,619,855
1929	.. 90,263,977	471,729	5,259,078	53,948,559	3,340,171
1930	.. 87,169,848	496,628	6,747,894	51,581,802	2,568,956
1931	.. 106,245,532	421,451	7,845,833	45,665,474	2,555,410

The quantities of milk, in gallons, received at factories and creameries were 205,441,560 in 1926-27, 212,983,200 in 1927-28, 226,228,350 in 1928-29, 220,977,700 in 1929-30, and 259,676,705 in 1930-31.

Exports of  
butter and  
cheese.

In 1930-31, there were exported from Victoria to countries outside Australia 61,751,348 lbs. of butter, valued at £2,998,170, all of which was Australian produce. The quantity sent to the United Kingdom was 53,119,474 lbs., valued at £2,509,860. The quantity of cheese exported to overseas countries was 680,526 lbs., and the value thereof, £24,113.

Information relating to the wool clip is obtained direct from the growers, and an allowance is made for the wool on Victorian skins, both stripped and exported. On this basis the production of wool in 1930-31 and earlier seasons was as follows:—

VICTORIAN WOOL CLIP AND ESTIMATED TOTAL PRODUCTION.

Districts.	Wool Clip, 1930-31.			
	Sheep.	Lambs.	Total.	
	lbs.	lbs.	lbs.	
Central .. ..	8,803,804	558,203	9,362,007	
North-Central .. ..	9,525,435	581,665	10,107,100	
Western .. ..	34,310,966	2,150,970	36,461,936	
Wimmera .. ..	14,878,600	754,837	15,633,437	
Mallee .. ..	3,752,814	130,418	3,883,232	
Northern .. ..	12,308,462	987,931	14,296,393	
North-Eastern .. ..	7,130,873	473,516	7,604,389	
Gippsland .. ..	6,751,760	432,896	7,184,656	
Total Clip	{ 1930-31	98,462,714	6,070,436	104,533,150
	{ 1929-30	109,318,424	8,477,465	117,795,889
	{ 1928-29	116,076,806	8,292,541	124,369,347
	{ 1927-28	89,113,548	5,920,098	95,033,646
	{ 1926-27	92,043,642	6,133,520	98,177,162

	1927-28.	1928-29.	1929-30.	1930-31.
	lbs.	lbs.	lbs.	lbs.
Wool clip .. ..	95,033,646	124,369,347	117,795,889	104,533,150
Wool stripped from Victorian skins and on Victorian skins exported (estimated) ..	23,769,390	25,509,241	28,261,000	28,978,316
Total production ..	118,803,036	149,878,588	146,056,889	133,511,466
Total value ..	£9,701,660	£10,252,002	£5,694,019	£4,374,932

Of the total quantity of wool produced, the amounts used in manufacturing for each of the last four years were as follows:—1927-28, 25,346,066 lbs.; 1928-29, 25,008,506 lbs.; 1929-30, 26,008,800 lbs.; and 1930-31, 21,413,372 lbs. Of the total production, the quantity used in manufacturing represented 21·3 per cent. in 1927-28, 16·7 per cent. in 1928-29, 17·8 per cent. in 1929-30, and 16·0 per cent. in 1930-31.

**Sheep shorn.** In 1930-31 there were 13,619,450 sheep and 2,935,685 lambs shorn, as compared with 14,204,743 sheep and 3,620,557 lambs in 1929-30, 13,005,239 sheep and 3,565,737 lambs in 1928-29, 12,809,537 sheep and 2,747,400 lambs in 1927-28, and 11,863,262 sheep and 2,671,435 lambs in 1926-27.

Weight of  
a fleece.

The next table shows the production of wool per sheep and per lamb shorn in each of the last five years :—

WEIGHT OF A FLEECE, 1926-27 TO 1930-31.

Year.	Weight of a Fleece.		
	Sheep.	Lambs.	Sheep and Lambs combined.
	lbs.	lbs.	lbs.
1926-27 .. .. .	7.76	2.30	6.75
1927-28 .. .. .	6.96	2.15	6.11
1928-29 .. .. .	8.93	2.33	7.51
1929-30 .. .. .	7.70	2.34	6.61
1930-31 .. .. .	7.23	2.07	6.31

Prices of  
wool.

The following information as to the average prices of wool per lb. which have prevailed during the last three seasons has been obtained from Melbourne wool brokers :—

PRICES OF WOOL, 1928-29 TO 1930-31.

Class of Wool.	Average Price per lb. in—		
	1928-29.	1929-30.	1930-31.
<b>GREASY MERINO.</b>			
Extra Super (Western District)	29d. to 32d.	19d. to 21d.	15d. to 18d.
Super .. .. .	26d. to 28d.	16d. to 18d.	13d. to 15d.
Good .. .. .	23d. to 25d.	14d. to 15d.	11d. to 12d.
Average .. .. .	20d. to 23d.	12d. to 13d.	9d. to 11d.
Wasty and Inferior .. .. .	13d. to 15d.	8d. to 9d.	6d. to 7d.
Extra Super Lambs .. .. .	30d. to 34d.	20d. to 22d.	16d. to 19d.
Super Lambs .. .. .	24d. to 28d.	15d. to 17d.	12d. to 14d.
Good Lambs .. .. .	17d. to 20d.	11d. to 13d.	9d. to 11d.
Average Lambs .. .. .	10d. to 16d.	6d. to 10d.	5d. to 8d.
Inferior Lambs .. .. .	8d. to 10d.	4d. to 6d.	3d. to 4d.
<b>GREASY CROSSBRED</b>			
Extra Super Comebacks .. .. .	26d. to 29d.	16d. to 19d.	13d. to 16d.
Super Comebacks .. .. .	23d. to 25d.	14d. to 15d.	12d. to 13d.
Fine Crossbred .. .. .	20d. to 22d.	12d. to 14d.	10d. to 12d.
Medium Crossbred .. .. .	15d. to 18d.	9d. to 11d.	7d. to 9d.
Coarse Crossbred and Lincoln	10d. to 13d.	6d. to 8d.	4d. to 6d.
Super Fine Crossbred Lambs .. .. .	24d. to 26d.	15d. to 17d.	12d. to 14d.
Good Crossbred Lambs .. .. .	18d. to 20d.	11d. to 12d.	9d. to 10d.
Coarse and Lincoln Lambs .. .. .	13d. to 15d.	8d. to 9d.	5d. to 7d.

## PRICES OF WOOL, 1928-29 TO 1930-31—continued.

Class of Wool.	Average Price per lb. in—		
	1928-29.	1929-30.	1930-31.
<b>SCOURED.</b>			
Extra Super Fleece .. ..	40d. to 44d.	24d. to 26d.	20d. to 22d.
Super Fleece .. ..	36d. to 40d.	22d. to 24d.	18d. to 20d.
Good Fleece .. ..	30d. to 34d.	18d. to 19d.	15d. to 17d.
Average Fleece .. ..	25d. to 28d.	15d. to 17d.	12d. to 14d.
<b>RECORD PRICES FOR THE SEASON.</b>			
Greasy Merino Fleece .. ..	47d.	37½d.	31½d.
„ Comeback Fleece .. ..	30½d.	21d.	18½d.
„ Merino Lambs .. ..	37½d.	24½d.	18½d.
„ Comeback Lambs .. ..	30d.	22d.	17½d.
Scoured Fleece .. ..	48d.	35½d.	34½d.

**Flocks of Sheep.** Tables containing information relating to the numbers of flocks in districts, the sizes of flocks, and the number and sizes of flocks on various holdings, will be found on pages 586 to 588 of the 1928-29 *Year-Book*.

**Live Stock In Australia and New Zealand.** In the following statement are given the numbers of horses, cattle, sheep and pigs in the various Australian States and New Zealand, according to the latest available figures :—

## LIVE STOCK IN AUSTRALASIA.

State, &c.	Horses.	Cattle.		Sheep.	Pigs.
		Dairy Cows.	Other.		
Victoria .. ..	379,872	669,132	760,788	16,477,995	281,245
New South Wales ..	524,512	1,094,186	1,746,287	49,870,000	334,331
Federal Capital Territory ..	815	4,240		183,077	37
Queensland .. ..	481,615	724,323	4,739,401	22,542,043	217,528
South Australia ..	183,529	109,672	109,313	5,980,959	82,991
Northern Territory ..	33,363	718,644		15,838	327
Western Australia ..	156,973	85,725	727,119	9,882,761	100,664
Tasmania .. ..	32,700	76,825	153,429	2,119,606	54,556
New Zealand .. ..	295,743	1,601,633	2,478,892	29,792,516	476,194

The returns for 1930-31 show that there were in that year 2,375 bee-keepers, who owned 56,090 frame and 5,071 box hives, producing 2,755,055 and 49,131 lbs. of honey respectively, and 30,478 lbs. of beeswax. The number of bee-keepers owning 20 hives and upwards was 561, as compared with 558 in the previous season. In 1930-31, the quantity of honey produced in the Wimmera district was 1,228,178 lbs., in the Northern district, 581,127 lbs., and in the Western district, 532,294 lbs. The more important particulars of the industry for the last five years are given below:—

## BEE-KEEPING, 1926-27 TO 1930-31.

Season ended May—	Number of Bee-keepers.	Number of Hives.	Honey produced.	Beeswax produced.
			lbs.	lbs.
1927 .. ..	2,968	54,123	2,370,310	33,238
1928 .. ..	2,521	52,748	2,992,860	34,358
1929 .. ..	2,284	55,247	4,181,571	49,675
1930 .. ..	2,394	53,715	3,097,805	29,682
1931 .. ..	2,375	61,161	2,804,186	30,478

State expenditure on destruction of vermin and noxious weeds. Active operations for the destruction of vermin and noxious weeds on Crown lands were first undertaken by the Government in 1880. The following are the amounts spent during the last five years:—

## EXPENDITURE ON DESTRUCTION OF VERMIN AND NOXIOUS WEEDS, 1926-27 TO 1930-31.

Year.	From Revenue.	Wire Netting Advances from Loan Funds.
	£	£
1926-27 .. ..	101,929	32,337
1927-28 .. ..	99,184	32,635
1928-29 .. ..	91,377	55,198
1929-30 .. ..	76,277	20,538
1930-31 .. ..	61,086	41,182

Subsidies to Shire Councils for the destruction of wild animals are made from revenue, and advances to municipalities and farmers for the purchase of wire netting are made from Loan Funds.

A complete system, administered by an officer called the Superintendent under the Vermin Destruction Act, exists for effectually keeping rabbits under control.

Rabbits, &c., sold at Melbourne Fish Market. The quantity of rabbits, hares, and wild-fowl sold at the Melbourne Fish Market in each of the last five years was as shown in the following statement :—

RABBITS, HARES, AND WILD-FOWL SOLD AT THE MELBOURNE FISH MARKET, 1926-27 to 1930-31.

Year ended June—				Rabbits.	Hares.	Wild-fowl.
				pairs.	brace.	brace.
1927	..	..	..	1,640,028	78	20,406
1928	..	..	..	1,697,316	*	9,054
1929	..	..	..	1,594,020	Nil	11,316
1930	..	..	..	1,347,168	Nil	7,422
1931	..	..	..	935,396	Nil	1,368

\* Included with rabbits.

Frozen rabbits, &c., exported. Large quantities of frozen rabbits and hares and of rabbit and hare skins have been exported to overseas countries, the numbers and values for each of the last five years being as follows :—

RABBITS AND HARES AND RABBIT AND HARE SKINS EXPORTED OVERSEA, 1926-27 to 1930-31.

Year ended June—				Frozen Rabbits and Hares.		Rabbit and Hare Skins.	
				Quantity.	Value.	Quantity.	Value.
				pairs.	£	lbs.	£
1927	..	..	..	403,147	44,999	2,211,153	381,334
1928	..	..	..	527,988	44,563	2,896,685	549,802
1929	..	..	..	1,624,279	136,273	2,682,567	604,842
1930	..	..	..	1,474,898	123,492	2,604,601	441,074
1931	..	..	..	2,308,703	157,665	2,231,117	143,672

## FISHERIES.

The numbers of men and boats engaged in the fishing industry at the different fishing stations throughout the State are given in the following table for the year 1930-31:—

VICTORIAN FISHERIES—MEN AND BOATS EMPLOYED,  
1930-31.

Fishing Stations.	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
			£	£
Anderson's Inlet .. .. .	15	8	387	267
Apollo Bay .. .. .	10	1	150	30
Barwon Heads and Ocean Grove .. .. .	10	8	1,135	187
Brighton .. .. .	19	11	567	98
Corner Inlet, Welshpool, Toora, and Port Franklin .. .. .	97	61	8,460	3,004
Dromana and Rosebud .. .. .	31	18	1,228	336
Frankston .. .. .	22	13	306	346
Geelong .. .. .	149	60	5,132	1,231
Gippsland Lakes .. .. .	200	162	10,681	5,032
Kerang .. .. .	10	2	11	60
Lake Boga .. .. .	3	..	..	..
Lorne .. .. .	18	5	260	101
Mentone .. .. .	18	11	317	137
Mordialloc, Chelsea, and Carrum .. .. .	140	46	2,000	1,563
Mornington .. .. .	46	38	3,267	881
Portarlington and St. Leonards .. .. .	74	50	5,890	1,330
Portland .. .. .	47	25	6,364	477
Port Albert .. .. .	62	48	3,863	1,379
Port Campbell .. .. .	3	3	147	19
Port Fairy .. .. .	62	40	10,615	449
Port Melbourne .. .. .	39	23	1,782	584
Queenscliff .. .. .	133	69	17,326	1,983
Sandringham and Black Rock .. .. .	27	16	1,299	247
Sorrento, Portsea, and Rye .. .. .	83	49	5,534	1,052
St. Kilda .. .. .	35	15	932	1,801
Torquay .. .. .	21	11	295	86
Warrnambool .. .. .	18	12	573	126
Werribee .. .. .	17	7	346	103
Waranga Basin .. .. .	8	4	37	36
Western Port (Cowes, Hastings, Grantville, Flinders, San Remo, and Tooradin) .. .. .	151	115	19,561	3,309
Williamstown and Altona .. .. .	65	25	1,714	556
Wonthaggi .. .. .	10	6	174	44
<b>Total .. .. .</b>	<b>1,643</b>	<b>962</b>	<b>110,353</b>	<b>26,854</b>

**Melbourne Fish Market.** The quantities and values of fish sold in the Melbourne Fish Market during each of the years 1928-29 and 1930-31 were as shown in the next table :—

FISH SOLD IN THE MELBOURNE FISH MARKET,  
1929-30 AND 1930-31.

	1929-30.		1930-31.	
	Quantity.	Value.	Quantity.	Value.
Fresh Fish (Victorian) lbs.	10,962,450	£ 159,869	11,768,225	£ 147,103
Crayfish .. doz.	35,919	31,392	36,459	18,229
Imported Fish (fresh or frozen) .. lbs.	5,719,976	148,149	3,530,582	87,483
Oysters .. bags	9,733	24,332	9,575	19,150
Total .. ..	..	363,742	..	271,965

In addition to the above, 529 cwt. of smoked fish, and 63,300 lbs. of prawns were sold in this market in 1930-31.

**Victorian fish sold.** The quantity and value of fish caught in Victorian waters and sold in the Melbourne and Ballarat markets and elsewhere in 1930-31 were as follows :—

VICTORIAN FISH SOLD IN 1930-31.

Markets.	Quantity.		Value.	
	Fish.	Crayfish.	Fish.	Crayfish.
	lbs.	doz.	£	£
Melbourne .. ..	11,768,225	12,406	147,103	6,203
Ballarat .. ..	421,981	955	5,314	476
Other .. ..	550,591	842	6,883	421
Total .. ..	12,740,797	14,203	159,300	7,100

**Fish imported.** In connexion with this subject, the quantities and values of the different classes of fish imported are of interest. Particulars of imports from oversea countries in each of the last two years are given in the following statement :—



## FISH IMPORTED, 1929-30 AND 1930-31.

	1929-30.		1930-31.	
	Quantity.	Value.	Quantity.	Value.
Fish—		£		£
Fresh or Frozen .. .. lbs.	2,663,235	67,788	1,746,584	42,083
Smoked or Dried (not Salted) .. .. "	34,877	2,041	9,861	760
Oysters in the Shell .. .. cwt.	508	420	3,793	1,815
Potted or Concentrated, &c. .. .. "	..	25,997	..	9,897
Preserved in tins, &c. .. .. lbs.	6,993,170	335,774	3,453,151	126,897
N.E.I. .. .. cwt.	2,155	6,274	1,999	5,232
Total .. ..	..	438,294	..	186,684

Of the 1930-31 oversea imports of fish preserved in tins, 2,169,471 lbs. came from Canada, 744,672 lbs. from the United Kingdom, 133,729 lbs. from Norway, and 201,969 lbs. from the United States of America.

The figures relating to agriculture and live stock in Victoria and Great Britain (England, Wales, and Scotland) in 1930 are, for comparative purposes, placed side by side in the table which follows:—

**AGRICULTURE AND LIVE STOCK IN VICTORIA AND GREAT BRITAIN, 1930.**

	Victoria.	Great Britain.
Area .. .. acres	56,245,760	56,208,959
Wheat .. .. bushels	53,814,369	41,416,000
Oats .. .. "	6,893,827	111,832,000
Barley .. .. "	1,983,130	35,128,000
Peas .. .. "	153,124	2,056,000
Potatoes .. .. tons	173,341	3,603,000
Turnips and swedes .. .. "	3,003*	13,753,000
Mangolds .. .. "	5,167	5,463,000
Hay .. .. "	1,605,900	8,823,000
Horses .. .. No.	379,872	1,117,669
Cattle .. .. "	1,429,920	7,085,775
Sheep .. .. "	16,477,995	23,765,394
Pigs .. .. "	281,245	2,453,510

\* Includes beet, carrots, and parsnips.

**MINING.**

The supervision of mining and the inspection of mines are regulated by Act of Parliament. Authority for all mining operations, whether on Crown or private lands, must be obtained in the prescribed manner, and mining leases giving the right to enter on private land for mining purposes may be issued to another than the owner.

**Miners' Rights.**

The taking out of a "miner's right" entitles the holder to prospect for gold on Crown lands. The right may be had on payment of a sum of 2s. 6d. per annum and remains in force for any number of years not exceeding fifteen. The holder is entitled to take possession for mining purposes of a defined parcel of Crown lands, which is called a "claim." The revenue in 1930-31 from miners' rights was £3,522.

**Mining Leases.**

Leases for the purpose of mining for gold are granted for a term not exceeding fifteen years at a yearly rental of 2s. 6d. per acre. For mining leases of land to be worked by means of dredging or hydraulic sluicing the yearly rent is 5s. per acre. Other mineral and coal mining leases are also issued at varying rates. The revenue from these sources in 1930-31 was £4,528.

**Area occupied for Mining.**

The area of Crown and private lands under occupation for mining purposes on 31st December, 1930, was 71,629 acres. The subjoined table shows the area being worked for different minerals:—

**AREA UNDER OCCUPATION FOR MINING PURPOSES, 31ST DECEMBER, 1930.**

(Crown Land and Private Land.)

Nature of Mineral, &c.	Area.	Nature of Mineral, &c.	Area.
Gold .. .. .	10,563	Kaolin and Quartz Grit .. .. .	10
Coal (ordinary) .. .. .	11,556*	Limestone .. .. .	53
Coal (brown) .. .. .	1,262	Limestone and Clay .. .. .	41
Coal (black and brown) .. .. .	100	Magnesite .. .. .	114
Bauxite .. .. .	57	Marblestone .. .. .	6
Bluestone .. .. .	27	Molybdenite .. .. .	118
Cement Gravel .. .. .	6	Oil .. .. .	1,422
Clay .. .. .	34	Oil and Gas .. .. .	43,856
Clay and Schist .. .. .	4	Oil, Gas, and Bitumen .. .. .	436
Clay and Slate .. .. .	3	Oil and Gypsum .. .. .	7
Clay, Pigments, and Infusorial Earth .. .. .	9	Quicksilver .. .. .	6
Copper .. .. .	6	Sand .. .. .	38
Copper, Gold, and Silver .. .. .	29	Silicate of Alumina .. .. .	51
Dolomite and Clay .. .. .	1	Silver and Lead .. .. .	10
Fireclay .. .. .	18	Tin .. .. .	723
Galena .. .. .	24	Tin and Gold .. .. .	57
Granite .. .. .	7	Sand and Gravel .. .. .	25
Gypsum .. .. .	310	Tailings Licences .. .. .	158
Kaolin .. .. .	22	Water Right Licences .. .. .	440
Kaolin and Gold .. .. .	20		
		Total .. .. .	71,629

\* Includes State Coal Mine Area.

Certain gold mining leases include the right to mine for minerals.  
 Certain mineral leases include the right to mine for gold.

**Mining development.** The mining industry has been well fostered by the Government, not only in the way of financial assistance but also by means of geological surveys and boring. Apart from the annual expenditure of the Mines Department from consolidated revenue, of which a statement is appended, portions of surplus revenues of past years amounting to £85,000 had been expended or advanced for developmental purposes from 1st July, 1899, to 30th June, 1931. Since 1st July, 1899, £520,421 has been apportioned from loan receipts and expended on mining development; but, apart from £249,399 expended on the State Coal Mine during the years 1909 to 1925, no loan money has been allotted for development for 25 years.

## STATE EXPENDITURE ON MINING, 1926-27 to 1930-31.

Item.	Expenditure from Consolidated Revenue.				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Mines Department .. ..	25,687	24,900	23,649	23,182	21,556
State Coal Mine .. ..	605,218	621,316	729,820	688,253	551,990
Coal Mines Regulation—Sinking Fund and Depreciation Fund	54,555	73,567	41,847	130,279	19,839
Diamond drills for prospecting ..	12,864	13,323	15,519	9,955	5,811
Testing plants .. ..	2,378	2,980	3,372	3,443	2,499
Geological and underground surveys of mines .. ..	3,791	3,973	3,917	3,567	2,681
Mining Development— Advances to companies, &c., boring for gold, coal, &c. ..	10,678	5,309	3,029	4,753	635
Miscellaneous .. ..	2,065	1,708	1,786	1,943	1,909
<b>Total .. ..</b>	<b>717,236</b>	<b>747,076</b>	<b>822,939</b>	<b>865,375</b>	<b>606,920</b>

The advances from loan moneys and revenue to mining companies to 30th June, 1931, for the development of mining, totalled £285,705 (£62,740 from loan moneys, and £222,965 from revenue) of which sum £43,767 had up to that date been repaid, £53,604 realized, and £165,585 written off, leaving £22,749 outstanding. Interest received during 1930-31 amounted to £70, and interest outstanding on 30th June, 1931, to £4,487.

The mineral production of the State (excluding salt) is summarized in the subjoined statement, which contains particulars of the recorded production of all metals and minerals up to the end of the year 1930:—

## TOTAL MINERAL PRODUCTION TO 31ST DECEMBER, 1930.

Metals and Minerals.	Recorded during 1930.		Total Recorded to end of 1930.	
	Quantity.	Value.	Quantity.	Value.
	Fine ozs.	£	Fine ozs.	£
Gold .. .. .	24,119	102,456	71,348,924	303,070,257
Silver .. .. .	813*	65	1,468,455*	223,104
Platinum .. .. .	..	..	30,577	7,880
Diamonds .. .. .	..	..	311	1,671
Sapphires, &c. .. .. .	..	..	..	128
	tons.	..	tons.	630
Coal, black .. .. .	703,487	807,699	14,600,187	11,642,682
" brown .. .. .	1,831,507	173,713	9,332,747	1,426,752
Ore—copper .. .. .	..	..	18,740	218,620
" tin .. .. .	..	..	17,097½	977,641
" antimony .. .. .	..	..	104,276½†	612,078
" silver-lead .. .. .	..	..	804	5,992
" iron .. .. .	..	..	5,434	12,540
" manganese .. .. .	..	..	422	2,009
Wolfram .. .. .	..	..	118	11,785
Gypsum .. .. .	5,809	1,610	151,871	100,898
Magnesite .. .. .	63	239	2,051	6,312
Kaolin .. .. .	1,951	1,792	39,129	50,563
Diatomaceous earth .. .. .	..	..	8,657	33,137
Pigment clays .. .. .	..	..	4,496	5,503
Phosphate rock .. .. .	..	..	15,781	16,704
Molybdenite .. .. .	..	..	868½†	30,911
Fluorspar .. .. .	..	..	623	1,888
Jarosite (Red Oxide) .. .. .	..	..	109	1,359
Bauxite .. .. .	789	769	2,449	4,088
Bluestone, freestone, granite, &c.‡	..	324,811	..	11,459,702
Limestone, &c.§	..	..	..	..
Total .. .. .	..	1,413,154	..	329,924,834

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

NOTE.—The value of gold as shown above is based on the average value of Victorian gold received at the Melbourne Mint.

**Gold raised in Victoria.** The quantities of gold raised in Victoria in different periods are shown in the next table:—

### GOLD RAISED IN VICTORIA, 1851 TO 1930.

Period.	Quantity * (Gross ozs.).	Period.	Quantity (Fine ozs.).
1851-60 .. ..	23,334,263	1916-20 .. ..	905,561
1861-70 .. ..	16,276,566	1921-25 .. ..	421,250
1871-80 .. ..	10,156,297	1926 .. ..	49,078
1881-90 .. ..	7,103,448	1927 .. ..	38,538
1891-1900 .. ..	7,476,038	1928 .. ..	33,917
1901-10 .. ..	7,095,061	1929 .. ..	26,275
1911-15 .. ..	2,161,349	1930 .. ..	24,119

\* Gross ozs. 1851-1900.

The yield has been on the down grade since 1906, the return for the State for 1930 having been the lowest since 1851. The quantities in fine ounces raised in the other principal gold-producing States in 1930 were 416,369 ounces in Western Australia, 7,821 ounces in Queensland, and 12,493 ounces in New South Wales. The total production of gold in the world in 1930, as shown in the United States Mint Report, was 20,160,355 fine ounces.

**Mining district gold yields.** The yield of gold (given in gross ounces) for the last two years in each mining district of the State, as estimated by the mining registrars, is shown in the following table:—

### DISTRICT YIELDS OF GOLD, ALLUVIAL AND QUARTZ, 1929 AND 1930.

Mining District.	1929.			1930.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Ararat and Stawell ..	110	290	400	188	402	590
Ballarat .. ..	490	280	770	578	459	1,017
Beechworth .. ..	2,332	6,540	8,872	1,898	4,506	6,404
Bendigo .. ..	585	13,350	13,935	688	13,927	14,615
Castlemaine .. ..	1,150	1,740	2,890	1,242	984	2,226
Gippsland .. ..	400	765	1,165	275	148	423
Maryborough .. ..	400	350	750	475	340	815
<b>Total .. ..</b>	<b>5,467</b>	<b>23,315</b>	<b>28,782</b>	<b>5,344</b>	<b>20,746</b>	<b>26,090</b>

**Government batteries, cyanidation, and dredging and sluicing.** Particulars relating to the operations of Government batteries, cyanide works, and dredging and sluicing plants for the last five years are as follows:—

**GOVERNMENT BATTERIES, CYANIDATION, AND  
DREDGING AND SLUICING, 1926 TO 1930.**

Year.	Government Batteries.			Cyanidation.			Dredging and Sluicing.			
	Number of Batteries.	Quantity of Ore Treated.	Yield of Gold.	Number of Plants.	Quantity of Tailings Treated.	Yield of Gold.	Number of Plants.	Quantity of Material Treated.	Yield of Gold.	Tin Obtained.
1926	31	tons. 476	oz. 618	7	tons. 7,748	oz. 1,323	19	cub. yds. 539,200	oz. 3,554	tons. 29
1927	31	643	999	8	11,060	1,672	9	900,500	4,440	44
1928	31	1,369	1,405	8	6,397	1,199	6	1,227,000	5,689	61
1929	31	1,810	1,478	10	4,047	772	6	682,400	1,774	14
1930	33	2,700	1,817	*	*	*	6	193,000	823	1

\* Not available.

The first battery was erected in 1897, since which date 82,089 tons of ore have been crushed for 58,560 ounces of gold.

Up to the end of 1929, 16,032,135 tons of tailings had been treated by the cyanide and other processes, and 1,286,695 ounces of gold had been won therefrom.

Since the inception of dredge mining, 1,903,826 ounces of gold and 1,797 tons of tin have been won by this system.

**Coal mining.** Bituminous coal is found in three main areas in the southern portion of the State, viz., the Wannon, the Otway, and South Gippsland. The Wannon area is comparatively unprospected, owing to almost the whole of the land having been sold. In the Otway area bores have been sunk without disclosing seams of payable thickness. The South Gippsland area occupies about 2,000 square miles, and coal mining is being carried on at Wonthaggi, Kilcunda, Outtrim, Jumbunna, and Korumburra.

**Brown coal.** The brown coal beds of Victoria have an approximate area of 1,200 square miles, and are reputed to be the thickest known. At Morwell, 780 feet of coal were passed through in a bore 1,010 feet deep. It is estimated that the average thickness of the coal in the deposits at Morwell, Alberton, and Altona is 50 feet, and that the total deposits in the State amount to 11,000,000,000 tons. These deposits are practically untouched, as the total output of brown coal for all years has been only 9,332,747 tons, valued at £1,426,752, nearly all of which has been produced at the mines at Morwell and Yallourn under the control of the State Electricity Commission.

**The State  
coal-field.**

The State Coal Mine at Wonthaggi, on the Powlett River, was opened in November, 1909. In June, 1911, the control of the mine was transferred to the Railways Commissioners. The area reserved for mining is about 17 square miles. Boring has proved that about 28,000,000 tons of coal existed in the central area of 5 square miles. The output of coal for the year ended 31st December, 1930, was 637,261 tons, valued at £732,850. The total output up to the end of 1930 was 9,935,066 tons, valued at £8,591,557. The average number of men employed at the mine throughout the year ended 31st December, 1930, was 1,795.

**Victorian  
coal  
production  
and value.**

The quantity of coal, exclusive of brown coal, raised in Victoria up to the end of 1930 was 14,600,187 tons, valued at £11,642,682. The total quantity raised prior to 1892, the average annual production for different periods from 1892 to 1930, and the value per ton at the pit's mouth, are given in the following table :—

## COAL PRODUCTION AND VALUE PER TON.

Period.	Average Annual Production.	Average Annual Value per ton at pit's mouth.
	tons.	s. d.
Prior to 1892 .. .. .	*77,914	18 8
1892-1900 .. .. .	184,517	9 11
1901-10 .. .. .	168,548	11 8
1911-15 .. .. .	608,512	9 2
1916-20 .. .. .	437,833	15 11
1921-25 .. .. .	520,705	22 8
1926 .. .. .	591,001	22 3
1927 .. .. .	684,245	22 4
1928 .. .. .	658,323	22 2
1929 .. .. .	703,828	23 1
1930 .. .. .	703,487	23 0

\* Total production up to date mentioned.

The quantities of coal produced in the other States in 1930 were as follows :—New South Wales, 7,093,055 tons; Queensland, 1,094,676 tons; Western Australia, 501,425 tons; and Tasmania, 138,716 tons.

**Mining  
accidents.**

The numbers of fatal and non-fatal accidents in gold and coal mines during the last five years are shown below. Only those non-fatal accidents have been recorded which rendered the injured unfit for work for a period of at least fourteen days.

## MINING ACCIDENTS, 1926 TO 1930.

Year.	Gold Mines.			Coal Mines.		
	Miners Employed.	Persons Killed.	Persons Injured.	Miners Employed.	Persons Killed.	Persons Injured.
1926 .. ..	1,967	5	14	2,939	2	6
1927 .. ..	1,126	1	1	2,492	4	7
1928 .. ..	655	2	1	2,224	2	5
1929 .. ..	864	2	..	2,251	2	8
1930 .. ..	942	..	1	2,267	2	13

As a result of gold mining accidents during the last five years 10 persons were killed, and 17 were injured and rendered unfit for work for a period of at least fourteen days. These numbers were equivalent to annual rates of 1·80 and 3·06 respectively per 1,000 employed. Coal mining accidents during the same period accounted for 12 deaths, and 39 injuries resulting in disablement for at least fourteen days, these being equal to yearly rates of 0·99 and 3·20 respectively per 1,000 employees.

**Quarries.** The quantity and value of stone raised from Victorian quarries during the last five years were as set forth in the following table:—

## QUARRIES, 1926-27 TO 1930-31.

Year ended June—	Number of Quarries.	Quantity of Stone Operated on—				Approximate Value of Stone Raised.
		Bluestone.	Sandstone.	Granite.	Limestone.	
		c. yds.	c. yds.	tons.	c. yds.	£
1927 ..	116	1,941,739	8,368	6,848	308,095	700,200
1928 ..	108	1,797,523	3,904	5,091	289,478	652,800
1929 ..	99	1,487,410	3,633	6,893	250,253	602,900
1930 ..	84	1,515,559	8,307	10,846	255,015	624,600
1931 ..	81	828,406	6,471	8,666	145,973	324,800

In 1930-31 the number of persons employed in quarries was 1,216, and the wages paid amounted to £235,094. For 1931, the figures do not include the employees' and wages connected with asphaltting and tar-paving works, particulars of which will be found on page 377.



## MANUFACTURING IN VICTORIA.

It can be said with confidence that the State of Victoria has advantages which should make possible great development in manufacturing industries.

A comparatively compact territory with a temperate climate producing a rich variety of raw materials, an intelligent labour supply supported by almost unlimited power resources, and a growing home market served by an ever-increasing network of railways and other communications leave few other essential requirements except the attraction of capital into the industries, the efficient organization of production, and the extension of markets for the product.

**Industrial progress.** Statistical records of factories date from 1850, when the number of factories in Victoria was 68. In 1900 the total had reached 3,097, employing 64,207 persons, and fairly regular expansion has since taken place concurrent with the increase in the population and consequent extension of the home market, until in 1930-31 the total number of factories was 8,199, employing 126,016 persons.

Figures for the years 1927-28, 1928-29, and 1929-30 showed a decreasing tendency obscured to some extent by the inclusion of statistics relating to bakeries which had not previously been collected.

For the year 1930-31, however, the figures show that a decided check has been given to industrial expansion in Victoria due both directly and indirectly to the world-wide fall in values of primary products. The Australian manufacturer depends almost wholly on the local market and this has been seriously affected by the reduced spending of primary producers and others. This reduced demand, superimposed upon already falling prices due to lower costs of raw materials, has tended to thrust further downward the value of output of secondary industries.

The volume of production, however, has been sustained and even increased in some industries, notably tobacco and flour, and in butter factories, but in other industries, particularly brick manufacturing and sawmilling, and others connected with the building trade, severe decreases in quantity output have occurred.

In comparison with the year 1929-30 the number of factories increased by four, the average number of persons employed decreased by 24,993, and the value of output decreased by £29,385,304 (23·9 per cent.). This latter amount was contributed to by a fall of £16,390,192 (24·5 per cent.) in the cost of raw materials, of £7,237,846 (23·7 per cent.) in salaries and wages paid, and of £846,252 (24·6 per cent.) in the cost of fuel and light.

The appended table summarizes particulars which indicate the growth of manufacturing industry since 1911. The figures for the past four years have been increased by the inclusion of statistics relating to the bakery industry which are referred to above, and allowance for this should be made when comparing the figures for the last four years with those of previous years.

## GROWTH IN THE MANUFACTURING INDUSTRIES.

Year.	Number of Factories	Number of Persons employed.	Value of Plant, Machinery, Land, and Buildings.	Amount of Salaries and Wages paid.	Value of Materials used (including containers).	Value of Output.
1	2	3	4	5	6	7
			£	£	£	£
1911 ..	5,126	111,948	18,257,889	8,911,019	25,029,525	41,747,863
1912 ..	5,263	116,108	19,457,795	10,102,244	27,002,302	45,410,773
1913 ..	5,613	118,744	20,775,738	10,714,336	28,465,699	47,936,647
1914 ..	5,650	118,399	21,975,646	11,099,940	28,986,694	49,439,985
1915 ..	5,413	113,834	22,529,072	11,036,345	30,728,743	51,466,093
1916-17..	5,445	116,970	23,784,289	11,833,517	37,103,350	60,047,284
1917-18..	5,627	118,241	25,460,282	12,502,601	42,133,636	67,066,715
1918-19..	5,720	122,349	27,318,735	14,080,403	52,098,737	80,195,677
1919-20..	6,038	136,522	30,804,520	17,702,173	65,563,104	101,475,363
1920-21..	6,532	140,743	35,392,735	21,377,216	65,401,425	106,008,294
1921-22..	6,753	144,876	40,992,280	23,846,495	60,352,561	106,243,181
1922-23..	7,096	152,625	46,423,240	25,457,192	62,568,163	111,286,343
1923-24..	7,289	156,162	53,196,475	27,472,084	62,217,874	113,921,927
1924-25..	7,425	154,158	61,031,975	29,057,052	65,205,233	118,177,398
1925-26..	7,461	152,959	60,396,500	29,329,400	67,164,445	119,986,439
1926-27..	7,690	161,639	63,850,005	31,822,589	69,816,935	127,397,951
1927-28..	8,245	160,357	67,507,020	32,087,851	69,637,778	128,465,317
1928-29..	8,197	156,568	69,909,370	31,533,586	70,100,456	127,897,463
1929-30..	8,195	151,009	72,011,020	30,517,535	66,770,302	122,811,099
1930-31..	8,199	126,016	70,990,071	23,279,689	50,380,110	93,425,795

NOTE.—Up to the year 1915 inclusive the statistics relate to the calendar year; for subsequent years they relate to the year ending 30th June.

Prior to 1924-25, column 5, Salaries and Wages Paid, was not inclusive of amounts taken by working proprietors as drawings.

The first Factories Act in Victoria was passed in 1873, and since that year many other Acts dealing with the subject have been placed upon the statute-book. The *Factories and Shops Act 1928* consolidated all Acts passed prior to that date. The general provisions of factory legislation, including "Wages Boards," are fully dealt with in Part VII., "Social Condition," of this *Year-Book*.

Statistics Act  
1928.

Statistics relating to the manufacturing industries of Victoria are collected by the Government Statist in accordance with the provisions of the *Statistics Act 1928*.

**Added Value.** In estimating the relative importance of various industries or the value of manufacturing industry as a whole, the method used is to calculate the value added in the process of manufacture, termed "added value." This is arrived at in the following way:—From the value of output of each industry are deducted the most important items of manufacturing expense such as costs of raw materials, containers, fuel and light, repairs to plant and machinery, replacement of tools, and any other important cost of manufacture, the difference being the value added to raw materials in the process of manufacture, and representing the fund available for the payment of wages, rent, interest, minor expenses, and profit.

It is considered that an inaccurate idea would be obtained by using the total value of output of manufacturing industries in year to year comparisons, owing to the duplication of materials used, the finished product of one process of manufacture forming, as it often does, the raw material for another. Woollen manufactures might be cited as an example. Greasy wool forms the raw material for the woolscouring industry, the product of which is scoured wool. This is afterwards combed into wool tops which are used in the spinning mills for the manufacture of yarn. In due course the yarn is woven into cloth, the raw material for the clothing industry. If these processes are carried out separately in different factories it is evident that the value of the wool would be counted five times by using value of output as the basis for annual comparisons of manufacturing production.

Added value prevents this double counting, gives a truer picture of the relative economic importance of industries, and also provides a good basis for estimating and comparing productive efficiency in manufacturing.

As added value is based on value of output, the added value per employee is affected not only by output per employee, but also by the price obtained, and should, therefore, in a comparison of the results of different years, be corrected to allow for variations in price levels. Another important factor is the quantity and efficiency of the machinery used in the process of manufacture.

The following table shows the value added per person employed in each class of manufacturing industry for the year ended 30th June, 1931 :—

## VALUE ADDED, 1930-31.

Class of Industry.	Average Number of Persons Employed.	Value Added.	Value Added per Person Employed.
		£	£ s. d.
1. Treatment of non-metalliferous mine and quarry products ..	1,505	677,410	450 2 2
2. Bricks, pottery, glass, &c. ..	1,831	621,708	339 10 11
3. Chemicals, dyes, explosives, paint, oils, and grease .. ..	4,723	2,715,298	574 18 2
4. Industrial metals, machines, implements and conveyances ..	26,193	7,468,526	285 2 8
5. Precious metals, jewellery, and plate .. ..	941	241,297	256 8 6
6. Textiles and textile goods (not dress) .. ..	14,719	3,380,396	229 13 3
7. Skins and leather (not clothing or footwear) .. ..	2,738	881,772	322 1 0
8. Clothing .. ..	30,157	5,958,917	197 11 11
9. Food, drink, and tobacco ..	20,024	9,408,144	469 16 10
10. Woodworking and basketware ..	4,483	1,314,056	293 2 5
11. Furniture, bedding, &c. ..	2,674	641,435	239 17 7
12. Paper, stationery, printing, book-binding, &c. .. ..	10,641	3,238,733	304 7 3
13. Rubber .. ..	2,051	666,826	325 2 5
14. Musical instruments .. ..	298	91,658	307 11 7
15. Miscellaneous products .. ..	1,052	294,879	280 6 1
16. Heat, light, and power .. ..	1,986	1,812,913	912 16 11
Total .. ..	126,016	39,413,968	312 15 5

The table hereunder has been compiled in an endeavour to supply comparable figures of the value added per employee in Victorian factories for each of the past ten years.

In recent years various alterations have been made in the method of arriving at this important concept, following recommendations by Australasian statisticians in annual conferences, the objects of which are to improve the statistics and to obtain uniformity throughout the Commonwealth.

The result is that any calculations of added value based on statements appearing in *Year-Books* of earlier date than 1928-29 would not be strictly comparable.

The value added per employee has been recalculated, using the year 1928-29 as base and adjusting the previous years.

Prior to 1927-28, bakeries were not included, but the effect of their inclusion is relatively small. In 1927-28, value added per employee in bakeries was £371 12s. 11d., in 1928-29 £410 18s. 8d., in 1929-30 £415 4s. 1d., and in 1930-31 £377 7s. 1d. To exclude these from the aggregate figures would reduce the added value per employee to £334 14s. 3d. in 1927-28, to £337 2s. 9d. in 1928-29, to £337 18s. 9d. in 1929-30, and to £311 5s. 3d. in 1930-31.

### VALUE ADDED IN MANUFACTURING.

Year.	Value of Output.	Expenses of Manufacturing.*	Value Added.	Average Number of Persons Employed.	Value Added per Person Employed.
1.	2.	3.	4.	5.	6.
	£	£	£		£ s. d.
1920-21 ..	106,008,294	68,878,822	37,129,472	140,743	263 16 2
1921-22 ..	106,243,181	63,978,488	42,264,693	144,876	291 14 7
1922-23 ..	111,286,343	66,459,537	44,826,806	152,625	293 14 1
1923-24 ..	113,921,927	66,410,960	47,510,967	156,162	304 4 10
1924-25 ..	118,177,398	69,611,632	48,565,766	154,158	315 0 9
1925-26 ..	119,986,439	71,784,661	48,201,778	152,959	315 2 7
1926-27 ..	127,397,951	74,774,770	52,623,181	161,639	325 11 2
1927-28 ..	128,465,317	74,667,052	53,798,265	160,357	335 9 9
1928-29 ..	127,897,463	74,872,184	53,025,279	156,568	338 13 5
1929-30 ..	122,811,099	71,551,731	51,259,368	151,009	339 8 11
1930-31 ..	93,425,795	54,011,827	39,413,968	126,016	312 15 5

\* Expenses of manufacturing includes the following costs only :—Raw materials, containers, fuel and light, tools replaced, repairs to plant and machinery, lubricating oil, and water.

Column 3 deducted from column 2 gives column 4, which when divided by column 5 gives column 6.

**Production of different industries, 1930-31.** This year a new classification of industries for statistical purposes, as shown in the next table, has been adopted by the Statisticians of Australia. A factory is defined as an establishment employing on the average four persons or more, or an establishment employing less than four persons where machinery is worked by other than manual power, whether the business carried on is that of making or repairing for the trade (wholesale or retail) or for export. The table shows for the year 1930-31 the number of factories in each industry, the horse-power used, the average number of persons employed, the wages paid, the values of materials and fuel and light used, and the value of articles produced or work done, and has been compiled from returns rendered compulsorily by all factory proprietors :—

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1930-31.

Nature of Industry.	Number of Factories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid.	Fuel and Light used.	Materials used, including Containers.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
<i>Class I.—Treatment of Non-metallic Mine and Quarry Products.</i>										
Lime, plaster, and asphalt ..	65	1,647	50	418	..	11	100,949	16,734	148,162	353,646
Marble, slate, &c. ..	40	932	49	332	..	8	91,494	2,905	55,130	185,889
Cement and cement goods ..	37	4,169	14	420	..	6	101,964	93,623	146,458	496,505
Other ..	6	12,470	2	193	..	2	53,509	35,176	85,538	272,368
Total ..	148	19,218	115	1,363	..	27	347,916	148,438	435,288	1,308,408
<i>Class II.—Bricks, Pottery, Glass, &amp;c.</i>										
Bricks, tiles, and firebricks ..	44	6,848	22	567	..	27	120,390	46,704	28,539	261,215
Earthenware, china, and porcelain ..	21	1,352	17	488	..	46	100,943	26,592	20,749	209,628
Glass, including bottles ..	21	2,420	13	582	..	21	146,169	41,692	112,364	434,862
Modelling, &c. ..	7	9	11	36	..	1	10,777	148	3,669	16,244
Total ..	93	10,629	63	1,673	..	95	378,279	115,136	165,321	921,949

Production.

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1930-31—*continued.*

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Nature of Industry.	Number of Factories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid.	Fuel and Light used.	Materials used, including Containers.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
						£	£	£	£	
<i>Class III.—Chemicals, Dyes, Explosives, Paint, Oils and Grease.</i>										
Chemicals, drugs, and medicines ..	54	3,551	17	588	3	533	231,509	19,744	545,572	1,080,210
Explosives .. .. .	8	863	..	346	..	146	113,081	17,187	192,177	449,148
White lead, paints, and varnish ..	20	493	14	68	..	16	21,328	1,523	62,634	114,853
Oils, vegetable (including oilcake) ..	20	226	6	89	..	4	16,624	1,679	65,585	115,420
Oils, mineral .. .. .	8	462	5	193	..	3	45,314	16,961	444,111	754,027
Boiling-down, tallow refining, and bone milling works .. .. .	23	1,124	15	258	..	4	70,778	19,698	159,939	295,860
Soap and candles .. .. .	18	569	8	470	..	147	122,380	26,947	499,679	1,030,955
Chemical fertilizers .. .. .	7	2,022	1	603	..	4	149,037	23,084	713,972	1,264,394
Inks, polishes, &c. .. .. .	25	500	13	173	..	112	65,858	2,607	236,555	404,904
Other .. .. .	6	640	5	275	..	604	140,491	15,624	287,088	649,148
Total .. .. .	189	10,450	84	3,063	3	1,573	976,400	150,054	3,207,312	6,158,919

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*Class IV. — Industrial Metals,  
Machines, Implements, and Con-  
veyances.*

Smelting, refining, &c., of iron and steel	188	7,041	186	2,352	2	184	538,474	56,051	555,040	1,360,440
Engineering (not marine or electrical)	299	7,148	303	3,867	1	116	991,611	54,465	1,031,833	2,480,840
Electrical installations and apparatus	96	1,004	62	934	..	119	227,179	8,846	251,097	612,152
Tramcars and railway carriages, &c.	24	4,671	..	5,820	..	6	1,352,678	73,136	1,209,804	3,037,441
<b>Motor vehicles and cycles—</b>										
(i) Construction and assembly ..	26	519	6	449	..	13	100,638	4,421	17,382	162,335
(ii) Repairs .. .. .	752	2,104	556	2,173	..	88	558,109	26,155	19,390	771,432
Motor-bodies .. .. .	61	1,426	68	887	..	32	225,642	6,616	213,948	522,007
Horse-drawn vehicles .. .. .	169	598	179	445	..	13	115,048	5,452	74,405	226,650
Cycle and motor accessories .. .. .	12	406	11	123	..	14	27,715	2,108	25,247	67,916
Ship and boat building and repairing, marine engineering .. .. .	10	1,746	9	303	..	1	74,365	3,659	20,136	106,293
Cutlery and small tools (not machine tools) .. .. .	26	257	23	112	..	6	28,078	1,389	8,160	48,459
Agricultural implements .. .. .	73	2,590	65	1,886	..	83	418,845	28,974	357,492	938,990
Brass and copper .. .. .	91	819	91	710	..	28	167,480	9,305	110,523	343,863
Galvanized-iron working and tin- smithing .. .. .	102	1,065	87	1,399	..	267	303,497	14,317	513,491	1,009,825
Wireworking (including nails) .. .. .	31	1,078	34	428	..	32	102,378	4,954	226,241	402,520
Art metal works .. .. .	15	258	13	141	..	6	36,086	1,137	26,723	83,704
Stoves and ovens .. .. .	23	604	28	312	..	15	69,701	6,278	54,885	173,529
Gas fittings and meters .. .. .	7	106	2	213	..	1	51,497	1,776	31,753	108,449
Wireless apparatus .. .. .	11	80	6	326	..	50	57,354	1,707	117,327	206,621
Other metal works .. .. .	64	859	36	445	..	26	91,430	7,197	97,500	247,253
<b>Total .. .. .</b>	<b>2,080</b>	<b>34,379</b>	<b>1,765</b>	<b>23,325</b>	<b>3</b>	<b>1,100</b>	<b>5,537,805</b>	<b>317,943</b>	<b>4,962,377</b>	<b>12,910,719</b>

*Class V.—Precious Metals, Jewellery,  
and Plate.*

Jewellery .. .. .	69	156	63	211	1	84	61,542	1,513	86,920	180,421
Watches and clocks .. .. .	9	6	4	39	..	3	9,458	184	2,011	14,260
Gold, silver, and electroplate .. .. .	35	665	32	452	..	52	94,664	5,886	59,753	205,874
<b>Total .. .. .</b>	<b>113</b>	<b>827</b>	<b>99</b>	<b>702</b>	<b>1</b>	<b>139</b>	<b>165,664</b>	<b>7,583</b>	<b>148,684</b>	<b>400,555</b>



FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1930-31—*continued.*

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Nature of Industry.	Number of Factories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid.	Fuel and Light used.	Materials used, including Containers.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
							£	£	£	£
<i>Class VI.—Textiles and Textile Goods (not Dress).</i>										
Cotton .. .. .	12	465	4	113	..	328	65,258	3,189	144,522	255,473
Wool, worsted and shoddy (including wool scouring) .. .. .	46	14,539	31	2,777	1	3,373	905,987	132,807	1,629,668	3,289,288
Hosiery and other knitted goods .. .. .	199	2,583	124	1,700	61	4,901	895,042	44,087	1,660,988	3,186,368
Rope and cordage .. .. .	10	2,298	7	452	..	295	112,691	10,378	297,536	534,260
Canvas goods (tents, tarpaulins, and sailmaking) .. .. .	20	38	18	75	1	64	31,016	552	105,760	168,235
Bags and sacks .. .. .	17	114	13	59	..	72	22,955	476	83,569	122,424
Other .. .. .	3	534	..	78	..	172	32,985	3,217	82,565	151,540
<b>Total .. .. .</b>	<b>307</b>	<b>20,571</b>	<b>197</b>	<b>5,254</b>	<b>63</b>	<b>9,205</b>	<b>2,065,934</b>	<b>194,706</b>	<b>4,004,608</b>	<b>7,707,588</b>

*Class VII.—Skins and Leather (not Clothing or Footwear).*

Furs, skins, leather—											
Furriers and fur dressing ..	57	103	56	131	13	209	61,396	1,255	179,377	281,240	
Fellmongery .. .. .	16	756	8	231	..	..	57,628	8,572	354,486	488,675	
Tanning, currying, and leather dressing .. .. .	53	3,676	60	1,311	..	35	322,373	28,641	988,910	1,517,087	
Saddlery, harness, bags, trunks, &c.—											
Saddlery, harness, and whips ..	10	54	11	80	..	25	19,577	230	24,638	52,336	
Machine belting .. .. .	5	59	2	42	..	2	9,541	397	37,293	63,984	
Bags, trunks, other leather goods ..	48	170	55	233	1	233	80,697	1,793	128,511	254,890	
Total .. .. .	189	4,818	192	2,028	14	504	551,212	40,888	1,713,215	2,658,212	

*Class VIII.—Clothing.*

Tailoring and slop clothing ..	438	603	396	1,190	35	4,691	833,733	18,405	1,340,556	2,469,228
Waterproof and oilskin clothing ..	8	81	4	54	..	165	29,669	878	45,844	88,226
Dressmaking .. .. .	366	542	106	242	266	4,649	634,925	9,938	1,189,995	2,077,261
Millinery .. .. .	76	95	17	70	24	1,214	146,464	2,936	252,567	472,016
Shirts, collars, and underclothing ..	148	1,454	79	390	46	3,888	493,277	11,490	1,093,821	1,916,182
Handkerchiefs, ties, and scarves ..	16	35	8	24	3	304	39,698	621	108,041	183,205
Hats and caps .. .. .	47	497	40	385	7	740	175,266	8,124	240,571	483,933
Boots and shoes .. .. .	175	2,812	205	4,459	9	3,949	1,400,624	29,857	1,917,444	3,974,195
Boot repairing (including bespoke work) .. .. .	415	476	383	270	1	10	111,696	2,995	75,749	233,171
Boot accessories .. .. .	27	610	23	316	..	113	85,759	3,328	195,410	349,661
Umbrellas and walking sticks ..	5	20	3	29	..	59	12,440	188	26,608	45,678
Dyeworks and cleaning .. .. .	28	422	30	199	5	209	80,470	9,771	24,506	157,177
Other .. .. .	22	196	17	99	7	725	102,602	1,666	197,677	383,651
Total .. .. .	1,771	7,843	1,311	7,727	403	20,716	4,146,623	100,197	6,708,789	12,833,584

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1930-31—*continued.*

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Nature of Industry.	Number of Factories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid.	Fuel and Light used.	Materials used, including Containers.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
						£	£	£	£	
<i>Class IX.—Food, Drink, and Tobacco.</i>										
Grain milling .. .. .	35	5,422	24	842	..	22	229,601	52,165	2,802,160	3,461,548
Cereal foods and starch .. ..	24	3,352	10	522	..	2	162,248	42,531	773,430	1,315,704
Chaff-cutting and corn crushing ..	135	2,073	37	343	..	8	81,617	9,178	60,983	193,620
Bakeries .. .. .	468	1,980	417	2,082	74	298	652,387	75,878	1,566,851	2,745,322
Biscuits .. .. .	9	427	11	523	1	418	135,660	18,775	267,285	581,656
Sugar confectionery (including chocolates) .. .. .	58	5,255	58	1,177	11	1,262	396,298	38,229	1,012,401	1,776,852
Jam, fruit, and vegetable canning ..	27	1,583	12	820	..	588	235,158	17,747	905,240	1,395,741
Pickles, sauces, and vinegar .. ..	13	451	10	123	1	93	41,596	4,559	117,044	221,822
Bacon curing .. .. .	19	1,974	22	451	1	24	130,692	20,190	650,101	954,873
Butter and cheese factories, &c. ..	165	7,994	18	1,938	..	279	542,374	143,454	6,599,879	8,077,608
Meat and fish preserving, meat extracts .. .. .	18	4,367	5	944	..	74	250,067	27,357	1,628,637	2,118,757
Condiments, coffee, and spices, &c. ..	43	679	6	268	..	2	84,831	7,033	375,998	561,563
Ice and refrigerating .. .. .	58	4,760	36	175	..	6	58,306	33,878	15,323	170,522
Aerated waters, cordials, &c. .. ..	108	800	77	479	..	2	131,605	6,373	219,399	461,943
Breweries .. .. .	9	4,006	..	1,077	..	6	369,463	51,378	808,133	1,935,542
Distilleries .. .. .	8	756	2	118	..	2	33,495	12,230	120,497	291,299

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Malting .. .. .	19	618	3	233	..	5	76,818	13,281	266,912	436,571
Tobacco, cigars, cigarettes, and snuff	12	793	14	908	2	776	343,128	9,097	1,293,598	2,160,007
Dried fruits .. .. .	24	777	1	449	..	123	101,722	3,863	87,598	250,033
Ice cream .. .. .	56	800	19	97	2	24	27,791	7,339	76,361	154,914
Sausage skins .. .. .	6	32	5	222	..	1	56,870	675	79,704	163,944
Other .. .. .	19	3,247	4	716	..	56	177,269	57,588	3,522,159	4,149,973
<b>Total .. .. .</b>	<b>1,333</b>	<b>52,146</b>	<b>791</b>	<b>14,507</b>	<b>98</b>	<b>4,628</b>	<b>4,318,096</b>	<b>652,798</b>	<b>23,249,693</b>	<b>33,579,814</b>
<i>Class X.—Woodworking and Basket-ware.</i>										
Sawmills (forest) .. .. .	149	3,236	176	892	..	4	214,312	3,867	49,320	327,333
Sawmills (town) .. .. .	117	6,640	65	1,135	..	21	260,008	14,265	435,152	824,762
Joinery .. .. .	183	2,363	119	644	..	29	165,765	6,375	184,101	436,536
Cooperage .. .. .	11	428	7	228	..	1	72,689	1,572	55,452	159,965
Boxes and cases .. .. .	49	1,717	37	418	2	9	99,479	5,205	210,755	384,028
Woodturning, woodcarving, &c. ..	81	1,302	64	343	..	14	78,284	4,096	75,724	194,177
Basket and wickerware, seagrass and bamboo furniture .. .. .	12	113	10	100	..	1	15,408	615	26,538	52,154
Perambulators .. .. .	11	57	19	97	..	6	20,156	448	24,076	54,074
Other .. .. .	3	64	4	25	..	13	5,444	1,203	5,822	15,456
<b>Total .. .. .</b>	<b>616</b>	<b>15,920</b>	<b>501</b>	<b>3,882</b>	<b>2</b>	<b>98</b>	<b>931,545</b>	<b>37,646</b>	<b>1,066,940</b>	<b>2,448,485</b>
<i>Class XI.—Furniture, Bedding, &amp;c.</i>										
Billiard tables, cabinet and furniture making, and upholstery .. .. .	306	3,441	300	1,565	..	143	344,988	14,254	403,121	895,596
Bedding and mattresses .. .. .	35	1,158	23	210	2	146	64,899	3,757	163,836	268,863
Furnishing, drapery .. .. .	17	53	5	57	2	118	27,241	450	51,447	96,723
Picture frames .. .. .	11	32	9	45	..	9	11,375	266	11,711	27,527
Window blinds, verandah blinds, &c. ..	9	18	6	12	..	22	6,558	108	17,166	27,065
<b>Total .. .. .</b>	<b>378</b>	<b>4,702</b>	<b>343</b>	<b>1,889</b>	<b>4</b>	<b>438</b>	<b>455,061</b>	<b>18,835</b>	<b>647,281</b>	<b>1,315,774</b>

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1930-31—*continued.*

Nature of Industry.	Number of Factories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid.	Fuel and Light used.	Materials. used including Containers.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
						£	£	£	£	
<i>Class XII.—Paper, Stationery, Printing, Bookbinding, &amp;c.</i>										
Envelopes, stationery, paper, paper boxes, bags, &c. .. ..	76	5,333	49	1,407	2	1,296	457,451	60,365	773,336	1,734,699
Newspapers, periodicals, &c. ..	122	3,337	117	1,918	2	78	610,081	23,750	730,698	1,500,393
General printing and bookbinding, &c.—										
(a) Government .. ..	3	910	..	763	..	286	216,304	4,959	111,205	386,218
(b) Other .. ..	348	3,244	406	2,627	5	1,123	835,275	20,766	706,464	1,966,167
Die sinking and engraving .. ..	25	87	21	131	..	10	32,819	736	9,023	49,628
Electrotyping and stereotyping ..	5	32	8	21	..	2	5,817	338	1,784	9,782
Photo engraving, lithography, photo lithography .. ..	31	74	36	197	6	93	68,420	2,019	28,000	120,483
Other .. ..	6	10	3	27	..	7	7,014	46	2,232	12,426
<b>Total .. ..</b>	<b>616</b>	<b>13,027</b>	<b>640</b>	<b>7,091</b>	<b>15</b>	<b>2,895</b>	<b>2,233,181</b>	<b>112,979</b>	<b>2,362,742</b>	<b>5,779,796</b>
<i>Class XIII.—Rubber Goods ..</i>	113	11,926	77	1,209	..	765	394,201	69,861	646,354	1,412,297

*Class XIV.—Musical Instruments.*

Pianos, piano-players, organs .. ..	16	321	9	212	..	10	46,858	1,086	43,673	115,663
Other .. ..	2	270	..	52	..	15	14,943	1,725	17,585	40,652
Total .. ..	18	591	9	264	..	25	61,801	2,811	61,258	156,315

*Class XV.—Miscellaneous Products.*

Brooms and Brushes .. ..	17	174	15	196	..	60	45,711	1,128	82,983	159,643
Surgical, optical, and other scientific instruments .. ..	48	131	29	185	1	12	50,501	1,512	39,302	111,812
Toys, games, and sports requisites .. ..	28	324	26	213	2	77	57,512	2,453	106,097	213,244
Other .. ..	13	277	7	135	4	90	33,436	2,703	49,819	101,013
Total .. ..	106	906	77	729	7	239	187,160	7,796	278,201	585,712

*Class XVI.—Heat, Light, and Power.*

Electric light and power—										
(a) Government .. ..	11	185,069	..	753	..	1	194,803	382,782	974	1,140,157
(b) Local authority .. ..	47	26,449	..	269	..	1	74,390	50,162	..	247,947
(c) Companies .. ..	33	10,249	5	133	..	..	37,592	62,365	..	217,034
Gas works—										
(a) Local authority .. ..	9	92	..	65	..	4	18,195	3,293	32,624	72,883
(b) Companies .. ..	28	2,957	..	752	..	1	202,432	109,991	686,501	1,560,956
Other .. ..	1	830	..	2	..	..	499	3,211	1,948	8,691
Total .. ..	129	225,646	5	1,974	..	7	527,911	611,804	722,047	3,247,668
Total all Classes .. ..	8,199	433,599	6,269	76,680	613	42,454	23,279,689	2,589,475	50,380,110	93,425,795

Production.

## INDIVIDUAL INDUSTRIES.

The salient features of the chief industries are set forth in the succeeding pages

Tanning was one of the earliest industries established in Victoria; in the year 1850 there were thirteen tanneries in the State. Particulars relating to the industry for the year 1921-22, and the past four years are given in the following table:—

Item.	1921-22.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	48	42	42	44	53
Number of persons engaged ..	2,384	1,899	1,879	1,838	1,406
Horsepower of engines used ..	3,568	3,948	4,005	3,840	3,676
Value of plant and machinery £	319,015	399,160	366,680	336,835	309,960
Value of land and buildings £	357,500	486,370	472,830	454,580	455,415
Salaries and wages paid. £	*501,604	476,559	466,000	449,027	322,373
Fuel, light, and power ..	41,298	39,905	33,824	33,288	28,641
Value of materials used ..	1,779,168	1,724,767	1,397,630	1,417,919	988,910
Value of output ..	2,740,429	2,623,798	2,722,296	2,197,709	1,517,087
Value added to materials ..	919,963	831,315	764,392	720,999	482,447
Materials treated—					
Cow and ox hides ..	792,974	539,327	624,681	638,915	504,528
Calf hides ..	512,515	465,543	455,902	429,373	276,672
Sheep and other skins ..	2,042,817	1,275,843	1,130,352	1,048,002	1,024,903
Bark used .. tons	13,852	9,792	10,931	11,709	8,725
Sole leather produced .. lbs.	†	11,959,650	11,916,309	12,624,029	10,334,659

\* Exclusive of drawings of working proprietors. † Not available.

The value of leather imported into Victoria from oversea countries during the year ended 30th June, 1931, was £34,727, and the value of leather exported in the same period was £111,458.

The manufacture of soap was also one of the earliest of Victorian industries. In the year 1850 the recorded production of the four establishments then operating was 5,840 cwt. of soap. The following table indicates the development which has since taken place.

Item.	1921-22.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	17	17	17	17	18
Number of persons engaged ..	742	666	671	653	625
Horsepower of engines used ..	493	824	851	828	569
Value of plant and machinery £	174,460	231,700	240,640	246,020	225,097
Value of land and buildings £	155,640	236,800	188,840	204,895	193,885
Salaries and wages paid .. £	* 139,519	141,241	141,107	138,450	122,380
Fuel, light and power ..	37,378	35,461	36,028	31,282	26,947
Value of materials used ..	625,335	635,309	703,126	636,295	499,679
Value of output ..	1,096,955	1,140,394	1,230,451	1,138,963	1,030,955
Value added to materials ..	433,742	437,548	461,697	455,107	481,430
Materials treated—					
Tallow .. cwt.	182,893	196,304	215,519	197,953	186,843
Alkali .. lbs.	5,554,640	7,857,046	9,029,663	8,738,272	8,437,976
Copra oil .. cwt.	18,811	26,281	27,182	26,112	25,421
Output—					
Soap household .. cwt.		282,038	298,343	285,324	281,194
" Sand .. "		21,064	48,656	28,346	29,450
" Toilet .. "		20,628	14,057	14,464	14,887
Soda crystals .. lbs.	1,633,632	3,634,988	3,709,104	3,488,576	3,466,400

\* Exclusive of drawings of working proprietors.

Other items of manufacture include soft soap, wool scouring soap, soap extract, candles, glycerine, &c.

The imports from oversea countries in 1930-31 included 152,023 lbs. of soap valued at £5,145, and 25,321 lbs. of candles, &c., valued at £1,529.

These industries are grouped because some establishments which produce bricks also manufacture tiles, and others which produce tiles, also manufacture pipes and pottery. Factories manufacturing cement pipes and tiles are not included herein, but are grouped with cement and cement products.

Item.	1921-22.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	93	83	76	77	65
Number of persons engaged ..	2,655	2,524	2,321	2,165	1,167
Horse-power of engines used ..	5,401	8,827	8,459	8,838	8,200
Value of plant and machinery £	366,900	519,710	503,770	499,205	468,456
Value of land and buildings £	367,885	545,260	564,270	581,765	534,554
Salaries and wages paid £	*495,288	576,593	538,952	483,873	221,333
Fuel, light, and power £	180,920	240,254	223,231	214,917	73,296
Value of materials used £	87,573	156,492	142,869	125,978	49,288
Value of output ..	£ 999,383	1,326,205	1,171,830	1,084,452	470,843
Value added to materials £	730,890	874,882	761,318	708,619	331,749
<b>Production—</b>					
Bricks, common ..	No. 169,715,000	198,775,000	179,528,000	162,678,000	25,450,000
Firebricks ..	No. †	5,502,323	3,453,000	3,595,000	314,000
Roofing tiles ..	No. †	12,030,470	9,254,320	8,939,839	861,000
Pipes ..	£ 131,876	171,908	161,771	145,430	80,045
Pottery ..	£ 185,293	177,225	124,839	126,708	75,022

\* Exclusive of drawings of working proprietors. † Not available.

#### Forest saw-mills.

Detailed information in regard to the forest saw-mills of the State for the five years 1926-27 to 1930-31 is given in the table which follows:—

#### FOREST SAW-MILLS, 1926-27 TO 1930-31.

Year.	Number of Mills.	Value of Machinery and Plant in Use.	Persons Employed.	Salaries and Wages Paid.	Victorian Timber Sawn.	
					Quantity.	Value.
		£		£	super ft.	£
1926-27 ..	207	573,550	2,862	597,744	115,813,000	914,334
1927-28 ..	185	516,800	2,528	536,708	100,567,000	732,700
1928-29 ..	171	443,640	1,758	406,582	79,018,000	676,200
1929-30 ..	169	447,080	1,882	430,639	86,145,000	681,625
1930-31 ..	149	350,435	1,072	214,312	42,274,000	310,430

In addition to the forest saw-mills there were 467 other factories working in wood. Particulars relating to these for the year 1930-31 are given on page 383.



**Firewood.** The quantity of timber sawn for firewood consumption in the year 1930-31 was 190,792 tons valued at the saw-mills at £165,148. There is also a large amount of firewood taken from the forests which does not pass through these sawmills, and its value cannot be reliably estimated. The increased use of brown coal briquettes and the extension of the use of gas and electricity for cooking and heating has caused a reduction in the demand for firewood in recent years.

**Agricultural and Dairy Machinery Works.** Agricultural and Dairy Machinery Works have been tabulated jointly since 1925-26, owing to a revision of the classification of Victorian statistics. Comparable figures are therefore available for the past five years only.

AGRICULTURAL AND DAIRY MACHINERY WORKS,  
1926-27 TO 1930-31.

Year.	No. of Factories.	Persons Employed.	Salaries and Wages Paid.	Value of—		
				Fuel and Light Used.	Materials Used.	Output.
			£	£	£	£
1926-27 ..	73	3,820	931,404	51,620	891,930	2,228,570
1927-28 ..	77	3,353	806,978	57,011	801,008	2,003,855
1928-29 ..	71	3,239	762,977	49,243	738,414	1,885,154
1929-30 ..	72	2,639	603,817	41,540	537,545	1,378,287
1930-31 ...	73	2,034	418,845	28,974	357,492	938,990

In the following table particulars of bacon and ham curing establishments are given for the year 1921-22 and the past four years.

BACON CURING.

Item.	1921-22.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	22	21	19	19	19
Number of persons employed ..	477	539	556	544	498
Horse-power of engines used..	1,424	1,825	1,838	1,798	1,974
Value of land, buildings, plant, &c. ..	£ 289,840	340,820	352,260	348,270	349,195
Salaries and wages paid ..	£ 103,783*	145,452	147,369	144,120	130,692
Value of materials used ..	£ 1,089,984	1,097,918	1,109,616	1,043,360	650,101
Value of fuel and light ..	£ 17,785	21,507	21,737	23,075	20,190
Value of output ..	£ 1,366,832	1,426,533	1,409,897	1,367,179	954,873
Pigs slaughtered for curing No.	163,917	210,547	198,131	218,799	208,593
Bacon and ham cured—					
In factories ..	lbs. 15,583,960	19,628,277	18,611,728	18,222,220	17,340,287
On farms ..	lbs. 1,812,838	976,871	789,719	666,317	891,982

\* Excluding drawings of working proprietors.

The number of butter, cheese, and kindred factories in 1930-31 was 165. Of these 133 were making butter, 22 cheese, 3 concentrated milk, 4 condensed milk, 11 powdered milk, 8 casein, and 1 milk sugar. There were also 22 creameries attached to the factories. The following table gives some indication of the value of this industry to the State :—

BUTTER AND CHEESE FACTORIES, 1921-22 to 1930-31.

Year.	Number of Factories.	Value of Machinery, Plant, Land, and Buildings.	Persons Employed.	Salaries and Wages Paid.	Value of Output.
		£		£	£
1921-22 .. ..	188	1,395,425	2,351	492,446	7,115,642
1922-23 .. ..	182	1,509,545	2,278	497,816	7,899,377
1923-24 .. ..	184	1,685,530	2,280	511,001	7,974,676
1924-25 .. ..	186	1,812,525	2,427	565,422*	8,212,788
1925-26 .. ..	183	1,889,475	2,213	528,310*	7,631,400
1926-27 .. ..	182	1,969,280	2,320	552,659*	7,813,409
1927-28 .. ..	179	2,021,330	2,426	572,907*	8,681,454
1928-29 .. ..	169	1,931,360	2,449	582,411*	9,614,084
1929-30 .. ..	163	2,040,058	2,387	586,395*	8,753,102
1930-31 .. ..	165	2,025,267	2,235	542,374*	8,077,608

\* Including amounts drawn by working proprietors.

Further particulars relating to butter and cheese factories will be found under the heading of Dairying on page 356.

BAKERIES (INCLUDING BREAD, PASTRY, AND CAKES, ETC.), 1927-28 to 1930-31.

Statistics relating to the manufacture of bread, pastry, and cakes were first compiled in the year 1928.

Figures for the past four years only are therefore available and cover about 44 per cent. of the establishments, the remaining 56 per cent. being too small to be classified as factories according to the

statistical definition. In 1927-28, 669 small factories, representing the 56 per cent. excluded from the statistics, used 32,889 tons of flour and produced, among other items, 20,851,188 4-lb. loaves of bread.

The total value of output of the industry as stated hereunder includes the value of all articles produced, but details relating to the output of pastry, cakes, pies, scones, &c., have not been tabulated. It must be explained that the value quoted is the wholesale selling value of the goods produced at the factory exclusive of all selling and delivery costs.

### BAKERIES, 1927-28 to 1930-31.

Item.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories .. ..	519	487	464	468
Average number of persons employed ..	3,367	3,248	2,951	2,871
Actual horse-power of engines used ..	1,774	1,822	1,944	1,980
Value of land and buildings .. £	1,025,220	1,087,550	1,019,260	1,036,675
Value of plant and machinery .. £	344,970	368,050	366,290	366,796
Salaries and wages paid .. £	772,704	767,117	719,055	652,387
Value of materials used .. £	2,218,452	2,045,012	1,987,669	1,566,851
Fuel, light, and power used .. £	86,592	84,436	82,347	75,878
Repairs, oil, and water used .. £	19,077	16,828	18,529	19,205
Total output .. .. £	3,575,645	3,480,992	3,313,820	2,745,322
Value added in process of manufac- ture .. £	1,251,524	1,334,716	1,225,275	1,083,388
Value added per person employed .. £	371	411	£415	377
Flour used—short tons .. ..	89,135	90,943	104,069	93,116
Bread made—4-lb. loaves .. ..	52,812,500	54,656,000	53,852,013	54,343,878

Meat freezing, preserving, and meat extract works numbered eighteen in 1930-31, and gave employment to 1,023 hands, the wages paid amounting to £250,067. The approximate value of machinery, plant, land and buildings in that year was £1,021,400. Further details regarding this industry appear on page 382, and particulars of the output for the past five years are given in the following table:—

Item.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Frozen meat—					
Cattle .. .. grs.	41,890	19,500	6,297	7,784	10,798
Sheep .. .. No.	1,346,425	915,545	1,590,573	1,825,019	1,697,947
Rabbits and hares ..	806,294	1,055,976	3,248,558	2,949,796	4,617,406
Poultry .. .. "	1,764	6,234	8,732	4,872	18,462
Preserved meat—					
Beef and mutton .. cwt.	14,880	12,890	9,544	4,628	3,152
Rabbits and hares ..	29	4	3	2	..
Other meats, &c. .. "	3,700	3,335	4,459	2,726	2,631

Imports and exports of meats.

The following statement shows the imports from and exports to oversea countries of frozen and preserved meats, other than bacon and ham, during the year ended 30th

June, 1931:—

## MEATS IMPORTED AND EXPORTED OVERSEA, 1930-31.

Meats.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Frozen—				
Beef .. ..	..	..	673,442 lb.	10,412
Game .. ..	2,182 lb.	98	..	..
Lamb .. ..	..	..	44,050,955 lb.	1,075,532
Mutton .. ..	..	..	12,798,586 „	186,903
Pork .. ..	16,137 lb.	347	2,534,919 „	71,719
Poultry .. ..	66 „	8	9,231 prs.	6,690
Rabbits and Hares .. ..	..	..	2,308,703 prs.	157,665
Other .. ..	..	..	560,805 lb.	14,095
Potted and Concentrated .. ..	18,930 lb.	4,260	..	671
Preserved in tins .. ..	19,468 „	1,096	286,756 lb.	9,206
Sausage Casings .. ..	3,155 cwt.	34,771	9,967 cwt.	120,545
Other .. ..	..	36	..	6,433
Total value .. ..	..	40,616	..	1,659,871

Victorian flour mills produce ample flour, etc., to supply all local requirements and a considerable surplus for export. During the year 1930-31, 190,269 tons of flour, valued at £1,221,250, were exported from Victoria to countries beyond Australia. The following table gives particulars of the industry for the year 1921-22 and the past four years:—

Item.	1921-22.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	45	42	41	38	35
Number of persons engaged ..	997	971	985	898	888
Horse-power of engines used ..	5,017	5,934	5,982	5,591	5,422
Value of plant and machinery £	360,540	652,300	654,510	580,835	527,055
Value of land and buildings £	249,295	486,400	468,600	431,710	431,723
Salaries and wages paid £	*228,195	267,347	269,913	247,692	229,001
Fuel, light, and power £	49,459	53,027	53,677	52,163	52,165
Value of materials used £	4,951,120	4,866,676	4,593,331	4,355,538	2,802,100
Value of output .. £	5,759,281	5,665,103	5,378,763	5,106,194	3,461,548
Value added to materials £	758,702	721,590	708,551	677,443	585,662
Wheat ground into flour bushels	14,697,287	17,659,570	18,545,041	17,227,886	17,578,614
Flour produced .. tons	308,532	367,383	390,286	364,682	369,966
Bran produced .. bushels	7,029,417	7,987,930	8,228,720	7,238,198	7,868,544
Pollard produced .. „	5,777,178	7,264,370	7,762,370	7,667,061	7,602,848
Wheatmeal produced .. cwt.	†	28,874	43,010	57,276	63,609

\* Exclusive of drawings of working proprietors. † Not available.

**Jam, pickle, and sauce works.** Particulars relating to jam, pickle, sauce, fruit and vegetable canning factories are given in the table hereunder, which shows the main items of output, etc., for the past five years.

Item.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	35	35	38	39	40
Number of persons engaged ..	2,246	2,361	2,126	2,261	1,647
Horse-power of engines used ..	1,376	1,663	2,148	2,085	2,034
Value of plant and machinery £	269,825	304,130	307,560	286,240	283,697
Value of land and buildings £	384,425	435,060	453,390	460,635	455,929
Salaries and wages paid £	424,196	466,016	393,685	418,024	276,754
Fuel, light, and power used £	33,982	37,106	32,815	35,496	22,306
Value of materials used £	1,402,976	1,618,263	1,347,853	1,607,306	1,022,284
Value of output .. £	2,217,113	2,660,244	2,202,502	2,592,061	1,617,563
Fruit used .. cwt.	792,283	960,004	601,722	1,052,534	574,931
Sugar used .. "	246,170	295,331	253,735	308,012	199,576
Output of—					
Jams and jellies .. cwt.	300,822	340,847	285,636	335,530	246,265
Fruit preserved .. "	335,798	479,928	351,048	510,298	245,690
Fruit pulped .. "	110,420	121,060	57,648	150,647	52,175
Sauce .. pints	7,385,438	7,312,500	7,905,541	8,806,347	6,736,916
Pickles .. "	2,615,267	1,487,990	1,803,764	1,451,693	1,058,754

**Beet Sugar Industry.** The following table contains particulars relating to the production, etc., of sugar in the beet sugar factory in which work is carried on under the control of the Victorian Government at Maffra, Gippsland.

A brief survey of the progress of this industry since its establishment was given in the *Victorian Year-Book* for 1928-29.

Season.	Area Harvested.	Sugar Beet Harvested.	Sugar Produced.
	acres.	tons.	tons.
1925-26 .. .. .	1,880	21,194	2,315
1926-27 .. .. .	2,024	9,851	1,177
1927-28 .. .. .	2,353	25,439	2,349
1928-29 .. .. .	2,130	15,236	2,108
1929-30 .. .. .	2,500	26,525	3,472
1930-31 .. .. .	3,045	38,291	5,095

**Breweries.** Particulars regarding breweries for the ten years 1921-22 to 1930-31 are set forth in the next table. Machinery and plant were valued at £514,760 in 1921-22 and at £1,007,249 in 1930-31, whilst land and buildings were valued at £402,445 and £699,267 respectively in those years. The wages paid in 1930-31 amounted to £369,463.

**BREWERIES, 1921-22 to 1930-31.**

Year.	Number of Breweries.	Persons Employed.	Materials Used—			Beer and Stout Made.	Value of Output.
			Sugar.	Malt.	Hops.		
			cwt.	bushels.	lbs.	gallons.	£
1921-22	15	1,053	107,160	688,090	717,950	22,388,000	2,200,882
1922-23	14	1,091	110,051	723,511	768,870	23,212,000	2,322,814
1923-24	14	1,186	112,840	743,131	796,769	23,907,000	2,412,387
1924-25	14	1,263	113,729	744,048	784,080	23,286,000	2,479,619
1925-26	11	1,113	118,310	777,041	811,063	24,347,000	2,594,835
1926-27	10	1,156	121,666	814,298	831,317	26,484,000	2,605,704
1927-28	9	1,169	116,890	815,882	814,812	25,870,000	2,534,815
1928-29	9	1,194	110,968	806,252	777,849	24,999,000	2,522,933
1929-30	9	1,153	103,328	754,288	619,218	21,952,775	2,334,283
1930-31	9	1,083	83,153	648,248	602,277	20,545,800	1,935,542

**Distilleries.** The number of distilleries working in 1930-31 was 8, and the persons employed numbered 122, of whom two were working proprietors. The estimated value of the machinery, plant, land and buildings was £445,068. The quantities of materials used in manufacture and of spirits distilled in each of the last ten years were as follows :—

**DISTILLERIES, 1921-22 to 1930-31.**

Year.	Materials Used.				Spirits Distilled.
	Wine.	Malt.	Other Grain.	Molasses.	
	gallons.	bushels.	bushels.	lbs.	proof gals.
1921-22	671,162	58,848	..	1,167,600	390,840
1922-23	1,100,568	77,717	..	85,120	473,152
1923-24	1,114,590	121,691	..	2,350,880	730,158
1924-25	1,117,370	92,124	..	2,727,650	561,153
1925-26	1,849,920	94,784	..	2,994,880	785,595
1926-27	1,874,370	212,022	..	2,437,920	995,708
1927-28	1,843,100	113,404	..	1,513,792	709,031
1928-29	1,320,046	175,833	11,192	2,278,080	813,562
1929-30	1,556,249	300,267	93,781	1,284,528	1,142,762
1930-31	706,574	183,245	173,311	909,888	1,010,727

Spirits made by vine-growers for fortifying wine are not included in the foregoing table. The following quantities were distilled in vineyards for that purpose during the last ten years :—23,020 gallons in 1921-22, 14,930 gallons in 1922-23, 13,792 gallons in 1923-24, 19,245 gallons in 1924-25, 14,850 gallons in 1925-26, 11,259 gallons in 1926-27, 10,110 gallons in 1927-28, 17,529 gallons in 1928-29, 18,299 gallons in 1929-30, and 21,295 gallons in 1930-31.

**Tobacco factories.** The number of tobacco, cigar, and cigarette factories licensed in 1930-31 was twenty-six, of which fourteen were too small to be classified as ordinary factories and were consequently not included in the statistical tabulation on page 383. In the year mentioned the remaining twelve gave employment to 1,700 persons who were paid £343,128 in wages, and used machinery, plant, land and buildings valued at £539,878. The subjoined table shows the quantity of tobacco leaf used by and the output of the full number of licensed establishments for the last ten years:—

## TOBACCO FACTORIES, 1921-22 to 1930-31.

Year.	Unmanufactured Leaf Operated on.		Quantity Manufactured.			
	Australian.	Imported.	Tobacco.	Snuff.	Cigars.	Cigarettes.
	lbs.	lbs.	lbs.	lbs.	number.	number.
1921-22 ..	535,590	5,250,641	6,345,508	232	33,893,695	152,908,600
1922-23 ..	540,322	5,628,555	6,709,060	231	32,699,019	99,771,650
1923-24 ..	471,862	4,998,680	5,833,903	99	29,244,981	87,896,350
1924-25 ..	427,152	5,222,496	5,998,437	50	30,794,864	77,840,200
1925-26 ..	449,575	5,055,260	5,879,683	100	29,595,805	70,135,500
1926-27 ..	527,807	4,662,288	5,520,998	—	27,657,963	70,314,868
1927-28 ..	462,279	4,579,586	5,511,072	—	26,688,939	68,537,354
1928-29 ..	450,083	4,585,040	5,351,643	4,527	21,094,483	96,032,175
1929-30 ..	491,936	4,319,954	5,450,116	—	23,739,045	91,309,252
1930-31 ..	1,818,722	3,551,324	5,575,051	—	20,592,865	278,304,141

**Woolen mills.** There were forty-six woollen mills (including fifteen wool-washing factories) working in 1930-31, and the number of persons employed therein was 6,182, of whom thirty-two were working proprietors. Salaries and wages paid amounted to £905,987, and the approximate value of the machinery, plant, land and buildings was £2,964,767. The value of the raw materials used during the year was £1,629,668, and that of the goods manufactured in the

same period, £3,289,288. The quantities of wool and cotton used and of goods manufactured in each of the last ten years were as follows:—

WOOLLEN MILLS, 1921-22 to 1930-31.

Year.	Quantity of Scoured Wool Used.	Quantity of Cotton Used.	Goods Manufactured—				Value of Output.
			Tweed and Cloth.	Flannel.	Blankets.	Shawls and Rugs.	
	lbs.	lbs.	yards.	yards.	pairs.	number	£
1921-22	8,015,650	586,836	1,872,512	5,759,987	297,700	51,598	2,482,761
1922-23	9,640,760	621,490	1,714,460	6,622,350	314,803	71,073	3,264,025
1923-24	7,936,456	848,812	1,927,298	6,095,442	377,354	115,443	3,561,480
1924-25	8,782,203	544,364	1,898,647	3,594,427	319,026	130,094	3,433,231
1925-26	10,679,901	285,482	3,438,142	3,618,260	250,943	93,766	3,976,224
1926-27	14,510,421	1,013,077	4,854,389	6,213,860	327,113	116,855	4,581,445
1927-28	11,960,882	972,455	6,236,623*	6,879,796*	375,125	126,603	4,680,740
1928-29	11,582,312	832,851	5,979,625*	4,603,874*	285,830	115,533	4,308,677
1929-30	11,708,536	547,307	6,077,129*	3,546,961*	190,869	123,861	3,903,164
1930-31	9,569,421	464,277	5,431,704*	4,065,138*	107,962	71,951	3,289,288

\* Square yards.

Particulars relating to factories manufacturing boots and shoes are shown in the following table. Figures for the year 1921-22 include boot-repairing establishments. These were tabulated separately from boot factories in the year 1926-27 and succeeding years. To enable a valid comparison to be made the figures for boot repairing factories are included at the bottom of the table.

Item.	1921-22.	1927-28.	1928-29.	1929-30.	1930-31.
Number of establishments ..	334	179	175	175	175
Number of persons employed ..	11,714	11,017	11,041	10,321	8,622
Horse-power of engines used ..	2,664	2,821	3,176	3,077	2,812
Value of plant, machinery, land, and buildings	£ 1,130,425	£ 1,376,180	£ 1,403,330	£ 1,369,000	£ 1,218,654
Salaries and wages paid	£ 1,760,589*	£ 1,906,127	£ 1,939,069	£ 1,834,816	£ 1,400,624
Fuel, light, and power	£ 30,375	£ 34,842	£ 34,654	£ 34,284	£ 29,572
Value of materials used	£ 3,109,863	£ 2,943,572	£ 3,031,173	£ 2,726,740	£ 1,917,444
Value of output ..	£ 6,043,172	£ 6,657,318	£ 5,810,619	£ 5,375,438	£ 3,974,195
Boots and shoes made	pairs 7,571,231	7,792,702	7,856,996	7,891,133	7,238,276
Slippers (including canvas) made ..	.. pairs 903,992	2,188,608	2,492,609	2,567,407	2,548,326
<i>Boot Repairing Factories.</i>					
Number of factories ..	†	305	340	372	415
Persons employed ..	†	546	567	594	664
Value of plant, machinery, land, and buildings	£ †	£ 418,310	£ 491,110	£ 495,270	£ 494,426
Value of materials used	£ †	£ 84,802	£ 83,955	£ 81,389	£ 75,749
Salaries and wages paid	£ †	£ 102,592	£ 116,849	£ 121,037	£ 111,696
Value of output ..	£ †	£ 244,997	£ 253,913	£ 255,528	£ 233,171

\* Excluding amounts drawn by working proprietors. † Not available.



The value of the output of establishments connected with the manufacture of dress, i.e., clothing, tailoring, dressmaking, millinery, underclothing, hats and caps, &c., but exclusive of boots and shoes, was £11,698,487 in 1930-31, as compared with £13,429,230 in 1921-22. During the period 1921-22 to 1930-31 the persons employed decreased by 14 per cent., the wages paid (excluding amounts drawn by working proprietors) by 5 per cent., the value of materials used by 18 per cent., and the value of the output by 13 per cent. Particulars of the industry for each of the last ten years are as follows:—

### DRESS (EXCLUSIVE OF BOOT) FACTORIES, 1921-22 to 1930-31.

Year.	Number of Factories.	Number of Persons Employed.			Salaries and Wages Paid.	Value of Materials Used.	Value of Output.
		Males.	Females.	Total.			
1921-22	1,424	4,674	27,370	32,044	£ 3,328,326	£ 7,689,101	£ 13,429,230
1922-23	1,526	4,951	28,595	33,546	3,554,303	7,456,539	13,354,238
1923-24	1,501	4,751	26,772	31,523	3,574,059	7,181,020	13,118,477
1924-25	1,500	4,823	26,295	31,118	3,837,919*	7,388,950	13,584,190
1925-26	1,491	4,862	26,453	31,320	4,022,168*	7,833,863	14,199,570
1926-27	1,535	5,348	28,941	34,289	4,492,778*	8,530,529	15,517,404
1927-28	1,517	5,241	28,212	33,453	4,493,366*	7,975,259	14,707,061
1928-29	1,522	5,433	28,272	33,705	4,541,295*	8,426,982	15,505,660
1929-30	1,474	5,915	27,631	33,546	4,594,570*	8,602,639	15,783,906
1930-31	1,405	5,361	22,162	27,523	3,492,542*	6,333,943	11,698,487

\* Including amounts drawn by working proprietors.

Particulars relating to the electric light and power works of the State are given in the next table:—

### ELECTRIC LIGHT AND POWER WORKS, 1921-22 to 1930-31.

Year.	Number of Stations.	Horse-power of Machinery.	Value of Machinery and Plant.	Persons Employed.	Wages Paid.	Electricity Supplied.	Value of Output.
			£		£	British units.	£
1921-22	84	57,481	3,166,750	1,350	334,805	133,021,000	1,407,268
1922-23	88	72,106	4,042,910	1,451	377,048	157,728,000	1,614,139
1923-24	90	154,622	5,864,065	1,752	462,172	405,108,000	2,176,551
1924-25	84	185,633	7,900,455	2,011	549,849	413,556,000	2,382,582
1925-26	83	183,342	5,035,460	1,149	338,807	460,710,000	1,648,113
1926-27	86	219,626	5,144,035	1,120	323,286	580,221,000	1,768,514
1927-28	86	198,914	5,513,630	1,069	307,490	630,880,000	1,566,113
1928-29	87	235,589	6,079,300	1,153	322,295	673,492,000	1,616,076
1929-30	91	248,193	6,559,245	1,230	354,823	724,525,000	1,873,361
1930-31	91	221,767	6,411,935	1,162	306,785	681,230,000	1,605,138

The decrease in the number of persons and the value of machinery and plant and output in electric supply undertakings for the last six years is due to a change in the method of compilation. In previous years, the figures related to both generation and distribution, but since 1924-25 only those relating to the former are given.

Prior to 1923-24 particulars relating to the Newport power houses controlled by the Victorian Railways Commissioners and the State Electricity Commission had not been included in the statistics, and this accounts for the large increase in the figures for that year. The principal generating station is now located at the Electricity Commission's works at Yallourn, where 238,273,000 units were generated in the year 1930-31.

### STATE ELECTRICITY COMMISSION.

The State Electricity Commission was constituted by the *Electricity Commissioners Act* 1918, as amended by the *State Electricity Commission Act* 1920, the latter providing for the appointment for seven years of a chairman and three commissioners. The Commission's duties cover—

1. Control of generation, supply and use of electricity in Victoria.
2. Investigation, and where practicable development, of all possible sources of power.
3. Promotion of the use of electricity.

The Commission is empowered to erect, acquire and operate electric undertakings and operate any business associated therewith, to supply electricity to corporations and to persons outside areas in which there are existing undertakings, to frame safety regulations and to issue licences for wiremen. It controls its own funds and all officers and employees required for the operation of the Act.

A comprehensive transmission system has been established, based upon the brown coal deposits at Yallourn, where the 75,000-kw. station is being duplicated by the installation of three 25,000-kw. turbo-alternators, together with the necessary boiler and auxiliary plant. One 25,000-kw. turbo-alternator is already in operation, making the present installed capacity of the Yallourn Power Station 100,000 kw. Two 132,000-volt lines transmit energy to receiving stations at Richmond and Yarraville. A third station (Thomastown) receives the surplus energy from the Sugarloaf-Rubicon group of hydro stations (37,000 h.p.) in the north-eastern district. There are two peak load stations in the metropolitan area, viz., Newport "B" and Richmond.

The Commission meets nearly all the energy requirements of the metropolitan area, and serves over 180 country centres, 108 of which had no supply previously. As from 1st July, 1931, it has supervised the operation of the Bendigo and Ballarat undertakings (including tramways) and will continue to do so until 1st July, 1934, when it will assume full control.

## Gasworks.

Particulars in regard to gasworks are given below for each of the last five years.

## GASWORKS, 1926-27 TO 1930-31.

Year.	Number of Works.	Persons Employed.	Wages Paid.	Coal Used.	Gas Made.	Coke Produced.	Value of Output.
			£	tons.	cubic feet.	tons.	£
1926-27 ..	33	959	264,918	442,391	5,855,817,000	283,998	1,967,485
1927-28 ..	34	1,013	290,190	437,947	6,326,887,000	291,077	2,077,068
1928-29 ..	35	936	265,536	437,951	6,424,614,000	279,887	2,042,896
1929-30 ..	36	905	261,547	399,182	6,409,110,000	200,437	2,073,455
1930-31 ..	37	822	202,627	334,874	5,869,257,000	211,226	1,638,839

Oil was used as well as coal in the manufacture of gas, the number of gallons consumed each year being 88,601 in 1926-27, 68,567 in 1927-28, 239,928 in 1928-29, 2,516,029 in 1929-30, and 1,489,397 in 1930-31.

## Factory output by classes.

The following table is an analysis of factory statistics designed to show the relative importance of the various classes of manufacturing.

A revised classification of industries has been adopted this year in accordance with a resolution passed at a recent conference of Commonwealth and State statisticians.

## VALUE OF ARTICLES PRODUCED IN FACTORIES.

Class of Industry.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
1. Treatment of non-metalliferous mine and quarry products ..	2,017,745	2,182,682	2,116,449	2,219,308	1,308,408
2. Bricks, pottery, glass, &c. ..	2,210,772	2,044,206	1,911,641	1,714,836	921,949
3. Chemicals, dyes, explosives, paint, oils, and grease ..	6,958,013	6,769,375	7,244,216	7,203,210	6,158,919
4. Industrial metals, machines, implements, and conveyances ..	21,229,864	20,442,389	20,137,270	18,787,020	12,910,719
5. Precious metals, jewellery, and plate ..	547,052	552,309	560,257	552,078	400,555
6. Textiles and textile goods (not dress) ..	8,906,327	8,945,062	9,228,699	9,186,336	7,707,588
7. Skins and leather (not clothing or footwear) ..	6,037,545	6,218,667	5,781,861	4,759,255	2,658,212
8. Clothing ..	18,232,738	17,472,270	17,925,129	17,330,421	12,833,584
9. Food, drink, and tobacco ..	37,282,882	40,416,917	40,739,745	39,724,515	33,579,814
10. Woodworking and basketware ..	5,614,266	4,999,458	4,230,329	4,179,177	2,448,485
11. Furniture, bedding, &c. ..	2,910,372	2,751,798	2,525,472	2,250,585	1,315,774
12. Paper, stationery, printing, bookbinding, &c. ..	6,943,920	7,084,595	7,133,207	6,975,549	5,779,796
13. Rubber ..	4,032,609	4,251,598	3,911,849	3,209,032	1,412,297
14. Musical instruments ..	337,548	279,566	335,367	310,518	156,315
15. Miscellaneous products ..	363,433	387,734	421,800	452,423	585,712
16. Heat, light, and power ..	3,772,865	3,666,691	3,674,122	3,956,766	3,247,668
Total ..	127,397,951	128,465,317	127,897,463	122,811,099	93,425,795

**Employment in factories.** The average number of persons employed in each class of industry is shown hereunder. The method of arriving at this average was altered in the year 1928-29, and it is now taken as the average number employed over the whole year, and not, in the case of a seasonal factory working only for a portion of the year, the average for the period of operation.

The table of monthly employment in factories (see page 416) is designed to show seasonal employment.

### AVERAGE NUMBER OF PERSONS EMPLOYED IN FACTORIES.

Class of Industry.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
1. Treatment of non-metallic mine and quarry products .. ..	2,483	2,518	2,382	2,297	1,505
2. Bricks, pottery, glass, &c. ..	3,740	3,458	3,336	2,997	1,831
3. Chemicals, dyes, explosives, paint, oils, and grease ..	5,462	5,317	5,272	5,074	4,723
4. Industrial metals, machines, implements, and conveyances .. ..	36,778	35,725	35,590	33,188	26,193
5. Precious metals, jewellery, and plate .. ..	1,044	1,100	1,065	1,077	941
6. Textiles and textile goods (not dress) .. ..	14,207	14,248	14,903	16,221	14,719
7. Skins and leather (not clothing or footwear) ..	4,669	4,153	3,799	3,824	2,738
8. Clothing .. ..	40,412	39,131	38,701	36,489	30,157
9. Food, drink, and tobacco ..	19,800	22,293	21,517	21,285	20,024
10. Woodworking and basketware .. ..	9,594	8,670	6,992	6,841	4,483
11. Furniture, bedding, &c. ..	4,988	4,688	4,286	3,660	2,674
12. Paper, stationery, printing, bookbinding, &c. ..	11,619	11,618	11,470	11,451	10,641
13. Rubber .. ..	3,549	4,205	3,868	3,261	2,051
14. Musical instruments ..	532	471	537	466	298
15. Miscellaneous products ..	640	653	733	741	1,052
16. Heat, light, and power ..	2,112	2,109	2,095	2,137	1,986
<b>Total .. ..</b>	<b>161,639</b>	<b>160,357</b>	<b>156,568</b>	<b>151,009</b>	<b>126,016</b>

This table shows that the decrease in activity in Victorian secondary industries commenced in the year 1927-28, was gradual until 1929-30, and became suddenly accentuated in 1930-31 as a result of world-wide depression of trade and industry.



**Occupations in factories.** In the following table the persons employed in factories are grouped according to their occupational status:—

### OCCUPATIONS OF PERSONS EMPLOYED IN FACTORIES.

Occupations.	1925-26	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Working proprietors ..	7,254	7,334	7,755	7,302	6,963	6,882
Managers, overseers ..	5,213	5,580	5,891	5,826	5,797	5,376
Accountants, clerks ..	6,034	6,519	6,677	6,847	6,500	6,064
Engine-drivers, firemen	2,065	2,036	1,945	1,850	1,850	1,601
Workers in factory or works ..	128,948	137,025	135,425	132,304	127,738	104,475
Outworkers ..	736	592	380	240	182	136
Carters, messengers ..	2,394	2,065	1,703	1,660	1,494	1,269
Others ..	315	488	581	539	485	213
<b>Total ..</b>	<b>152,959</b>	<b>161,639</b>	<b>160,357</b>	<b>156,568</b>	<b>151,009</b>	<b>126,016</b>

**Outworkers.** The term "outworker" used in the above table relates to factory workers working in their own homes, but does not include individuals working for themselves. The employment of outworkers is regulated by a special provision of the Factories and Shops Act. They are required to register their names and addresses with the Chief Inspector of Factories, and factory proprietors are forbidden to give work to those who are not registered.

**Sex distribution in factories.** The average numbers of males and females employed in factories and their proportions to the male and female populations, for the years 1921-22 to 1930-31, were as follows:—

### EMPLOYMENT OF MALES AND FEMALES IN FACTORIES.

Year.	Males.		Females.		Total.	
	Number.	Average per 10,000 of Male Population.	Number.	Average per 10,000 of Female Population.	Number.	Average per 10,000 of Total Population.
1921-22 ..	97,789	1,279	47,087	599	144,876	934
1922-23 ..	103,092	1,307	49,533	618	152,625	960
1923-24 ..	107,578	1,334	48,584	593	156,162	961
1924-25 ..	105,984	1,286	48,174	578	154,158	930
1925-26 ..	104,512	1,246	48,447	573	152,959	908
1926-27 ..	108,969	1,278	52,670	613	161,639	944
1927-28 ..	108,068	1,246	52,289	598	160,357	921
1928-29 ..	104,648	1,195	51,920	586	156,568	889
1929-30 ..	100,135	1,136	50,874	568	151,009	850
1930-31 ..	82,949	936	43,067	476	126,016	704

Males formed 67·5 per cent. in 1921-22 and 65·8 per cent. in 1930-31 of the total persons employed. The decrease during the period 1921-22 to 1930-31 in the number of males employed was 14,840, or 15·2 per cent., and in the number of females employed, 4,020, or 8·5 per cent.

Of the total females in factories 70·6 per cent. are engaged in the textile and clothing industries, and 11·0 per cent. in the preparation of food and drink. The extent of female employment in certain industries is shown in the next table:—

### FEMALE EMPLOYMENT IN FACTORIES, 1930-31.

Industry.	Number Employed.		Females per 100 Males.
	Males.	Females.	
Chemicals, drugs, &c. .. ..	605	536	88·6
Explosives .. .. .	346	146	42·2
Matches .. .. .	216	603	279·2
Galvanised iron working and tin-smithing .. .. .	1,486	267	18·0
Cotton .. .. .	117	328	280·3
Woollen mills .. .. .	2,808	3,374	120·2
Hosiery and knitting .. .. .	1,824	4,962	272·0
Silk natural and artificial .. .. .	78	172	220·5
Rope cordage .. .. .	459	295	64·3
Furriers and fur dressing .. .. .	187	222	118·7
Bags, trunks, &c. .. .. .	288	234	81·3
Tailoring and slop clothing .. .. .	1,586	4,726	298·0
Dressmaking .. .. .	348	4,915	1,412·4
Millinery .. .. .	87	1,238	1,423·0
Shirts, underclothing, corsets .. .. .	513	4,277	833·7
Hats and caps .. .. .	425	747	175·8
Boots and shoes .. .. .	4,664	3,958	84·9
Biscuits .. .. .	534	419	78·5
Confectionery .. .. .	1,235	1,273	103·1
Jams, pickles, &c. .. .. .	965	682	70·7
Tobacco, cigarettes, &c. .. .. .	922	778	84·4
Envelopes, stationery, &c. .. .. .	976	1,258	128·9
General printing and bookbinding .. .. .	3,796	1,414	37·2
Rubber goods .. .. .	1,286	765	59·5
All other factories .. .. .	57,198	5,478	9·6
Total .. .. .	82,949	43,067	51·9

A favorable feature of factory statistics has been the small proportion of children engaged in factories. Of the male and female employees, boys and girls under 16 constituted 3·07 and 7·80 per cent. respectively in 1930-31, as

Child labour  
in factories.

against 4.13 and 6.71 per cent. in 1921-22. The number of children employed in factories and their proportions to the total employees are given in the subjoined table for the years 1921-22 to 1930-31 :—

## CHILDREN EMPLOYED IN FACTORIES.

Year.	Boys under 16.	Girls under 16.	Total Children.	Proportion per cent. of—		
				Boys to Male Employees.	Girls to Female Employees.	Children to Total Employees.
1921-22 ..	3,780	3,120	6,900	4.13	6.71	5.00
1922-23 ..	4,031	3,163	7,194	4.18	6.48	4.95
1923-24 ..	4,057	3,422	7,479	4.03	7.15	5.03
1924-25 ..	4,027	3,223	7,250	4.05	6.78	4.94
1925-26 ..	3,980	3,489	7,469	4.06	7.30	5.13
1926-27 ..	4,567	4,041	8,608	4.46	7.77	5.58
1927-28 ..	4,231	3,992	8,223	3.91	7.63	5.13
1928-29 ..	4,209	4,298	8,507	4.29	8.39	5.70
1929-30 ..	3,748	4,019	7,767	3.74	7.90	5.14
1930-31 ..	2,543	3,361	5,904	3.07	7.80	4.69

**Machinery in factories.** In the following table are shown the number of factories using mechanical power, the total horse-power of the engines used, and the value of the machinery and plant for the ten years 1921-22 to 1930-31 :—

## MACHINERY IN FACTORIES.

Year.	Number of Factories equipped with Machinery.	Value of Machinery and Plant.	Horse-power of Engines.
		£	
1921-22 ..	5,473	21,182,110	191,881
1922-23 ..	5,762	23,994,715	216,427
1923-24 ..	6,030	28,223,915	314,561
1924-25 ..	6,168	32,563,815	374,064
1925-26 ..	6,321	30,549,130	367,318
1926-27 ..	6,637	31,580,350	414,992
1927-28 ..	7,209	32,745,680	403,770
1928-29 ..	7,305	33,724,910	446,382
1929-30 ..	7,419	35,022,535	465,739
1930-31 ..	7,519	34,771,687	433,599



The nature of the power used and the capacity of the machinery in the factories of the State are set out in the next table. Establishments using more than one kind of mechanical power are included once only in the upper half of the table, usually under the power which is principally used. The lower half of the table shows the total horse-power of engines used.

## POWER USED IN FACTORIES, 1921-22 TO 1930-31.

Year.	Number of Factories using—					
	Steam.	Gas.	Electricity.	Oil.	Water, Wind, or Horses.	Manual Labour.
1921-22 ..	935	666	3,474	364	34	1,280
1922-23 ..	910	655	3,795	372	30	1,334
1923-24 ..	885	540	4,174	402	29	1,259
1924-25 ..	812	476	4,448	403	29	1,257
1925-26 ..	736	413	4,709	432	31	1,140
1926-27 ..	678	334	5,141	467	17	1,053
1927-28 ..	618	334	5,701	509	12	1,036
1928-29 ..	579	278	5,941	493	14	892
1929-30 ..	539	223	6,142	490	25	776
1930-31 ..	502	228	6,279	499	11	680

Year.	Actual Horse-power of Engines.				
	Steam.	Gas.	Electricity.	Oil.	Total.
1921-22 .. ..	106,882	19,327	62,663	3,009	191,881
1922-23 .. ..	112,547	18,968	81,679	3,233	216,427
1923-24 .. ..	195,744	18,394	95,340	5,083	314,561
1924-25 .. ..	233,290	17,869	97,381	5,380	353,920
1925-26 .. ..	235,872	15,422	107,812	8,212	367,318
1926-27 .. ..	268,061	13,548	123,359	10,024	414,992
1927-28 .. ..	241,956	12,326	137,692	11,796	403,770
1928-29 .. ..	(a) 274,331	10,886	147,835	13,330	446,382
1929-30 .. ..	(b) 286,164	9,671	155,911	13,993	465,739
1930-31 .. ..	(c) 258,253	9,081	151,997	14,268	433,599

(a) Includes 26,265 horse-power generated by water.

(b) Includes 26,546 horse-power generated by water.

(c) Includes 26,581 horse-power generated by water.

The predominance of steam is due to its extensive use for the generation of electricity. A consistent increase is shown in the use of electricity which, as a secondary power, should be deducted from the total if the net horse-power used in factory production is required.

Wages in  
Factories.

The total amount and the average amount of salaries and wages paid to persons employed in factories are given in the following table for each of the last ten years:—

## SALARIES AND WAGES PAID IN FACTORIES.

Year.	Drawings by Working Proprietors (excluding Profits).		Salaries paid to Managers and Clerks.		Wages paid to Factory Workers.		Total Salaries and Wages paid.
	Males.	Females.	Males.	Females.	Males.	Females.	

## Aggregate Amounts.

	£	£	£	£	£	£	£
1921-22	..	..	2,563,467	357,691	16,933,984	3,991,353	23,846,495
1922-23	..	..	2,761,045	394,366	18,038,101	4,353,680	25,547,192
1923-24	..	..	3,003,855	436,425	19,577,822	4,453,982	27,472,084
1924-25	1,533,868	74,043	3,055,257	443,676	19,460,304	4,484,904	29,057,052
1925-26	1,590,771	80,876	2,996,929	448,387	19,547,974	4,664,463	29,329,400
1926-27	1,837,094	95,988	3,288,208	495,735	20,931,037	5,194,577	31,822,589
1927-28	1,954,036	102,663	3,353,582	532,265	20,915,338	5,229,167	32,087,051
1928-29	1,965,990	100,829	3,416,012	552,056	20,268,582	5,230,117	31,533,586
1929-30	2,032,445	97,250	3,395,311	554,149	19,293,295	5,145,085	30,517,535
1930-31	1,819,904	100,294	2,955,747	485,137	14,042,377	3,876,230	23,279,689

## Average Amounts.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1921-22	..	..	316 18 11	133 16 4	202 19 11	91 2 11	172 16 9	
1922-23	..	..	331 10 9	134 14 8	204 12 2	94 16 5	175 15 9	
1923-24	..	..	339 19 1	142 13 5	212 19 0	99 7 1	184 15 11	
1924-25	233 8 11	111 13 7	347 18 0	143 13 7	214 15 5	100 19 4	186 16 4*	
1925-26	240 18 4	124 4 8	363 7 11	149 9 3	218 0 4	104 2 6	189 16 5*	
1926-27	275 18 6	141 18 5	369 19 2	151 16 8	223 18 1	106 12 0	193 14 1*	
1927-28	278 14 11	137 16 0	367 14 4	154 7 7	227 11 3	108 14 5	196 15 9*	
1928-29	298 15 8	139 13 0	374 11 3	155 7 7	227 17 5	109 15 5	197 8 3*	
1929-30	321 1 8	153 12 8	386 10 8	157 14 10	226 18 6	110 2 2	197 1 6*	
1930-31	290 6 1	163 12 3	334 9 2	145 13 9	204 15 9	99 1 6	179 5 10*	

\* These figures are based on the number of employees and the wages, etc., paid to them, working proprietors being excluded.

The above table shows a general decrease in the wages paid in all groups except female working proprietors for the year 1930-31. The average wage paid to all employees decreased by £17 15s. 8d., or 9 per cent.

The method of arriving at the average number of employees since the year 1928-29 (see page 399) would tend to increase the average wage paid to an amount slightly greater than that in previous years.

The average wage for 1930-31 (£179 5s. 10d.) was probably below the average according to the determinations of Wages Boards, and would be mainly accounted for by the fact that the former sum is based on the actual payments to workers, while the latter represents the

average of the sums to which they would have been entitled if they had worked throughout the whole year. There is, of necessity, a difference between the two averages, as all hands are not continuously employed, nor are all factories working throughout the whole year.

The cost of production and the value of the output in each class of manufacturing industry during the year 1930-31 are given in the subjoined statement:—

### FACTORY COSTS AND OUTPUT, 1930-31.

Class of Industry.	Cost of—				Value of Output.
	Raw Materials Used (including Containers).	Fuel, Light, and Power Used.	Salaries and Wages Paid.	Tools replaced, Repairs to Plant, Oil and Water Used.	
	1.	2.	3.	4.	5.
	£	£	£	£	£
1. Treatment of non-metallic products ..	435,288	148,438	347,016	47,272	1,308,408
2. Bricks, pottery, glass, &c. ..	165,321	115,136	378,279	19,784	921,949
3. Chemicals, dyes, explosives, paint, oils and grease ..	3,207,312	150,054	976,400	86,255	6,153,919
4. Industrial metals, machines, implements and conveyances ..	4,962,377	317,943	5,537,805	161,873	12,910,719
5. Precious metals, jewellery, and plate ..	148,684	7,583	165,664	2,991	400,555
6. Textiles and textile goods (not dress) ..	4,004,608	194,706	2,065,934	127,878	7,707,588
7. Skins and leather (not clothing or footwear) ..	1,713,215	40,888	551,212	22,337	2,658,212
8. Clothing ..	6,708,789	100,197	4,146,623	65,681	12,833,584
9. Food, drink, and tobacco ..	23,249,693	652,798	4,318,996	269,179	33,579,814
10. Woodworking and basket-ware ..	1,066,940	37,646	981,545	29,843	2,448,485
11. Furniture, bedding, &c. ..	647,281	18,835	455,061	8,223	1,315,774
12. Paper, stationery, printing, bookbinding, &c. ..	2,362,742	112,979	2,233,181	65,342	5,779,796
13. Rubber ..	646,354	69,861	394,201	29,256	1,412,297
14. Musical instruments ..	61,258	2,811	61,801	588	156,315
15. Miscellaneous products ..	278,201	7,796	187,160	4,836	585,712
16. Heat, light and power ..	722,047	611,804	527,911	100,904	3,247,668
Total .. ..	50,380,110	2,589,475	23,279,689	1,042,242	93,425,795

The difference between the sum of the first four columns and the last column represents the amount available for miscellaneous expenses, interest, and profit. The proportions which this margin

and the chief items of the cost of production bear to the total value of production in each class of industry are shown in the following table:—

PROPORTIONATE VALUE OF COSTS, ETC., TO PRODUCTION  
IN FACTORIES, 1930-31.

Class of Industry.	Percentage of Costs, &c., to Total Value of Production.				
	Materials Used, including Containers.	Fuel, Light, &c.	Wages.	Tools Replaced, Repairs to Plant, Oil and Water Used.	All other Expenditure, Interest and Profit.
	%	%	%	%	%
1. Treatment of non-ferrous mine and quarry products .. ..	33·3	11·3	26·6	3·6	25·2
2. Bricks, pottery, glass, &c.	17·9	12·5	41·1	2·1	26·4
3. Chemicals, dyes, explosives, paint, oils, and grease .. ..	52·1	2·4	15·9	1·4	28·2
4. Industrial metals, machines, implements, and conveyances .. ..	38·4	2·5	42·9	1·3	14·9
5. Precious metals, jewellery, and plate .. ..	37·1	1·9	41·4	·7	18·9
6. Textiles and textile goods (not dress) .. ..	52·0	2·5	26·8	1·7	17·0
7. Skins and leather (not clothing or footwear) .. ..	64·5	1·5	20·7	·9	12·4
8. Clothing .. ..	52·3	·8	32·3	·5	14·1
9. Food, drink, and tobacco	69·2	1·9	12·9	·8	15·2
10. Woodworking and basketware .. ..	43·7	1·5	38·0	1·2	15·6
11. Furniture, bedding, &c. .. ..	49·2	1·4	34·6	·6	14·2
12. Paper, stationery, printing, bookbinding, &c. .. ..	40·9	2·0	38·6	1·1	17·4
13. Rubber .. ..	45·8	4·9	27·9	2·1	19·3
14. Musical instruments .. ..	39·2	1·8	39·5	·4	19·1
15. Miscellaneous products .. ..	47·5	1·3	32·0	·8	18·4
16. Heat, light, and power .. ..	22·2	18·8	16·3	3·1	39·6
Total .. ..	53·9	2·8	24·9	1·1	17·3

There are considerable variations in the proportions which the cost of materials and the expenditure on wages bear to the value of the output in the different classes of industries. These are, of course, due to the difference in the treatment required to present the raw material in its manufactured form. Thus in class two the sum paid in wages represents 41 per cent. and the cost of raw materials 18 per cent. of the value of the finished article, whilst in class nine the expenditure on wages amounts to 13 per cent. and that on raw materials to 69 per cent. of the value of the output.

Cost of  
production,  
1921-22 to  
1930-31.

In the next table the cost of production, the value of the output of factories, and the balance available for profit and miscellaneous expenses are compared for the years 1921-22 to 1930-31 :—

COST OF PRODUCTION AND VALUE OF OUTPUT OF  
FACTORIES, 1921-22 TO 1930-31.

Year.	Cost of Production.				Total Value of Output.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	All other Expenditure, Interest, and Profit.	
	£	£	£	£	£
1921-22 ..	60,352,561	2,329,760	23,846,495	19,714,365	106,243,181
1922-23 ..	62,658,163	2,443,681	25,547,192	20,637,307	111,286,343
1923-24 ..	62,217,874	2,803,239	27,472,084	21,428,730	113,921,927
1924-25 ..	65,205,233	2,964,635	29,057,052	20,950,478	118,177,398
1925-26 ..	67,164,445	3,156,382	29,329,400	20,336,212	119,986,439
1926-27 ..	69,816,935	3,392,448	31,822,589	22,365,979	127,397,951
1927-28 ..	69,637,778	3,433,923	32,087,051	23,306,565	128,465,317
1928-29 ..	70,100,456	3,361,298	31,533,586	22,902,123	127,897,463
1929-30 ..	66,770,302	3,435,727	30,517,535	22,087,535	122,811,099
1930-31 ..	50,380,110	2,589,475	23,279,689	17,176,521	93,425,795

These figures are reduced in the succeeding statement to their proportionate value of the total output.

PROPORTION OF OUTLAY TO OUTPUT OF FACTORIES,  
1921-22 to 1930-31.

Year.	Proportion of Outlay to Output.				Total.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	Other Expenditure, Interest, and Profit.	
	%	%	%	%	%
1921-22 .. ..	56·8	2·2	22·4	18·6	100·0
1922-23 .. ..	56·3	2·2	23·0	18·5	100·0
1923-24 .. ..	54·6	2·5	24·1	18·8	100·0
1924-25 .. ..	55·2	2·5	24·6	17·7	100·0
1925-26 .. ..	56·0	2·6	24·4	17·0	100·0
1926-27 .. ..	54·8	2·7	25·0	17·5	100·0
1927-28 .. ..	54·2	2·7	25·0	18·1	100·0
1928-29 .. ..	54·8	2·6	24·7	17·9	100·0
1929-30 .. ..	54·4	2·8	24·8	18·0	100·0
1930-31 .. ..	53·9	2·8	24·9	18·4	100·0

The apparent decrease since 1923-24 in the percentage available for profit and miscellaneous expenses, as shown in the last table, is largely accounted for by the fact that the amount of salaries and wages includes for those years the sums drawn regularly by working proprietors amounting in the successive years to £1,612,911, £1,671,647, £1,933,032, £2,056,699, £2,066,819, £2,129,695, and £1,920,198.

The ratio of salaries and wages to the value of the output of factories was 24·9 per cent. on the average of the last five years, as against 23·7 per cent. in the period 1921-22 to 1925-26. The cost of materials was 54·4 per cent. of the value of output in the period 1926-27 to 1930-31, as compared with 55·8 per cent. in the years 1921-22 to 1925-26. The proportionate outlay on fuel, light, and power was 2·4 per cent. in the earlier and 2·7 per cent. in the later period. The balance available for miscellaneous expenses, rent, interest, and manufacturers' profit was £17 19s. 6d. in every £100 of the total output value in the period 1926-27 to 1930-31, as compared with £18 1s. 11d. in the preceding five-year period.

Capital  
invested in  
manufacturing  
plant and  
premises.

In the following statement the amount of capital invested in machinery and plant and land and buildings used in connexion with the various classes of manufacturing industries is shown for the year 1930-31 :—

MACHINERY, PLANT, LAND AND BUILDINGS USED IN  
MANUFACTURING INDUSTRIES, 1930-31.

Class of Industry.	Value of Machinery and Plant.	Value of Land and Buildings.
	£	£
1. Treatment of non-metalliferous mine and quarry products .. .. .	1,568,987	843,432
2. Bricks, pottery, glass, &c. .. .. .	636,841	684,504
3. Chemicals, dyes, explosives, paint, oils, and grease .. .. .	2,384,958	2,245,324
4. Industrial metals, machines, implements, and conveyances .. .. .	5,330,389	7,591,173
5. Precious metals, jewellery, and plate .. .. .	67,137	250,275
6. Textiles and textile goods (not dress) .. .. .	3,230,222	2,574,679
7. Skins and leather (not clothing or footwear) .. .. .	408,259	868,550
8. Clothing .. .. .	1,157,734	4,675,477
9. Food, drink, and tobacco .. .. .	6,666,593	7,805,344
10. Woodworking and basketware .. .. .	894,585	1,004,477
11. Furniture, bedding, &c. .. .. .	251,711	862,904
12. Paper, stationery, printing, bookbinding, &c. .. .. .	2,587,085	3,120,518
13. Rubber .. .. .	1,043,099	848,651
14. Musical instruments .. .. .	50,005	162,600
15. Miscellaneous products .. .. .	230,736	312,281
16. Heat, light, and power .. .. .	8,263,346	2,368,195
Total .. .. .	34,771,687	36,218,384

The capital invested in plant, buildings, &c., used in connexion with four classes of industry—food and drink; clothing; textile

fabrics; and heat, light and power—amounted, in the year under review, to £36,741,590, or more than one-half of the total for all manufacturing industries.

The values of machinery and plant and of land and buildings used in connexion with manufacturing industries are shown in the next table for the years 1921-22 to 1930-31 :—

**MACHINERY, PLANT, LAND AND BUILDINGS USED IN  
MANUFACTURING INDUSTRIES, 1921-22 to 1930-31.**

Year.						Value of Machinery and Plant.	Value of Land and Buildings.
						£	£
1921-22	..	..	..	..	..	21,182,110	19,810,170
1922-23	..	..	..	..	..	23,994,715	22,428,525
1923-24	..	..	..	..	..	28,223,915	24,972,560
1924-25	..	..	..	..	..	32,563,815	28,468,160
1925-26	..	..	..	..	..	30,549,130	29,847,370
1926-27	..	..	..	..	..	31,580,350	32,269,655
1927-28	..	..	..	..	..	32,745,680	34,761,340
1928-29	..	..	..	..	..	33,724,910	36,184,460
1929-30	..	..	..	..	..	35,022,535	36,988,485
1930-31	..	..	..	..	..	34,771,687	36,218,384

It will be seen from these figures that the values of machinery and plant and land and buildings increased by 73 per cent. between 1921-22 and 1930-31.

In the appended table the number of accidents in factories is given for the last ten years. The particulars in the table relate to establishments which came within the scope of the Factories Acts in force in the years specified, and not to those classified for statistical purposes in the preceding tables.

**ACCIDENTS IN FACTORIES, 1920 to 1930.**

Year.		Number of Employees.	Number of Accidents.	Percentage of Accidents to Number of Employees.
1920	..	116,846	862	·737
1921	..	117,633	830	·705
1922	..	126,630	787	·621
1923	..	128,915	1,034	·802
1924	..	129,147	1,052	·814
1925	..	128,013	996	·778
1926	..	135,510	1,252	·924
1927	..	136,022	1,348	·991
1928	..	137,244	1,224	·891
1929	..	136,025	1,129	·829
1930	..	104,926	890	·848



**Manufactures—** The foregoing tables do not include particulars relating to work of various kinds done by the Penal Department at Pentridge and the Royal Victorian Institute for the Blind. **Penal Department and Blind Institute.** At the former establishment the manufacture of wire netting, clothing, brushware, boots, mats, blankets, flannel, underclothing, and printing are carried on. The estimated value of the output for 1930-31 was £51,758, and of the materials used, £37,508. The articles produced are used principally by Government Departments. The work carried on by the latter is the manufacture of brushware, basketware, mats and matting, and gives employment to 154 persons (133 males and 21 females). The value of the work turned out for the period under review was £31,375.

**Value of Victorian production.** The value of all articles produced or manufactured in Victoria has been compiled from actual returns or estimates in the office of the Government Statist, and the results are set forth in the following table:—

VALUE OF VICTORIAN PRODUCTION, 1926-27 to 1930-31.

Produce.	Value in—				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<i>Cultivation.</i>	£	£	£	£	£
Wheat .. ..	9,546,812	4,724,369	8,334,675	3,559,063	3,600,190
Oats .. ..	653,291	688,804	627,521	554,547	340,673
Barley, malting ..	192,349	184,824	151,726	203,999	122,836
" other .. ..	103,390	112,503	70,778	96,203	32,017
Maize .. ..	152,055	121,368	136,067	112,686	90,005
Other Cereals ..	58,483	48,995	36,000	45,111	24,776
Grass and Clover					
Seed .. ..	2,350	2,076	9,380	9,636	7,905
Potatoes .. ..	671,673	388,537	1,189,349	691,273	328,305
Onions .. ..	110,839	188,186	187,233	74,704	52,018
Other Root Crops	15,161	14,759	13,163	10,933	11,173
Hay .. ..	4,719,925	3,683,272	3,502,862	2,998,282	2,360,865
Straw .. ..	47,970	66,904	49,427	53,710	28,311
Green Forage* ..	436,205	474,475	535,755	846,265	631,735
Tobacco .. ..	57,700	35,280	39,510	54,660	145,750
Grapes, not made into wine, raisins, &c. .. ..	74,889	81,421	50,813	31,038	32,481
Raisins, ordinary ..	99,080	76,100	82,873	96,451	83,908
" sultanas .. ..	1,195,183	623,241	857,975	797,736	692,750
Currants .. ..	182,536	152,171	273,186	186,406	194,039
Wine .. ..	254,184	152,212	84,233	82,132	61,817
Hops .. ..	16,074	50,262	36,800	33,120	26,068
Other Crops .. ..	109,022	163,618	119,397	144,663	157,387
Fruit grown for sale in orchards and gardens .. ..	970,831	1,189,356	1,093,434	927,723	751,716
Fruit in private orchards and gardens .. ..	9,570	10,520	8,500	9,100	8,250
Market Gardens ..	887,550	949,200	931,500	1,060,500	1,009,850
Less Deductions ..	-4,822,130	-5,616,588	-4,087,508	-3,699,467	-4,205,669
<b>Total .. ..</b>	<b>15,744,992</b>	<b>8,570,865</b>	<b>14,364,655</b>	<b>8,985,524</b>	<b>6,598,156</b>

\* Exclusive of area under sown grasses.

## VALUE OF VICTORIAN PRODUCTION, 1926-27 TO 1930-31—continued.

Produce.	Value in—				
	1926-27.	1927-23.	1928-29.	1929-30.	1930-31.
<i>Dairying and Pastoral.</i>	£	£	£	£	£
Milk consumed in natural state ..	2,326,800	2,184,900	2,025,200	1,858,000	1,685,200
Butter made ..	6,233,400	6,675,700	7,682,200	6,901,330	6,570,817
Cheese made ..	270,620	244,140	325,600	378,500	326,774
Cream made (not for butter) ..	154,880	174,610	212,800	227,470	152,509
Condensed, Concentrated, and Powdered Milk ..	1,498,060	1,906,720	1,713,600	1,557,880	1,277,866
Cattle ..	2,330,830	3,308,880	4,203,500	4,157,000	3,299,800
Pigs ..	1,343,750	1,189,410	1,622,700	1,602,200	1,155,400
Sheep (without wool) ..	2,585,770	3,740,310	3,468,000	3,315,000	2,347,000
Wool ..	7,876,683	9,701,660	10,252,002	5,694,019	4,374,982
Less Deductions ..	-2,340,426	-2,701,730	-2,368,289	-2,555,965	-2,456,918
Total ..	22,280,367	26,424,600	29,137,413	23,135,434	18,728,380
<i>Mining.</i>					
Gold ..	208,778	163,699	144,038	111,609	102,456
Coal ..	846,697	982,533	933,403	991,422	981,412
Stone from Quarries (including limestone) ..	700,200	652,800	602,900	624,613	324,811
Other Metals and Minerals ..	124,567	156,246	113,765	105,602	108,388
Total ..	1,880,242	1,955,278	1,794,141	1,833,246	1,517,067
<i>Forest Produce.</i>					
Timber (Forest Saw-mills only) ..	863,493	782,700	676,200	681,625	310,432
Firewood (estimated) ..	888,400	910,000	939,000	936,400	732,141
Bark for Tanning ..	136,906	107,700	98,380	86,589	44,349
Total ..	1,888,799	1,800,400	1,713,580	1,704,614	1,086,922
<i>Miscellaneous.</i>					
Honey and Beeswax ..	47,282	60,140	82,854	60,125	45,498
Poultry production (estimated) ..	4,819,500	4,760,000	4,295,000	4,688,000	3,926,000
Rabbits and Hares ..	508,340	679,230	820,820	609,470	352,280
Fish ..	167,461	185,840	173,870	223,587	166,450
Total ..	5,542,583	5,685,210	5,372,544	5,531,182	4,490,228
Total Value of Primary Products ..	47,336,983	44,436,353	52,382,333	41,190,000	32,420,753
Manufacturing—Added Value*	51,005,430	51,565,291	51,062,027	49,403,185	37,877,866
Grand Total ..	98,342,413	96,001,644	103,444,360	90,593,185	70,298,619

\* Exclusive of value of output of butter and cheese factories, and forest saw-mills (as regards Victorian timber), which is included above under the headings "Dairying and Pastoral" and "Forest Produce," respectively.

Deductions made from the total value of "Cultivation" include cost of freight and handling charges, together with cost of bags, seed, manure, spraying material, and fodder used in the production of crops.

In the case of "Dairying and Pastoral" production the deductions consist of cost of freight, handling charges, and wool packs, and the value of hay, bran and pollard, green fodder, and root crops used as fodder.

The inclusion of bakeries resulted in an increase in added value in manufacturing of £1,251,524 in 1927-28, of £1,334,716 in 1928-29, of £1,225,275 in 1929-30, and of £1,083,388 in 1930-31, for which allowance must be made when comparing the figures for the last four years with those of previous years.

The values of different kinds of production per head of the total population in each of the last five years were as follows:—

VALUE OF PRODUCTION PER HEAD OF POPULATION,  
1926-27 to 1930-31.

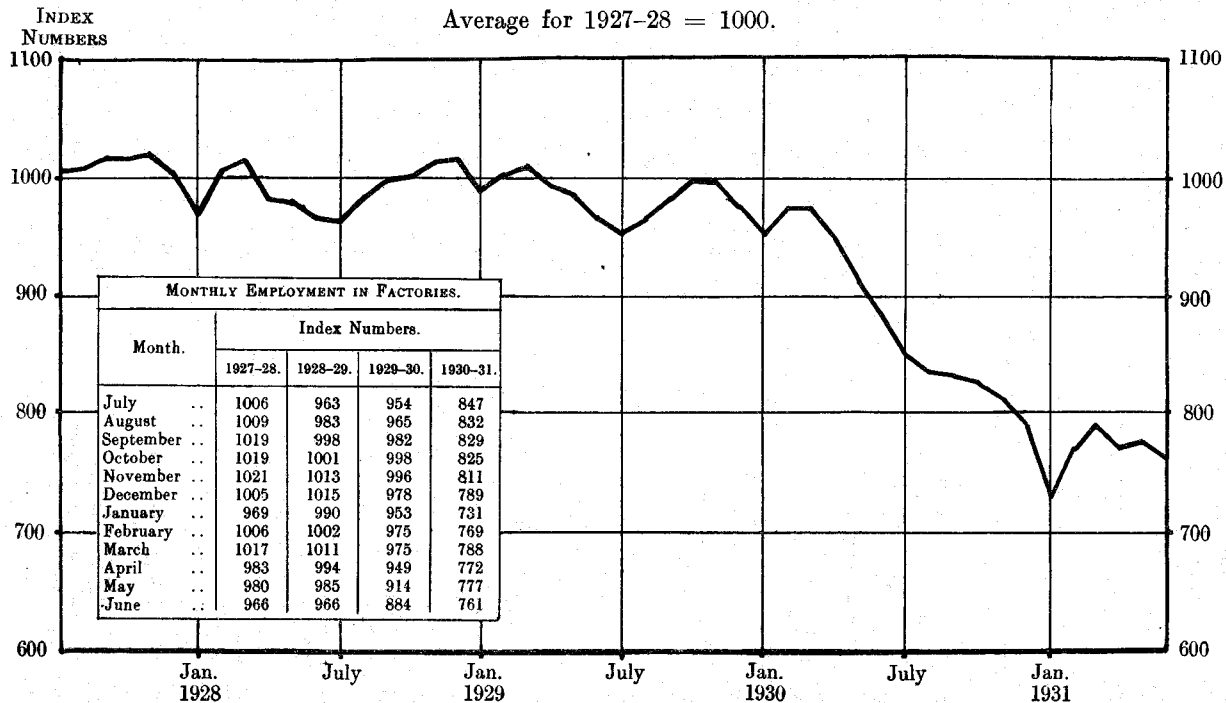
Produce.	Value of Produce per head in—				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cultivation ..	9 4 0	4 18 5	8 3 2	5 1 1	3 13 8
Dairying and Pastoral	13 0 4	15 3 6	16 10 11	13 0 5	10 9 2
Mining .. ..	1 1 11	1 2 5	1 0 4	1 0 8	0 16 11
Forest .. ..	1 2 1	1 0 8	0 19 6	0 19 2	0 12 2
Miscellaneous ..	3 4 9	3 5 4	3 1 0	3 2 3	2 10 2
<b>Total Primary Production</b>	<b>27 13 1</b>	<b>25 10 4</b>	<b>29 14 11</b>	<b>23 3 7</b>	<b>18 2 1</b>
<b>Manufactures ..</b>	<b>29 15 11</b>	<b>29 12 3</b>	<b>28 19 11</b>	<b>27 16 0</b>	<b>21 3 0</b>
<b>Grand Total</b>	<b>57 9 0</b>	<b>55 2 7</b>	<b>58 14 10</b>	<b>50 19 7</b>	<b>39 5 1</b>

**Monthly employment in factories.** An analysis has been made of the number of employees in factories in Victoria on the pay day nearest the 15th day of each month for the past four years.

The figures have been converted into index numbers which are given hereunder with an accompanying graph. The latter indicates

MONTHLY INDEX OF EMPLOYMENT IN VICTORIAN FACTORIES FROM  
1ST JULY, 1927, TO 30TH JUNE, 1931.

Average for 1927-28 = 1000.



clearly the course of the trade depression as affecting factory employees.

*Production.*

Monthly  
employment  
in factories.

Statistics furnished by manufacturers include informa-  
tion for the pay days nearest the 15th day of each month, including  
and all others engaged in work connected with manu-

This information has been tabulated and the monthly totals for

## MONTHLY EMPLOYMENT

Industry.	Average Number			
	July.	August.	Septem-ber.	October.
Aerated waters .. .. .	513	508	568	654
Agricultural implements .. .. .	2,510	2,521	2,571	2,371
Art metal .. .. .	158	152	151	147
Bacon curing .. .. .	470	448	445	447
Bags and sacks .. .. .	133	133	136	132
Bags, trunks, &c. .. .. .	496	492	482	497
Bakeries .. .. .	2,508	2,489	2,491	2,484
Basketware .. .. .	107	102	116	107
Bedding and mattress .. .. .	352	337	335	315
Biscuits .. .. .	1,001	1,014	990	975
Boiling down, tallow, &c. .. .. .	267	266	263	280
Boot accessories .. .. .	387	389	406	417
Boot repairing .. .. .	287	283	284	282
Boots and shoes .. .. .	8,433	8,309	8,607	8,967
Boxes and cases .. .. .	395	384	400	403
Brass and copper .. .. .	842	838	804	789
Breweries .. .. .	1,114	1,011	1,031	1,088
Bricks, tiles, firebricks .. .. .	898	959	824	670
Brooms and brushware .. .. .	257	268	261	256
Butter and cheese .. .. .	1,928	2,057	2,174	2,386
Cabinet, furniture .. .. .	1,943	1,823	1,789	1,744
Cement and cement goods .. .. .	650	687	642	473
Cereal foods .. .. .	810	812	805	785
Chaffcutting .. .. .	402	406	400	382
Chemical fertilizers .. .. .	626	595	630	597
Chemicals, drugs .. .. .	1,159	1,176	1,163	1,136
Condiments, coffee .. .. .	468	478	468	476
Confectionery .. .. .	2,657	2,620	2,546	2,404
Cooperage .. .. .	256	220	214	247
Cotton .. .. .	446	445	431	418
Cutlery and small tools .. .. .	117	119	120	123
Cycle and motor accessories .. .. .	156	164	154	134
Die sinking and engraving .. .. .	146	142	137	137
Distilleries .. .. .	156	143	125	135
Dressmaking .. .. .	5,284	5,208	5,422	5,196
Dried fruit .. .. .	437	491	447	422
Dyeworks and cleaning .. .. .	406	406	415	420
Earthenware, china, &c. .. .. .	578	585	612	571
Electric light—Government .. .. .	796	787	793	737
"    Local authority .. .. .	286	284	283	277
"    Companies .. .. .	139	139	139	134
Electrical installations .. .. .	1,145	1,119	1,115	980
Electrotyping and stereotyping .. .. .	28	28	26	25
Engineering (not marine or electrical) .. .. .	4,883	4,720	4,433	4,244
Explosives .. .. .	464	436	495	492

tion relating to the number of employees on factory pay-rolls on the managers, clerks, engine-drivers, operatives, carters and messengers facturing.

each industry are set out in the following table :—

**IN FACTORIES, 1930-31.**

of Employees in—

November.	December.	January.	February.	March.	April.	May.	June.
683	710	617	557	514	457	463	466
2,343	1,961	1,904	1,736	1,466	1,425	1,409	1,387
135	142	122	126	144	161	168	152
456	476	460	462	467	472	478	470
135	151	143	119	125	116	117	124
508	483	450	437	423	415	411	408
2,463	2,434	2,446	2,443	2,445	2,430	2,421	2,433
106	114	99	125	124	80	67	103
330	331	335	354	372	379	378	389
1,000	987	888	942	952	781	908	882
295	294	254	270	253	254	248	250
422	377	381	448	477	478	485	491
287	280	279	275	279	278	276	265
8,990	7,518	6,438	8,072	8,556	8,805	9,131	8,586
416	433	431	439	460	458	443	434
778	773	709	691	659	625	614	616
1,121	1,132	1,113	1,083	1,084	1,066	1,060	1,056
558	476	505	508	459	412	500	567
259	256	249	255	258	252	251	251
2,486	2,458	2,241	2,187	2,115	2,069	1,957	1,994
1,658	1,641	1,505	1,511	1,510	1,517	1,526	1,459
401	421	266	269	326	306	316	299
764	785	694	697	792	793	807	747
349	338	389	372	340	341	349	367
501	553	586	585	642	833	607	525
1,120	1,149	1,088	1,097	1,100	1,090	1,099	1,107
506	529	490	468	461	439	447	443
2,377	2,456	2,099	2,260	2,323	2,390	2,597	2,541
254	236	231	230	222	215	210	214
429	429	436	440	444	447	446	447
119	122	121	119	118	112	116	113
135	135	138	130	124	126	128	134
151	129	141	144	136	130	131	133
134	111	89	91	87	118	118	123
4,911	4,795	3,977	4,569	4,847	4,824	4,808	4,368
449	483	517	772	1,041	884	522	457
418	422	416	412	389	391	392	393
512	470	443	519	489	514	530	506
713	699	723	743	732	760	779	760
268	271	267	269	270	271	275	264
132	134	131	132	133	135	134	134
993	1,044	942	1,060	1,012	1,046	1,107	1,048
21	21	21	20	20	20	20	20
4,015	3,927	3,580	3,520	3,645	3,617	3,500	3,565
495	484	534	479	478	469	468	485

## MONTHLY EMPLOYMENT IN

Industry.	Average Number			
	July.	August.	Septem-ber.	October.
Extracting and refining—other metals ..	19	19	18	18
Fellmongery .. .. .	229	223	252	268
Furnishing, drapery .. .. .	185	184	169	182
Furriers .. .. .	371	341	346	268
Galvanized iron working .. .. .	1,680	1,680	1,732	1,750
Gas fittings and meters .. .. .	237	233	232	234
Gasworks—Local authority .. .. .	74	73	74	81
"    Companies .. .. .	781	768	736	754
Glass (including bottles) .. .. .	771	771	785	773
Gold, silver, and electroplating .. .. .	612	615	551	562
Grain milling .. .. .	781	768	757	801
Handkerchiefs, ties, &c. .. .. .	311	339	355	385
Hats and caps .. .. .	1,270	1,279	1,221	1,273
Horse-drawn vehicles .. .. .	486	480	481	479
Hosiery and knitting .. .. .	6,851	6,413	6,135	5,912
Ice refrigerating .. .. .	152	149	162	201
Ice cream .. .. .	73	81	130	187
Inks, polishes, &c. .. .. .	288	286	286	289
Jams and fruit preserving .. .. .	1,040	962	989	1,092
Jewellery .. .. .	333	333	330	305
Joinery .. .. .	745	730	718	708
Lime, plaster, and asphalt .. .. .	558	517	490	481
Machine belting .. .. .	47	42	44	44
Malting .. .. .	284	276	279	295
Margarine .. .. .	62	65	66	63
Marble, slate, &c. .. .. .	354	352	337	344
Meat and fish preserving .. .. .	613	601	910	1,493
Millinery .. .. .	1,287	1,278	1,366	1,397
Modelling .. .. .	43	40	38	35
Motor body building .. .. .	1,102	1,129	1,012	1,109
Motor construction and assembly .. .. .	546	513	487	460
Motor repairs .. .. .	2,451	2,411	2,377	2,373
Musical instruments .. .. .	348	336	346	287
Newspapers .. .. .	2,083	2,090	2,044	2,039
Oils, mineral .. .. .	209	194	206	206
Oils, vegetable .. .. .	93	88	105	92
Papermaking, stationery .. .. .	2,749	2,745	2,793	2,786
Perambulators .. .. .	111	109	114	117
Photo engraving .. .. .	319	306	291	293
Pickles and sauces .. .. .	227	229	232	218
Picture frames .. .. .	58	62	61	59
Printing and bookbinding .. .. .	4,965	4,943	4,889	4,866
Rope and cordage .. .. .	750	746	802	781
Rubber tyres, &c. .. .. .	1,042	951	1,063	1,063
Rubber, other (rubber goods) .. .. .	973	942	1,025	1,012
Saddlery, harness .. .. .	104	99	116	117
Sausage skins .. .. .	184	171	187	286
Sawmills—Forest .. .. .	1,498	1,400	1,387	1,293
"    Town .. .. .	1,151	1,117	979	978
Ship and boat building .. .. .	322	439	411	369

## FACTORIES, 1930-31—continued.

of Employees in—

November.	December.	January.	February.	March.	April.	May.	June.
16	16	19	17	17	16	18	20
264	212	138	192	202	235	252	261
196	190	157	164	165	156	177	158
270	265	277	323	371	411	422	370
1,834	1,805	1,656	1,613	1,698	1,540	1,514	1,489
208	185	189	198	200	202	220	237
72	72	67	67	66	67	67	70
757	752	770	749	755	752	747	742
508	587	519	411	394	566	664	464
493	476	459	438	451	462	489	467
793	811	904	942	841	889	964	869
379	364	278	309	316	286	304	304
1,207	1,178	913	1,043	1,025	992	998	1,057
486	484	466	458	451	434	426	398
5,935	5,998	6,041	6,697	7,063	7,330	7,586	7,398
220	236	241	230	215	159	144	146
195	200	193	167	111	68	56	54
282	280	264	276	279	279	276	273
1,113	1,097	1,870	2,346	3,213	1,175	1,075	839
324	328	216	250	266	272	282	275
687	663	599	589	577	589	572	578
429	425	402	401	382	367	382	374
43	42	44	42	42	40	41	39
286	270	188	141	144	164	236	243
68	69	69	71	81	84	82	89
333	333	318	336	311	316	314	301
1,738	1,570	646	1,024	971	910	747	954
1,349	1,347	1,120	1,297	1,403	1,286	1,142	1,064
32	30	19	26	33	28	27	30
1,066	863	764	801	822	767	782	755
457	478	443	419	401	390	397	411
2,333	2,325	2,277	2,245	2,199	2,174	2,123	2,101
278	265	226	261	271	290	277	247
2,026	2,032	2,010	1,999	1,956	1,920	1,891	1,889
201	198	183	188	182	193	190	183
101	84	96	99	103	126	113	127
2,699	2,804	2,622	2,635	2,632	2,616	2,637	2,629
112	110	104	100	96	93	85	80
294	284	288	279	272	279	271	261
217	213	203	236	225	183	204	206
55	56	53	50	53	52	54	49
4,834	4,777	4,596	4,601	4,587	4,576	4,582	4,557
760	739	618	673	665	732	745	737
1,085	1,182	931	944	1,115	1,197	1,094	1,004
1,002	957	836	811	820	826	842	928
115	106	94	103	100	101	112	102
306	269	211	214	222	218	196	218
1,213	1,203	1,122	1,146	1,145	1,031	1,031	962
930	920	709	830	834	715	757	718
359	258	339	233	218	287	209	213



## MONTHLY EMPLOYMENT IN

Industry.	Average Number			
	July.	August.	Septem-ber.	October.
Shirts, collars, &c. .. .. .	4,635	4,680	4,681	4,715
Smelting, iron rolling .. .. .	3,107	2,904	2,700	2,675
Soap and candle .. .. .	630	626	624	620
Stoves and ovens .. .. .	353	323	352	339
Surgical instruments .. .. .	207	204	198	197
Tailoring .. .. .	6,374	6,198	6,424	6,464
Tanning and leather dressing .. .. .	1,405	1,327	1,372	1,357
Tents and sailmaking .. .. .	140	128	133	149
Tobacco and cigarettes .. .. .	1,493	1,495	1,593	1,698
Toys, games, &c. .. .. .	311	321	324	333
Tram and railway workshops .. .. .	6,590	6,558	6,236	5,961
Umbrellas .. .. .	88	87	84	84
Watches and clocks .. .. .	42	42	42	42
Waterproof clothing .. .. .	225	224	227	210
White lead, paint, &c. .. .. .	80	89	88	87
Window blinds, &c. .. .. .	35	32	29	28
Wireless apparatus .. .. .	363	434	322	265
Wireworking .. .. .	530	525	525	489
Wood turning .. .. .	395	373	352	380
Woollen mills .. .. .	6,593	6,297	6,045	5,874
Other factories .. .. .	3,877	3,650	3,643	3,585
	126,789	124,428	124,053	123,386

## BUILDING STATISTICS, 1930-31.

In view of the great importance of statistics of building and construction, their collection was undertaken in Victoria in 1929. Owing, however, to the obvious incompleteness of the returns received, the information obtained was not considered satisfactory, and very few details were published. The data received from builders covering their operations for the years ending 30th June, 1930, and 1931, show evidence of much greater care in compilation, and are considered worthy of publication in full detail.

The particulars given below for the year 1930-31 were obtained from returns furnished by 930 builders.

The value of building work done in each of the past three years, according to the returns received, was as follows:—

## VALUE OF BUILDING WORK.

	1928-29.	1929-30.	1930-31.
	£	£	£
New buildings .. .. .	5,747,671	5,025,237	1,958,307
Repairs and additions .. .. .	519,243	1,041,503	570,032
Other construction .. .. .	..	235,328	130,806
<b>Total</b> .. .. .	<b>6,266,914</b>	<b>6,302,068</b>	<b>2,659,145</b>

FACTORIES, 1930-31—continued.

of Employees in—

November.	December.	January.	February.	March.	April.	May.	June.
4,474	4,469	3,732	4,026	4,032	3,870	3,949	3,889
2,576	2,546	2,381	2,358	2,283	2,243	2,246	2,110
622	619	597	612	607	614	619	617
330	341	303	319	313	297	322	326
195	192	184	191	187	188	186	188
6,386	6,267	5,333	5,557	5,731	5,712	5,692	5,433
1,301	1,015	1,107	1,411	1,498	1,488	1,462	1,367
155	161	141	128	128	131	126	111
1,728	1,727	1,658	1,671	1,641	1,771	1,782	1,758
319	320	270	278	272	279	278	280
5,855	5,881	5,676	5,660	5,525	5,253	5,386	5,335
88	91	79	71	72	89	95	105
42	42	42	42	42	42	42	42
211	208	202	212	218	230	212	214
92	92	90	92	82	88	71	79
32	32	33	31	30	29	27	29
255	276	274	305	381	465	531	636
467	470	412	420	427	424	429	431
350	355	323	330	370	355	339	333
5,789	5,455	5,587	5,871	6,229	6,504	6,732	6,870
3,589	3,490	3,266	3,396	3,539	3,448	3,686	3,761
121,412	118,027	109,345	115,102	117,881	115,562	116,245	113,830

The number of persons employed and the total salaries and wages paid are shown hereunder.

Persons Employed.	Number.	Salaries and Wages Paid.	Average Salary or Wage.
		£	£ s. d.
Working proprietors .. ..	993	141,172	142 3 4
Managers .. ..	86	25,960	301 17 2
Clerks—			
Male .. ..	42	6,855	163 4 3
Female .. ..	33	3,469	105 2 5
Others .. ..	2,871	423,567	147 10 8

The average wage paid to "Others," in which term is included all workers directly employed by the builders, is low, probably because work had been intermittent on account of a severe depression which prevailed in the building industry during the period. The following statement shows the payments to sub-contractors :—

## PAYMENTS TO SUB-CONTRACTORS, 1930-31.

			£				£
Plumbers	..	..	99,990	Bricklayers	..	..	44,291
Painters	..	..	51,433	Tilers	..	..	29,711
Electricians	..	..	41,407	Others	..	..	361,089
Joiners	..	..	53,607				
				Total	..	..	681,528

The term "Others" in this statement includes sub-contractors for excavations, concreting, asphaltting, fibro-cement and plaster work, plastering, &c., and where certain builders have been unable to dissect their costs the total has been included under this heading. The term "sub-contractor" is intended to mean sub-contractor for "labour and material" only. Persons compiling returns were instructed to include sub-contractors for "labour only" under the heading of "persons employed," and the amount of the contract under "wages paid."

**Materials used.** The value of materials used has been, in most cases, carefully dissected, but some builders have been unable to give the details asked for. This is regrettable, as it is important that complete statistics in regard to materials used should be available. Where the details could not be supplied it was necessary to include the total cost of all materials used under the heading of "Other materials." The value of the materials used is shown below:—

Materials.	Value.	
	1929-30.	1930-31.
	£	£
Timber .. .. .	1,108,896	406,340
Bricks .. .. .	330,423	114,011
Tiles .. .. .	81,483	45,274
Cement and lime .. .. .	186,623	95,269
Other materials .. .. .	1,482,196	599,423
<b>Total</b> .. .. .	<b>3,189,621</b>	<b>1,260,317</b>

In addition to payment for wages, materials, and sub-contracts, there are numerous other expenses incidental to building, such as fuel, insurance, building fees of various kinds, &c. These have been included under the heading of "Other expenses," and total £43,894.

Capital invested in plant and machinery amounted to £100,852, and in land and buildings used as workshops to £97,685.

The following table is an analysis of the buildings completed during the years 1929-30 and 1930-31. As some of these buildings were doubtless commenced in the previous year, the total value is not a measure of the value of building construction for these respective years. The table published at the beginning of this review purporting to show value of work done is designed for this purpose.

## BUILDINGS COMPLETED DURING 1929-30 AND 1930-31.

	1929-30.		1930-31.	
	Number.	Value.	Number.	Value.
Business premises ..	361	£ 1,473,018	142	£ 757,680
Other buildings ..	..	835,360	..	372,900
Dwellings—				
Brick ..	927	1,215,338	273	388,109
Wood ..	1,727	1,252,667	465	298,524
Total Value ..	..	4,776,383	..	1,817,213

Information collected with regard to dwellings was confined to those constructed of brick and of wood as representative of the most common types of houses built in Victoria.

The table hereunder summarizes the result.

## DWELLINGS CONSTRUCTED, 1930-31.

Number of Rooms.	Brick Dwellings.		Average Value per Dwelling.	Wooden Dwellings.		Average Value per Dwelling.
	Number.	Value.		Number.	Value.	
Three rooms ..	7	£ 3,181	£ 455	41	£ 13,152	£ 320
Four rooms ..	19	11,070	583	124	64,035	516
Five rooms ..	119	118,263	994	246	171,541	699
Six rooms ..	70	89,640	1,280	42	33,628	800
Seven rooms ..	26	49,305	1,896	4	3,893	973
Eight rooms ..	9	24,458	2,717	3	2,471	823
Nine rooms ..	8	22,067	2,758	1	755	755
Ten rooms ..	6	20,492	3,415	3	6,230	2,073
Over ten rooms ..	9	49,633	5,515	1	2,819	2,819