

### TOTALS

Year	Average Rainfall	Wheat		Wool Total Product <sup>n</sup>	Live Stock	
		Area	Average per Area		Cattle	Sheep
		Acres	Bushels	Ibs.		
1913	23.06	2,565,861	12.84	106,833,690	1,528,553	12,113,682
1914	15.21	2,863,535	1.38	95,406,867	1,362,542	12,051,685
1915	22.88	3,679,971	15.90	82,330,198	1,043,604	10,545,632
1916	30.27	3,125,692	16.37	94,845,024	1,175,098	12,576,587
1917	31.36	2,690,216	14.03	105,424,682	1,371,049	14,760,013

**KARKAROC**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	12.46	808,471	6.38	14,529,820	33,909	635,469
1914	7.29	1,052,598	3.3	1,148,315	26,249	499,185
1915	12.42	1,235,121	10.72	1,825,296	39,970	387,339
1916	17.72	1,295,761	15.06	3,417,621	34,003	479,598
1917	19.85	863,194	11.26	5,434,950	33,046	79,892

**WIMMERA**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	16.38	645,496	17.46	10,116,631	51,143	1,303,212
1914	9.76	139,795	1.29	15,439,800	41,119	1,514,595
1915	16.39	399,839	19.67	12,417,827	35,423	1,465,949
1916	22.54	708,537	29.73	16,483,191	43,509	1,785,313
1917	21.56	687,985	20.03	10,280,016	46,000	1,258,861

**RODNEY**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	16.76	701,562	15.24	14,922,294	175,058	1,241,369
1914	9.23	619,794	1.27	12,721,944	125,372	1,365,419
1915	16.75	1,003,616	18.38	10,645,053	108,036	1,479,633
1916	25.60	989,155	15.36	13,574,233	121,588	1,822,176
1917	36.34	796,453	12.61	11,024,200	175,770	2,563,136

**NORTH EASTERN**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	29.69	77,221	13.11	6,755,067	355,237	806,165
1914	19.84	59,731	4.01	6,632,306	171,941	1,044,310
1915	34.77	86,458	16.31	6,442,092	122,460	712,412
1916	46.01	67,803	11.33	6,736,133	146,375	933,019
1917	56.08	42,381	6.54	6,943,161	179,220	1,054,610

**DALHOUSIE**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	34.22	23,567	14.89	3,112,000	55,544	396,015
1914	14.55	25,613	3.90	6,001,541	67,539	1,606,491
1915	25.65	38,856	19.99	7,379,059	61,494	940,711
1916	34.44	23,344	16.95	7,819,506	69,142	1,131,316
1917	35.86	22,123	11.55	8,893,418	79,505	1,298,336

**NORTH CENTRAL**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	27.64	16,585	19.67	7,769,423	247,028	1,086,144
1914	30.05	16,964	7.72	7,534,894	228,500	1,289,096
1915	24.07	32,435	19.88	7,424,423	186,120	1,009,687
1916	38.78	42,231	13.24	8,055,143	219,530	1,295,986
1917	32.41	38,787	14.34	8,351,663	229,381	1,307,007

**WESTERN**

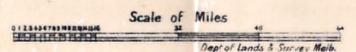
Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	25.06	149,611	14.86	38,576,694	322,109	4,148,335
1914	18.56	123,638	7.31	33,658,397	338,094	4,029,220
1915	21.44	172,975	29.49	32,512,301	344,021	3,465,639
1916	30.72	164,560	12.38	32,477,950	223,175	3,352,883
1917	31.70	138,322	17.40	35,194,563	334,769	4,576,510

**BULN BULN**

Year	Average Rainfall	Wheat Area	Wheat Average per Acre	Wool Total Product	Live Stock Cattle	Live Stock Sheep
1913	34.65	12,412	15.24	1,007,577	358,477	885,913
1914	23.07	9,591	15.36	7,237,766	354,089	1,800,595
1915	27.63	18,675	22.00	7,167,011	294,564	1,855,423
1916	37.78	11,182	15.68	8,947,921	284,008	1,627,484
1917	34.63	14,394	18.33	7,594,256	303,649	1,546,032

# VICTORIA.

Showing  
Statistics of Wheat, Wool, Live Stock and Rainfall in each District.



## PRODUCTION.

## LAND SETTLEMENT, ETC.

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

	Acres.
Lands alienated in fee simple .. ..	24,427,467
Lands in process of alienation .. ..	7,559,809
Crown lands .. ..	24,258,484
Total .. ..	56,245,760

The Crown lands comprise—

Permanent forests .. ..	3,376,221
Timber Reserves .. ..	753,557
Water Reserves .. ..	315,596
Reserves for Agricultural Colleges, &c. ..	84,990
Reserves in the Mallee .. ..	397,881
Other Reserves .. ..	306,097
Roads .. ..	1,744,452
Water frontages, beds of rivers, lakes, &c. } ..	2,147,923
Unsold land in cities, towns, and boroughs }	
Land in occupation under—	
Grazing Area Leases .. ..	2,573,143
Perpetual Leases .. ..	210,704
Other Leases and Licences .. ..	121,294
Temporary Grazing Licences .. ..	9,522,261
Unoccupied .. ..	2,704,365
Total .. ..	24,258,484

Alienation  
of land,  
1890 to 1917.

In the following table are shown the area of Crown lands sold absolutely and conditionally, and the area of such lands alienated in fee simple in each year since 1899.

A proportion of the area conditionally sold each year

reverts to the Crown 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, 1900 TO 1917.

Year.	Area of Crown Lands Sold.		Crown Lands alienated in Fee Simple.	
	Absolutely, at Auction, &c.	Conditionally to Selectors.*	Area.	Purchase Money.
	Acres.	Acres.	Acres.	£
1900 .. ..	7,685	225,098	494,752	526,650
1901 .. ..	7,052	516,412	406,145	438,363
1902 .. ..	7,304	299,502	523,574	555,538
1903 .. ..	13,223	334,590	510,080	542,011
1904 .. ..	9,588	253,592	584,010	613,511
1905 .. ..	8,778	217,419	907,339	934,386
1906 .. ..	6,642	173,113	344,519	375,296
1907 .. ..	6,313	191,232	181,050	208,619
1908 .. ..	6,552	213,883	137,023	176,335
1909 .. ..	7,393	257,179	150,948	188,017
1910 .. ..	5,795	248,694	127,993	171,904
1911 .. ..	4,068	205,708	159,892	136,277
1912 .. ..	4,120	114,630	128,427	165,854
1913 .. ..	4,205	171,449	153,051	164,065
1914 .. ..	3,705	166,026	129,525	145,003
1915 .. ..	3,287	129,232	117,257	113,167
1916 .. ..	2,061	140,341	89,203	80,238
1917 .. ..	2,075	89,164	82,042	79,992

\* Exclusive of Mallee selectors.

From the period of the first settlement of the State to the end of 1917 the amount realized by the sale of Crown lands was £33,566,206, which represents an average of £1 1s. 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.

Amount realized by sale of Crown lands.

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, 1917.

Location.	Classification.					Total.
	Agricultural and Grazing.				Auri-ferous.	
	First.	Second.	Third.	Un-classed.		
County.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bulu Bulu .. .. .	1,846	52,468	48,073	..	..	102,387
Croajlongong .. .. .	2,510	6,056	553,110	840,400	14,150	1,416,226
Dargo .. .. .	..	..	87,880	435,400	77,210	600,490
Tambo .. .. .	..	..	203,050	393,800	900	602,750
Tanjil .. .. .	..	..	96,190	363,650	67,000	526,840
Wonnangatta .. .. .	..	39	129,618	942,100	..	1,071,757
Bogong .. .. .	3,351	12,250	202,243	208,692	124,488	551,024
Benambra .. .. .	..	352	227,419	320,994	76,229	624,904
Delatite .. .. .	743	21,662	208,056	234,300	67,866	527,627
Molra .. .. .	171	..	9,399	..	..	9,570
Anglesey .. .. .	87	1,946	60,646	..	8,223	70,852
Bourke .. .. .	..	307	100	..	..	407
Dalhousie .. .. .	..	762	3,124	..	6,082	9,968
Evelyn .. .. .	..	23,389	..	..	3,525	26,914
Mornington .. .. .	..	5,936	52,904	..	..	58,840
Bendigo .. .. .	85	635	5,237	..	7,694	13,651
Rodney .. .. .	162	103	125	..	2,660	3,050
Borong .. .. .	..	819	37,237	..	9,767	47,323
Gladstone .. .. .	413	1,147	1,951	..	23,120	26,631
Lowan .. .. .	..	177	49,907	..	..	50,084
Kara Kara .. .. .	..	163	4,893	..	7,073	12,134
Talbot .. .. .	..	485	205	..	53,510	54,200
Tatchera .. .. .	..	70	..	..	..	70
Heytesbury .. .. .	..	910	167,733	..	..	168,643
Poiwarth .. .. .	1,149	12,862	35,518	..	..	49,529
Grant .. .. .	..	75	24,960	..	17,485	42,520
Grenville .. .. .	..	20	..	..	15,640	15,660
Ripon .. .. .	..	..	13,993	..	6,640	20,633
Normanby .. .. .	85	758	68,272	..	..	69,115
Dundas .. .. .	425	40	22,777	11,500	..	34,742
Villers .. .. .	..	..	455	..	..	455
Follett .. .. .	..	..	11,380	..	..	11,380
Totals .. .. .	10,977	142,931	2,321,455	3,755,836	589,267	6,820,466
Throughout the State .. .. .	..	..	Swamp or reclaimed lands .. .. .	..	..	1,413
.. .. .	..	..	Lands which may be sold by auction .. .. .	..	..	10,923
The north-western portion of the State .. .. .	..	..	Mallee lands (such as are suitable to be eventually classed 1st, 2nd, or 3rd class for selection)	..	..	5,393,824
Total area remaining for disposal .. .. .	..	..	..	..	..	12,226,626

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

Pastoral occupation of Crown lands.

The particulars of Crown lands leased for pastoral occupation on 31st December, 1917, are as follows :—

Number of Licences and Leases .. .. .	14,307
Area (acres) .. .. .	12,383,810
Annual Rental .. .. .	£39,652

These licences and leases are not all on the same basis as regards the terms and the privileges of tenure. For instance, grazing area leases are granted for any term of years expiring not later than 29th December, 1920, whilst grazing licences are renewable annually, and are only granted for waste lands of the Crown until required under the principal sections of the Act. The lessee of a grazing area has the privilege of selecting (*i.e.*, of purchasing under the deferred payment system on certain conditions) out of his lease for agricultural or grazing purposes an area not exceeding 200 acres of first class, 320 acres of second class, or 640 acres of third class land, according to classification; and the lessee of a Mallee allotment has a like privilege of selecting out of his lease 640 acres of first class, 1,000 acres of second class, or 1,280 acres of third class land, according to classification.

**Persons who may select land.**

Any person of the age of 18 years or upwards is eligible to take up or select under the Land Acts a prescribed area varying according to the classification of the land—less the area of previous selections.

**Land Laws.**

A conspectus of the provisions of the Victorian Land Acts appears in the *Year-Book* for 1916-17 and previous issues.

**Official register of private farms for sale.**

At the Lands Inquiry Office, in addition to particulars regarding Crown lands, &c., available for settlement, a register is kept of suitable private farms for sale. These are classified according to value and utility. The list is comprehensive and embraces the whole State, and intending purchasers can inspect with confidence any of the properties submitted. No charge is made by the Government for any work done in this connexion.

**Transfer of Land Act.**

The "Torrens System," whereby persons acquiring possession of land may receive a clear title, was introduced into Victoria in 1862. The system 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, application must be made accompanied by strict proofs of the applicant's interest in the property. During 1917 there were submitted 332 applications to have brought under the Act land amounting to 11,035 acres in extent, and to £396,811 in value; whilst the land actually brought under the Act during the year by application was 48,284 acres valued at £818,093. Up to the

end of 1917 there had been brought under the Act 2,969,656 acres valued at £59,941,413. The number of certificates of title issued in 1917 was 13,181.

**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. The amount at credit of the fund at 30th June, 1916, was £121,071. Receipts during 1916-17 comprised contributions £2,050, interest on stock £2,845, and interest on £75,073, advanced for the purchase of land adjoining the Titles Office, £3,003. During the year the amount paid out of the fund for claims was £70. The balance at the credit of the assurance fund on 30th June, 1917, was £123,899. The amount paid up to 30th June, 1917, as compensation and for judgments recovered, including costs, was £7,572.

#### CLOSER SETTLEMENT.

**Closer Settlement.** Under the provisions of the Closer Settlement Act the Lands Purchase and Management Board is empowered to expend at the rate of £500,000 per annum in the purchase, for the Crown, of privately owned lands throughout the State, for subdivision into suitable allotments according to the class of the land, and for disposal by the Board to eligible applicants, as stated hereafter. Lands well adapted for settlement are thus made available in those portions of the State in which railways, water supply and markets are provided, and in which roads and other facilities are good. The areas purchased comprise ordinary farming lands in a more or less improved condition, and lands in irrigated districts with plentiful supplies of water for irrigation.

Every application for a Closer Settlement allotment must be accompanied by the registration fee of 5s., a lease fee of £1, and a deposit (equal to 3 per cent. of the capital value of the land) which is deducted from the purchase money. The applicant is required to give evidence of suitability and fitness, &c., to occupy the land. If successful, a permit giving immediate possession is issued (followed by a lease as soon as practicable), and no further payment is required for six months. The deposit, less the 5s. registration fee, is at once returned to any unsuccessful applicant. Only one allotment of the maximum value can be granted to any one person and the principle of residence is a permanent condition in the title.

In addition to the provisions for the purchase of large estates for subdivision, the Closer Settlement Act provides that any one or more persons, who are eligible to acquire a farm allotment under the Closer Settlement Act, may enter into a provisional agreement with the owner of a block of private land for the purchase thereof, and acquire it through the Lands Purchase and Management Board. The value of the land must not exceed the maximum allowed under the Act, unless two or more eligible persons agree to purchase it. Agreements with full details and an application on the proper forms must be filled in and lodged with the Board, together with a valuation fee of £4, when an inspection and valuation of the property will be made. The fee may be returned if, after a preliminary inspection, the Board does not approve of the application. Should the Board decide to acquire the land, the purchaser is required to deposit an amount not exceeding four half-yearly instalments, and is otherwise subject to all the provisions of the Closer Settlement Act with regard to payments, permanent residence, improvements, &c.

Repurchased lands are disposed of as farm allotments, agricultural labourers' allotments, and workmen's home allotments under conditional purchase lease, the terms of which are briefly stated herein, but are more particularly described in each title as issued.

Conditional purchase leases are granted to successful applicants under the Closer Settlement Act, and are for such a term not exceeding  $31\frac{1}{2}$  years as may be agreed upon between the lessee and the Board. The purchase money is payable by 63 or a less number of half-yearly instalments. In some cases the Board has granted applications made for extension of payments under a lease to  $46\frac{1}{2}$  years, the payments being by 93 half-yearly instalments. The deposit lodged with the application is credited as part of the principal, and the balance bears interest at  $4\frac{1}{2}$  per cent. Each instalment includes interest upon the balance of purchase money remaining unpaid, and is 3 per cent. half-yearly (6 per cent. per annum) of the capital value of the allotment (less the amount of the deposit). Payments in advance may be made at any time, at the option of the lessee, and a proportionate reduction of interest secured thereby.

In special cases, when a lessee is unable to meet the instalments of purchase money as they fall due, the Board has power to suspend such payments up to an amount not exceeding 60 per cent. of the value of the improvements effected by the lessee. Interest at the rate

of 5 per cent. per annum is charged on the amount in arrear or on any instalments which may have been suspended.

The lessee must reside on the allotment. Personal residence by the lessee's wife, or child over 18 years of age, or parent dependent for support, may, with the approval of the Board, be considered personal residence by the lessee. A farm lessee cannot transfer, assign, mortgage, or sublet the whole or any part of his allotment within the first six years of the lease. The Crown grant may be issued to the lessee at the end of any half-year after the first twelve years have expired, on payment of the balance of purchase money, and the residence condition may be fulfilled thereafter by any one approved by the Governor in Council.

**Farm allotments.** Lands for farm allotments are subdivided into suitable areas not exceeding in value a maximum amount of £2,500 ; and no lease thereof can be granted to a person who at the date of application is directly or indirectly the owner of any other land in Victoria (township land excepted) which, together with the allotment applied for, exceeds such value. Improvements of a permanent and substantial character must be effected by the lessee of a farm allotment to the value of at least two instalments of the purchase money before the end of the first year from the date of the lease, 10 per cent. of the purchase money before the end of the third year, and a further 10 per cent. before the end of the sixth year. Improvements must thus be made to the value of at least 20 per cent. of the total purchase money payable for the allotment ; and, if they are made in excess of requirements during either of the two earlier periods mentioned, the excess is set off against the expenditure necessary by the end of the sixth year.

**Agricultural labourers' allotments.** Agricultural labourers' allotments are made available in the vicinity of larger holdings, with the object of providing workmen for the farmer, and of providing small areas for agricultural labourers, who in their spare time may work the allotments with the aid of their families. Lands for agricultural labourers' allotments are subdivided into suitable areas not exceeding in value a maximum amount of £350, and no lease thereof can be granted

to any person who, at the date of application, is directly or indirectly the owner of any other land in Victoria which, together with the allotment applied for, exceeds such value. Improvements required to be effected by the lessee of an agricultural labourer's allotment are the erection of a dwelling-house of the value of at least £30 within one year from the date of the lease; and the enclosure of the allotment with a substantial fence within two years from the date of the lease. A lessee who has complied with conditions may, at any time, with the Board's consent, transfer, sublet, or mortgage his lease.

**Workmen's home allotments.** Workmen's home allotments are made available near centres of population, and, being of fair size and away from congested areas, provide open surroundings. Only one residence or place of business is permitted to be erected on each allotment. Lands for workmen's home allotments are subdivided into suitable areas not exceeding in value a maximum amount of £250, and no lease thereof can be granted except to a person (a) who is engaged in some form of manual, clerical, or other work for hire or reward, and whose salary is not more than £250 per annum; (b) who at the date of application is not the owner (either directly or indirectly) of any other land in Victoria which exceeds in area one-eighth of an acre if township or suburban, or 50 acres if country land; and (c) whose real and personal estate does not exceed £350. Improvements required to be effected by the lessee of a workman's home allotment are as follows:—The allotment must be fenced, and a substantial dwelling house of the value of at least £50 must be erected thereon within one year and additional improvements of a value of at least £25 made within two years from the date of the lease. A lessee who has complied with conditions may at any time transfer, mortgage, or sublet his allotment, subject to the Board's approval.

**Advances to settlers.** The Closer Settlement Act provides for advances by the Lands Purchase and Management Board to settlers who are—

- (a) Lessees under the *Closer Settlement Act 1915*.
- (b) Licensees of an agricultural or grazing allotment under the *Land Act 1915*.
- (c) Licensees under section 86 of the *Land Act 1915* or corresponding sections of any repealed Act.
- (d) Conditional purchase lessees under the *Land Act 1915*; or
- (e) Conditional purchase lessees under the Murray Settlements Act, now Section 245 *Land Act 1915*.
- (f) Selection purchase lessees under Sections 46 and 50, *Land Act 1915*.
- (g) Perpetual lessees under Section 54, *Land Act 1915*.

Advances of not more than £500, and not exceeding 60 per cent. of the value of improvements effected on the land, may be made during the first six years of the lease for the following purposes :—

1. The erection of dwelling-houses or outbuildings, or the effecting of other improvements.
2. Carrying on farming, grazing, agricultural and horticultural pursuits.

After six years the lessee or grantee may obtain an advance up to £1,000 on a 60 per cent. basis of the value of his improvements and the purchase money paid for the land. The amounts allowed by the Board to lessees under the Closer Settlement Act towards the cost of erecting dwelling-houses and outbuildings are made on the following bases :—

For a farm allotment.—An amount not exceeding 10 per cent. of the value of the land ; but, where the land is valued at less than £500, a maximum not exceeding £50.

For an agricultural labourer's allotment.—An amount not exceeding £50.

For a workman's home allotment.—An amount not exceeding £50 where the lessee is in intermittent employment, but where in permanent employment the advance may be £150. (In special areas within the Metropolitan district the Board has power to advance up to £250.)

Advances are repayable by equal half-yearly instalments, extending over a period fixed by the Board not exceeding twenty years, with interest at 5 per cent. per annum ; but may be repaid at any time in whole or in part under a duly proportionate rebate of interest.

**Wire netting  
advances.**

Advances of wire netting may also be made under the Closer Settlement Act to owners of land—

- (a) if such land is held as above mentioned ; or
- (b) if such land immediately adjoins any unoccupied Crown land or is not included in any municipality.

The wire netting supplied is No. 17 gauge,  $1\frac{1}{2}$ -in. mesh, 42 inches wide, weighs 28 cwt. to the mile, and is supplied in rolls of not less than 100 yards. Each advance is limited to a quantity sufficient for 6 miles of vermin-proof fencing, and the price of the wire netting is deemed to be the amount of the advance, which is repayable by a cash payment, or on terms over a period not exceeding ten years with interest at 4 per cent. per annum.

Estates  
purchased.

The following is a complete statement of all estates acquired by the Closer Settlement Board for the purpose of closer settlement at 30th June, 1918, including the estates acquired under the provisions of the Small Improved Holdings Act, the administration of which has been transferred to the Board.

CLOSER SETTLEMENT ESTATES AT 30TH JUNE, 1918.

Estates.	Area.*	Purchase Money including Discount.	Price Paid Per Acre.	No. of Lessees.			Area Vacant and Available.
				Farm Allotments.	Workmen's Home Allotments.	Agricultural Labourers' Allotments.	
Dry Areas—	acres.	£	£ s. d.				acres.
Wando Vale ..	10,446	63,985	6 2 6	67	..	..	25
Walmer ..	18,769	44,751	3 5 0	42	..	2	6
Whitfield ..	4,247	36,066	8 10 0	34	..	1	98
Brunswick ..	91	2,793	29 0 0	..	55	..	10
Eurack ..	5,109	53,640	10 10 0	46	..	..	4
Footscray ..	31	2,494	80 0 0	..	85	..	..
Dal Campbell ..	45	2,357	47 8 0	..	63	..	2
Springvale ..	3,396	25,895	7 12 6	22	..	..	..
Memsie ..	10,028	57,159	5 14 0	44	..	..	10
Richmond Vale ..	1,790	11,000	8 11 6	10	..	1	..
Overnewton ..	11,336	71,492	6 4 6	66	..	..	230
Wyuna ..	23,016	120,876	5 5 0	120	..	10	23
Restdown ..	17,894	60,391	3 7 6	53	..	..	..
Strathkellar ..	10,227	74,150	7 5 0	55	..	6	228
Bona Vista ..	2,000	28,832	14 0 0	25	..	4	92
Cadman's ..	18	844	50 0 0	..	42	..	..
Lara ..	8,329	45,825	5 10 0	31	..	7	373
Tandarra ..	4,558	21,083	4 12 6	19	..	..	8
Exford ..	8,054	64,039	8 0 0	45	..	6	4
Colbinabbin ..	19,164	110,198	5 17 6	84	..	..	69
Pirron Yaloak ..	1,058	23,796	22 7 6	21	..	..	..
Numurkah ..	2,380	18,901	8 0 0	13	..	1	..
Allambee ..	5,025	31,794	6 6 4	13	..	..	3,014
Pender's Grove ..	233	23,337	100 0 0	..	258	..	..
Phoenix ..	23	968	40 0 0	..	47	..	2
Keayang ..	1,494	14,966	10 0 0	13	..	..	..
Werneth ..	6,588	31,043	4 15 0	21	..	..	11
Staughton Vale ..	9,857	66,466	6 15 0	41	..	..	630
Glenhuntly ..	74	7,040	94 0 0	..	158	..	2
The Heart ..	3,793	56,322	14 12 2	42	..	..	5
Mooralla ..	17,199	60,197	3 10 0	25	..	..	1,169
Maribyrnong ..	1,112	10,842	9 15 0	12	..	2	..
Kenilworth ..	18,440	55,321	3 0 0	23	..	14	2,479
Doogalook ..	4,640	29,002	6 5 0	17	..	..	..
Werribee ..	15,218	148,802	18 0 0	33	..	..	2,170
Konongwootong ..	10,181	104,363	10 3 0	65	..	15	45
Cornelia Creek ..	29,567	121,034	4 15 0	80	..	1	82
Koyuga ..	789	3,914	..	2	..	..	..
Meadowbank ..	313	9,085	29 0 0	5	..	..	..
Oaklands ..	8,069	26,309	3 5 0	12	..	..	..
Hurstwood ..	6,493	31,311	4 15 0	14	..	..	..
Emeralla ..	10,694	57,570	5 13 7	34	..	7	..
Morven ..	8,029	39,533	4 17 6	19	..	..	11
Mt. Widderin ..	8,900	48,634	5 15 6	28	..	..	3
Tooronga ..	161	17,675	178 4 4	..	210	..	..
Nerrin Nerrin and Westmere ..	7,743	67,915	..	27	..	1	437
Bellarine ..	204	5,457	26 15 0	6	..	..	49
Daylesford ..	70	2,957	42 5 2	15	..	..	..

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

CLOSER SETTLEMENT ESTATES AT 30TH JUNE, 1918—continued.

Estates.	Area.*	Purchase Money including Discount.	Price Paid Per Acre.	No. of Lessees.			Area Vacant and Available.
				Farm Allotments.	Workmen's Home Allotments.	Agricultural Labourers' Allotments.	
<b>Dry Areas—continued.</b>	acres.	£	£ s. d.				acres.
Mordialloc ..	460	7,850	17 1 6	..	..	27	12
Thomastown ..	581	11,230	19 5 6	27	..	2	..
Wangaratta ..	796	9,600	12 3 4	27	..	2	162
Warragul ..	98	2,060	21 0 0	3	..	5	..
Belmont ..	113	3,161	28 0 0	..	..	17	..
Highton ..	425	11,032	26 0 0	16	..	..	32
Deepdene ..	2,985	35,742	12 0 0	13	..	..	723
Glenaladale ..	2,109	28,787	13 10 0	16	..	..	..
Cremona ..	1,292	20,140	Various	2	..	..	..
Boisdale ..	2,521	72,174	Various	42	..	..	95
Pannoo ..	15,102	98,455	Various	43	..	..	..
Marathon and Willow Grove ..	14,783	58,752	Various	27	..	..	1,369
Dunrobin ..	18,814	119,779	6 6 0	56	..	21	29
Kilmany ..	8,746	106,080	12 0 0	74	..	..	2
Waubra ..	47	1,042	22 10 0	10	..	3	..
Nathalia ..	30	362	12 0 0	..	..	5	..
Moyhu ..	2,422	19,580	8 0 0	12	..	..	265
†Condah ..	157	1,725	10 19 8	..	..	..	..
‡Mackey ..	1,078	20,626	19 2 10	..	..	..	..
Ascot Park ..	488	3,671	Various	..	..	..	..
Nanneella ..	738	7,767	Various	6	..	12	18
Cohuna ..	223	2,215	Various	1	..	1	..
Bamawn ..	162	1,391	8 12 0	..	..	..	162
Thornbury ..	11	5,625	..	..	46	..	..
Crown Lands ..	2,904	20,043	Various	13	79	24	19
Sec. 6-11—Purchases ..	49,920	325,217	Various	267	..	13	2,459
<b>Irrigable Areas—</b>							
Nanneella ..	8,565	78,654	Various	86	..	3	1,393
Bamawn ..	13,365	122,944	Various	138	..	11	1,486
Shepparton ..	9,243	136,839	Various	210	..	41	294
Swaa Hill ..	7,358	73,637	Various	126	..	1	637
Cohuna ..	11,531	114,856	Various	97	..	5	2,224
Tongala ..	15,228	172,396	Various	173	..	24	2,873
Kyabram ..	993	14,025	Various	17	..	7	261
Roonbrook ..	3,423	23,201	Various	27	..	..	617
Werribee ..	6,767	128,062	..	84	..	20	1,251
Koyuga ..	4,173	36,228	..	41	..	15	62
Echuca ..	3,235	29,142	Various	26	..	1	15
Dingee ..	472	4,160	Various	5	..	..	152
Cornelia Creek ..	2,507	16,501	..	14	..	8	..
Stanhope (including Lauderdale and Bonshaw) ..	7,738	92,339	Various	56	..	4	2,513
Sec. 6-11—Purchases ..	679	6,188	..	5	..	..	202
Acquired, but not available ..	16,437	184,164	..	..	..	..	..
<b>Total ..</b>	<b>569,334</b>	<b>4,239,956</b>	<b>..</b>	<b>3,099</b>	<b>1,043</b>	<b>350</b>	<b>30,618</b>

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

† Disposed of to the Crown Lands Department.

‡ Disposed of for public purposes.

On 30th June, 1918, the Board had 99 properties, with a total area of 569,334 acres, of which 30,618 acres were available for

allotment, and 16,437 acres had not at that date been made available for occupation. Portions of estates amounting in the aggregate to 28,720 acres have been sold by public competition and for public reserves without any restrictions, and are not under conditional purchase lease.

Up to the end of June, 1918, 102 allotments, containing 11,230 acres, had been sold to discharged soldiers and transferred to the Discharged Soldiers Settlement Act.

The extent of the settlement effected by the Board at 30th June in each of the years 1914 to 1918 is summarized in the next statement.

Extent of  
Closer  
Settlement.

### CLOSER SETTLEMENT HOLDINGS 1914 TO 1918.

		At 30th June.				
		1914.	1915.	1916.	1917.	1918.
In occupation—						
Number of Holdings...	...	4,112	4,227	4,321	4,509	4,492
Area ...	acres	449,791	460,592	494,965	507,500	506,838
Resident Population	...	16,800	17,200	17,600	17,782	17,620
Area unallotted	acres	60,028	56,977	51,879	43,017	30,618

The sum of £2,205,663 had been repaid to the Closer Settlement Fund up to 30th June, 1918. Of this amount £1,358,004 has been transferred to revenue to meet interest due to stockholders, £30,000 has been invested to replace amounts written off estates re-valued, and £721,168 has been utilized for redemption and cancellation of stock and for capital and working expenditure, the balance to the credit of the fund on 30th June, 1918, being £96,491. The balance of unredeemed stock is now £5,049,426, on which the interest payable amounts to £175,210 per annum. Up to the 30th June, 1918, 12,166 applications for advances aggregating £977,884 had been approved, and that amount had been advanced to effect improvements, or upon improvements already effected by lessees.

Under the *Closer Settlement Act 1909* (No. 2) the administration of the *Small Improved Holdings Act 1906* was placed in the hands of the Closer Settlement Board, subject to the Minister. The particulars of estates dealt with under the latter Act are shown in the table on page 400 relating to closer settlement estates at 30th June, 1918.

Small  
Improved  
Holdings.

### WATERWORKS.

Victorian Waterworks are all controlled by official bodies, either State or local, and the following table summarizes those waterworks on which the Government has expended or advanced moneys. It is practically a summary of all waterworks in the State, although there are minor works constructed by municipalities out of municipal funds.

Victorian  
Waterworks.

**WATERWORKS—CAPITAL EXPENDITURE AND ADVANCES  
BY STATE TO 30TH JUNE, 1917.**

Controlling Bodies.	Purposes of Supply.	Storage Capacity of Reservoirs.	Capital Expenditure and Advances by State.
		Gallons.	£
State Rivers and Water Supply Commission—			
Coliban System ... ..	Domestic and Mining	8,825,037,000	1,251,492
Broken River Works ... ..	Stock and Domestic	...	14,853
		Acre feet.	
Goulburn-Waranga ... ..	Irrigation, &c. ... ..	218,090	1,417,250
North west (Kerang) Lakes	Stock and Domestic	82,650	10,014
Kow Swamp Works ... ..	Irrigation, &c. ... ..	40,860	187,084
Loddon River Works ... ..	" " ... ..	14,000	167,636
Sugarloaf Reservoir ... ..	" " ... ..	(Under construction.)	154,259
		Cubic feet.	
Lake Lonsdale Reservoir ...	Stock and Domestic	1,981,000,000	49,054
Lower Wimmera Compensation Works ... ..	" " ... ..	125,000,000	8,558
Long Lake Pumping Works	" " ... ..	160,000,000	27,346
Pyke's Creek and Werribee Scheme ... ..	Irrigation, &c. ... ..	14,850	195,756
Irrigation and Water Supply Districts (18) ... ..	" " ... ..	...	1,630,539
Waterworks Districts (16) ...	Stock and Domestic	...	1,161,706
First Mildura Irrigation and Water Supply Trust ... ..	Irrigation ... ..	...	100,932
		Gallons.	
Waterworks Trusts (98) ... ..	Stock and Domestic	1,110,387,500	1,224,211
Municipal Corporations (28) ...	" " ... ..	3,093,189,000	713,089
Abolished Irrigation and Water Supply Trusts (8) ... ..	Irrigation ... ..	...	31,953
Miscellaneous Expenditure ...	" " ... ..	...	169,961
Melbourne and Metropolitan Board of Works ... ..	Domestic ... ..	6,460,000,000	4,867,607
Geelong Waterworks Trust ...	" " ... ..	1,468,157,000	600,290
Total ... ..	... ..	...	13,988,640

Of the expenditure given in the case of the Melbourne waterworks, £3,189,934 represents money borrowed by the State, £1,630,148 of which has been redeemed—£800,000 out of consolidated revenue, and £830,148 by payments from the Melbourne and Metropolitan Board of Works, to which body the waterworks were transferred in 1891. The loan liability to the State of the Melbourne and Metropolitan Board of Works on 30th June, 1917, was £1,559,786. Further particulars relating to this Board will be found on page 263, Part VI., of this volume.

The Geelong Waterworks were sold by the Government to the Geelong Municipal Waterworks Trust in 1908 for £265,000. The expenditure shown in the above table includes, in addition to this amount, the outstanding State loan liability on account of the works; viz., £190,676, and the capital expenditure by the Trust since acquiring the works, viz., £144,614.

Expenditure  
and  
Advances  
for  
Waterworks.

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

### CAPITAL EXPENDITURE AND LOANS FOR WATERWORKS.

	Expenditure and Advances by State.	Interest Capitalized.	Free State Grants.	Capital Written Off.	Payments towards Redemption.	Amount standing at Debit, 30th June, 1917.
	£	£	£	£	£	£
State Works .. .. .	3,483,302	..	2,798*	..	..	3,483,302
Irrigation and Water Supply Districts (18) .. .. .	1,630,589	..	15,406	575,152	15,385	1,040,052
First Mildura Irrigation and Water Supply Trust .. .. .	100,932	..	..	..	2,180	98,752
Waterworks Districts (16) .. .. .	1,161,706	..	46,439	169,927	32,534	959,245
Waterworks Trusts (98) .. .. .	1,179,925	6,871	37,414	130,989	117,996	937,811
Geelong Water Supply Works .. .. .	455,676	..	..	..	265,000	190,676
Municipal Corporations (19) .. .. .	708,545	43,633	..	165,870	122,195	404,113
(9) .. .. .	9,543	346	..	..	9,889	..
Melbourne and Metropolitan Waterworks System .. .. .	3,189,934	..	..	..	1,630,148	1,559,786
Abolished Trusts (8) .. .. .	31,710	..	243	31,680	30	..
Miscellaneous .. .. .	169,961	..	..	..	..	169,961
Total .. .. .	12,121,823	50,850	102,300	1,073,618	2,195,357	8,903,698

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

In addition to the capital written off, as shown above, arrears of interest amounting to £579,786 have been written off certain liabilities to the State, viz., £342,773 from the liabilities of what were originally Irrigation and Water Supply Trusts, £85,556 from the liabilities of Waterworks Trusts, and £151,457 from the liabilities of Municipal Corporations. Thus the amount actually written off the liabilities of the Trusts (Irrigation and Waterworks) and Corporations is £1,653,404. Interest outstanding at 30th June, 1917, amounted to £26,568, viz., £11,339 against the First Mildura Trust, £13,358 against Waterworks Trusts, and £1,871 against Municipal Corporations.

### 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 intrusted with the management of all irrigation works, except those controlled by the First Mildura Trust. This authority is embodied in the *Water Act 1915*—which consolidates the Water Acts of 1905 and 1909, of which an epitome has been given in previous issues of this work—and the *Water Act 1916*. The chief difficulties under which the Irrigation Trusts laboured were sparse settlement, and the absence of powers to

Progress of  
Irrigation.

make compulsory charges on the properties commanded by the irrigation channels. Since the assumption of control by the Commission, a policy of closer settlement on the lands served by the irrigation channels has been inaugurated and vigorously pushed on, and a system of compulsory rating enforced, along with which there has been the allotment of water as a right to properties in channelled areas.

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 four years.

PROGRESS OF IRRIGATION IN CLOSER SETTLEMENT AREAS.

District (having allotted Water Rights).	Area Irrigated.	
	1909-10.	Average for past Four Years.
	Acres.	Acres.
Supplied from the Goulburn—		
Shepparton .. .. .	..	10,934
Rodney .. .. .	32,356	49,175
Tongala .. .. .	2,270	9,668
Rochester .. .. .	500	20,836
Dingee .. .. .	..	1,532
Tragowel Plains .. .. .	20,000	30,623
Supplied from the Murray—		
Cohuna .. .. .	12,000	16,515
Gannawarra .. .. .	7,825	14,836
Koondrook .. .. .	5,029	13,397
Swan Hill .. .. .	5,410	8,249
Nyah .. .. .	569	1,632
Merbein .. .. .	202	5,333
Supplied from the Werribee—		
Bacchus Marsh .. .. .	31	3,063
Werribee .. .. .	..	3,125
Total .. .. .	86,192	188,918

Progress of  
Settlement in  
Irrigation  
Districts.

The demand for blocks in the Irrigated Closer Settlement Areas in 1917-18 was slightly greater than in the previous year, this being due to a large extent to the desire of discharged soldiers to settle on irrigable farms. During the year the Water Supply Commission granted blocks to 135 applicants, 87 of whom were discharged soldiers, while the Lands Department made available 570 acres known as the "Merbein North West

Extension." After the Commission had reticulated this area, and an additional 50 acres on the main settlement, the whole was divided into 38 irrigation blocks, all of which were allotted to discharged soldiers. There are now 64 discharged soldiers settled at Merbein and 130 in the Irrigation Districts as a whole. The total area settled in Irrigation Districts is about 85,800 acres. Of this area 27,000 acres are under lucerne, 13,000 acres under fruit, and 14,000 acres under other crops. The following table shows the areas purchased and subdivided by the State in Irrigation Districts, the number of families on such areas when purchased, and the number now occupying blocks under the State's Closer Settlement scheme:—

### CLOSER SETTLEMENT IN IRRIGATION DISTRICTS.

Closer Settlement Estates.	Area of Lands purchased by the State.	Properties Subdivided.						Increase in No. of Families.
		Area.	Number.	No. of families thereon when purchased.	Subdivided into—		No. of Closer Settlement Blocks now occupied.	
					No. of Closer Settlement Blocks.	Average Area.		
	acres.	acres.				acres.		
Shepparton ..	9,200	9,200	21	20	268	32	255	235
Tatura ..	100	100	1	..	21	4	..	..
Stanhope ..	20,900	8,200	2	9	146	51	63	54
Kyabram ..	3,000	1,000	1	3	29	32	24	21
Tongala ..	15,200	15,200	31	30	236	62	195	165
Cornelia Creek ..	2,500	2,500	} Pt. 1	..	{ 14	176	12	12
Koyuga ..	4,200	4,200				56	71	52
Nanneella ..	8,600	8,600	16	6	109	76	89	83
Echuca ..	3,200	3,200	6	4	26	122	25	21
Bamawm ..	13,400	13,400	28	21	172	74	150	129
Dingee ..	500	500	3	1	17	26	12	11
Cohuna ..	11,500	11,500	27	8	134	82	97	89
Koondrook ..	3,400	3,400	5	4	39	84	30	26
Swan Hill No. 1	5,400	5,400	18	9	79	67	72	63
Swan Hill No. 2 (Burtons)	1,500	1,500	1	1	51	26	47	46
Swan Hill No. 3 (Crown lands)	500	500	1	..	16	30	14	14
Werribee ..	8,000	6,700	1	6	137	43	103	97
<i>Murray Frontage Settlements.</i>	111,100	95,100	163	122	1,550	..	1,240	1,118
Nyah ..	2,900	2,900	1	..	149	19	139	138
Merbein ..	7,000	7,000	Crown lands	..	283	25	282	282
	121,000	105,000	164	122	1,982	..	1,661	1,538

The figures show that the settlements referred to in the above table were supporting more than thirteen times as many families in 1918 as there were on the same areas when they were purchased.

In addition to this, the improvements in cultivation rendered possible by irrigation must be taken into consideration.

The total area now subdivided is about 105,000 acres which, after making the necessary deductions for roads, channels, and township reserves, has been made available in 1982 blocks of an aggregate area of about 100,000 acres.

There are now available, including lands at Nyah and Merbein, 321 allotments, in sizes varying from 2 to 100 acres and containing in all 14,000 acres. In addition, there is in reserve an area of about 15,000 acres, mainly at Stanhope, which will be subdivided and made available as required for discharged soldiers and others. The terms upon which these allotments may be acquired are explained on page 395.

**Water Supply  
Construction  
Works,  
1917-18.**

The construction of storage works by the State Rivers and Water Supply Commission was continued during the year. The construction of Sugarloaf Reservoir, on the Upper Goulburn, and the enlargement of Waranga Reservoir, which are the principal works for irrigation requirements now being carried on, were advanced as far as the abnormally wet season would permit.

Progress was also made with the works for supplementing the domestic and stock supplies to the districts served by the Wimmera-Mallee system.

The work of converting Taylor's Lake into a controllable storage (to hold 30,000 acre feet) has been somewhat delayed owing to the scarcity of labour, but it is now well advanced, and will probably come into partial use during the winter of 1919.

The construction of a main channel to connect the channels of the Long Lake and Tyntynder Waterworks Districts with the Wimmera-Mallee System has been continued, and the portion from Wycheproof to Goschen is practically complete. This portion will serve the whole of Long Lake District and the greater part of Tyntynder District during the ensuing season. When this work is completed, these districts, hitherto supplied from the Murray River by pumping at Long Lake and Nyah, will be supplied with equal efficiency and at a lower cost, from the Wimmera River by gravitation. The comprehensive Wimmera-Mallee gravitation channel system will then serve a total area of 8,500 square miles, extending approximately from Lake Lonsdale—at the foot of the Grampians Ranges—on the south, to Ouyen and Piangil—some ten to twenty miles beyond Lake Tyrrell—on the north, and from the Richardson and Avoca Rivers on the east to Lake Hindmarsh on the west. The channels which supply this extensive area have a total length of 3,600 miles.

The enlargement of the Upper Coliban Reservoir having been completed, a commencement was made during the year with works designed to enlarge the capacity of the main Bendigo Branch channel. The reservoir referred to, in conjunction with that on the same river at Malmsbury and several subsidiary reservoirs, supplies the Bendigo and Castlemaine districts with water for domestic and stock

use, and for irrigation and mining purposes. The aggregate storage capacity of the reservoirs of the Coliban System is now 10,826,000,000 gallons, or 39,860 acre feet.

At the request of the Naval authorities, a scheme was prepared for the supply of water to the Naval Base which is being established at Crib Point, Western Port. It was found that efficiency with economy could best be secured by providing at the same time a domestic supply for the several townships and bayside resorts en route, and the scheme adopted includes these important services.

The supply is to be drawn from the head-works of the Bunyip River, and will be conveyed through cement-lined races and pipes, *via* Berwick, Beaconsfield, Pakenham, Cranbourne, and Somerville townships to a service reservoir at Frankston, from which the townships of Mornington, Frankston, Seaford, Carrum, Chelsea, and Aspendale will be reticulated. From Frankston a pipe main connects with the Base Reservoir, which will serve the Naval Base and the neighbouring seaside resorts.

The scheme is estimated to cost £156,000. The works are already well advanced, and those portions which more directly affect the Naval Base are being expedited, so as to give water to that important area early in 1919.

When the works now in hand are completed, the total storage capacity of the reservoirs under the Commission's control will be, in round figures, 1,000,000 acre feet.

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

#### IRRIGATED AREAS: HOW UTILIZED.

Crop.	1909-10.	1914-15.	1915-16.	1916-17.	1917-18.
	acres.	acres.	acres.	acres.	acres.
Cereals .. ..	23,715	74,658	61,663	18,790	3,243
Lucerne .. ..	24,124	71,217	70,372	74,042	50,869
Sorghum and other annual fodder crops	8,094	37,759	15,412	14,707	10,589
Pastures .. ..	50,541	81,463	82,622	87,458	54,985
Vineyards, orchards, and gardens ..	17,524	28,666	32,918	38,246	32,785
Fallow .. ..	4,988	13,368	5,621	3,220	2,323
Miscellaneous ..	785	2,214	2,399	4,242	3,002
	129,771	309,345	271,007	240,705	157,796
Details not available (private diversions)..	8,000	15,000	17,000	17,000	17,000
Total ..	137,771	324,345	288,007	257,705	174,796

Of the total area irrigated in 1917-18 for which details of crops are available—157,796 acres—the percentages devoted to different purposes were as follows:—Pastures, 35; lucerne, 32; cereals, 2; vineyards, orchards, and gardens, 21; sorghum and other annual fodder crops, 7;

fallow, 1; and miscellaneous, 2. The abnormally heavy rainfall in the year 1917-18—particularly in the cereal irrigation period—made it unnecessary, in many instances, to water land which in ordinary seasons is under irrigated culture.

The Mildura Irrigation Settlement, on the Murray River, was established in 1887 under the management of the Chaffey Brothers Limited, and in 1895 was vested in the First Mildura Irrigation Trust. Water is obtained by pumping from the river. The following particulars are an indication of the prosperity of the settlement:—

POPULATION OF MILDURA SHIRE, 1891 TO 1917.

1891	April.(Census)	...	2,321	1914	December	...	...	7,250
1896	September	...	2,000	1915	"	...	...	7,618
1901	March (Census)	...	3,325	1916	"	...	...	8,000
1911	April (Census)	...	6,119	1917	"	...	...	8,250

The receipts and payments of the Mildura Irrigation Trust during the year ended 30th June, 1917, were as follows:—

RECEIPTS AND PAYMENTS OF FIRST MILDURA IRRIGATION TRUST, 1916-17.

<i>Receipts.</i>		£	<i>Payments.</i>		£
Horticultural Rates	..	24,759	Wages	..	8,083
Special Waterings, &c.	..	1,014	Firewood	..	6,086
Miscellaneous	..	3,394	Interest, Sinking Fund and Depreciation	..	6,135
			Miscellaneous	..	2,350
<b>Total</b>	<b>..</b>	<b>29,167</b>	<b>Total</b>	<b>..</b>	<b>22,654</b>

The extent of watering done represented 40,860 water acres in 1911-12, 36,553 acres in 1912-13, 39,541 acres in 1913-14, 42,476 acres in 1914-15, 41,405 acres in 1915-16, and 29,966 acres in 1916-17.

The following particulars relating to artesian boring have been supplied by the State Rivers and Water Supply Commission:—

ARTESIAN AND SUB-ARTESIAN BORING.

Number of Bores Sunk.		Total Depth Bored.	
State.	Private.	State.	Private.
		Feet.	Feet.
99	186	42,000	39,000

In 83 of the Government bores fresh water was struck at depths varying from 150 to 700 feet, the water rising to heights varying from 200 to 7 feet below the surface. In three cases the water rises from 4 feet to 17 feet above the surface.

### 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 1915, 1916, and 1917, and the average yearly amount of rainfall deduced from all available records to December, 1917, in each of the 26 river basins or districts constituting the State of Victoria:—

#### RAINFALL—YEARLY RECORDS AND AVERAGES.

Basin or District.	Rainfall.			
	During 1915.	During 1916.	During 1917.	Yearly Average to December, 1917.
	Inches.	Inches.	Inches.	Inches.
Glenelg and Wannon Rivers ..	28.10	29.09	29.86	26.55
Fitzroy, Eumeralla, and Merri Rivers	31.05	32.02	32.78	29.37
Hopkins River and Mt. Emu Creek ..	21.86	29.64	29.97	25.38
Mt. Elephant and Lake Corangamite	23.65	30.28	26.94	25.23
Cape Otway Forest .. ..	39.35	42.04	44.09	38.74
Moorabool and Barwon Rivers ..	20.97	31.66	25.43	24.85
Werribee and Saltwater Rivers ..	18.78	34.98	26.97	23.80
Yarra River and Dandenong Creek	27.26	43.66	40.26	33.65
Koo-wee-rup Swamp .. ..	32.72	45.31	43.01	36.22
South Gippsland .. ..	30.92	46.46	37.66	38.92
Latrobe and Thomson Rivers ..	33.56	43.22	40.34	38.95
Macallister and Avon Rivers ..	17.74	34.18	22.91	24.49
Mitchell River .. ..	20.44	31.17	26.28	27.05
Tambo and Nicholson Rivers ..	21.60	30.44	25.62	27.30
Snowy River .. ..	23.36	37.24	27.46	34.56
Murray River .. ..	14.64	23.40	25.24	16.72
Mitta Mitta and Kiewa Rivers ..	33.64	41.62	53.58	33.23
Ovens River .. ..	35.04	47.47	61.88	33.31
Goulburn River .. ..	27.77	36.45	42.64	26.85
Campaspe River .. ..	22.01	31.51	30.58	23.22
Loddon River .. ..	17.87	27.23	27.78	19.93
Avoca River .. ..	15.46	20.80	22.23	17.20
Avon and Richardson Rivers ..	17.10	20.54	20.94	16.45
Eastern Wimmera .. ..	22.37	28.02	25.46	21.36
Western Wimmera .. ..	21.26	23.37	24.38	20.01
Mallee .. ..	10.83	16.50	20.45	12.84
Weighted Averages.. ..	22.35	30.27	30.77	24.43

The wettest portions of the State are the South Gippsland, the Latrobe and Thomson, and the Cape Otway Forest districts, and the driest district is the Mallee, where the average rainfall is only 12.84 inches as compared with an average of 24.43 for the State.

The actual areas of the State, in square miles, subject to different degrees of rainfall are as follows:—

DISTRIBUTION OF AVERAGE RAINFALL.

Rainfall.	Area in Square Miles.
Under 15 inches .. .. .	19,912
From 15 to 20 inches .. .. .	12,626
From 20 to 25 inches .. .. .	14,070
From 25 to 30 inches .. .. .	15,247
From 30 to 40 inches .. .. .	14,029
From 40 to 50 inches .. .. .	7,055
From 50 to 60 inches .. .. .	3,348
Over 60 inches .. .. .	1,597

The rainfall recorded for each quarter in 1917, and the quarterly averages up to 1917 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.
	Pts.	Pts.	Pts.	Pts.	Pts.	Pts.	Pts.	Pts.
Gleng and Wannon Rivers .. .. .	370	367	822	799	1,199	891	595	593
Fitzroy, Eumerella, and Merri Rivers .. .. .	461	442	952	877	1,133	968	732	650
Hopkins River and Mt. Emu Creek .. .. .	404	416	695	754	1,086	787	812	581
Mt. Elephant and Lake Corangamite .. .. .	414	455	667	714	919	754	694	600
Cape Otway Forest .. .. .	526	596	1,260	1,172	1,568	1,272	1,055	834
Moorabool and Barwon Rivers .. .. .	464	472	594	686	753	716	732	611
Werribee and Saltwater Rivers .. .. .	459	514	614	632	685	637	939	597
Yarra River and Dandenong Creek .. .. .	583	682	1,156	896	1,111	894	1,176	893
Koo-wee-rup Swamp .. .. .	641	678	1,248	1,025	1,220	1,002	1,192	916
South Gippsland .. .. .	714	769	1,178	1,100	938	1,125	936	898
Latrobe and Thomson Rivers .. .. .	722	716	1,113	1,032	1,135	1,141	1,064	808
Macalister and Avon Rivers .. .. .	547	623	445	560	481	603	813	660
Mitchell River .. .. .	623	670	582	644	570	685	853	706
Tambo and Nicholson Rivers .. .. .	551	677	571	682	535	643	905	728
Snowy River .. .. .	584	811	710	935	571	887	881	825
Murray River .. .. .	348	309	554	492	857	475	765	396
Mitta Mitta and Kiewa Rivers .. .. .	745	596	1,351	944	1,728	987	1,534	796
Ovens River .. .. .	827	546	1,754	1,001	1,954	1,035	1,653	749
Goulburn River .. .. .	589	441	1,234	814	1,429	830	1,012	600
Campaspe River .. .. .	392	402	730	709	1,274	719	662	492
Loddon River .. .. .	402	340	634	604	1,169	604	573	445
Avoca River .. .. .	375	276	400	530	968	537	480	377
Avon and Richardson Rivers .. .. .	384	252	358	502	862	527	490	364
Eastern Wimmera .. .. .	377	300	598	649	1,065	710	506	477
Western Wimmera .. .. .	336	250	599	638	1,000	680	503	433
Mallee .. .. .	400	236	354	352	747	401	544	295
The whole State .. .. .	485	437	768	702	1,036	734	788	570

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	29·923	30·079	30·079
Monthly range of pressure of air—Inches	·892	·773	·811	·979
Mean temperature of air in shade—° Fahr.	57·6	66·5	59·3	50·0
Mean daily range of temperature of air in shade—° Fahr. .. .. .	18·7	21·2	17·4	14·0
Mean relative humidity. Saturation = 100 .. .. .	66	60	70	76
Mean rainfall in inches .. .. .	7·30	5·89	6·63	5·74
Mean number of days of rain .. .. .	38	23	33	41
Mean amount of spontaneous evaporation in inches .. .. .	10·11	17·18	7·76	3·63
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	5	11

In the subjoined statement are shown the yearly averages of the climatic elements in Melbourne for 1917 and for the past 62 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 1917.	Average for 62 Years.	Extremes between which the Yearly Average Values have oscillated in 62 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ...	29·945	30·013	30·106	29·945
Highest " " " " ...	30·502	30·608	30·762	30·488
Lowest " " " " ...	29·091	29·257	29·445	28·942
Range (inches) ... .. .	1·411	1·351	1·719	1·169
Mean temperature of air in shade (° Fahr.)	58·4	58·4	59·9	57·3
Mean daily maximum ... .. .	66·3	67·3	69·0	66·0
Mean daily minimum ... .. .	50·4	49·4	51·2	47·2
Absolute maximum ... .. .	101·0	105·2	111·2	96·6
Absolute minimum ... .. .	31·4	30·7	33·9	27·0
Mean daily range ... .. .	15·9	17·9	20·4	15·0
Absolute annual range ... .. .	69·6	74·5	82·6	66·0
Solar Radiation (maximum)... .. .	115·6	118·1	127·6	108·0
Terrestrial Radiation (minimum) ..	44·1	43·8	46·7	39·5
Rainfall (in inches)... .. .	30·57	25·54	38·04	15·61
Number of wet days ... .. .	171	135	171	102
Year's amount of free evaporation (in inches) ... .. .	39·43	38·68	45·66	31·59
Percentage of humidity (saturation = 100) ... .. .	67	68	76	62
Cloudiness (scale 10 = overcast, 0 = clear)	6·1	5·9	6·4	4·8
Number of days of fog ... .. .	27	18	39	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 instruction to those engaged therein. The Department publishes a monthly journal.

**Government Experimental Farming.** The great expansion in our rural industries during recent years has been largely brought about by the general adoption of better methods of farming, and by the introduction of more prolific wheats, and it is claimed that these improvements have been adopted as the result of the experimental and demonstration work of the Department of Agriculture. For many years the Department carried out research work on a large number of experimental plots on private farms throughout the State, but in 1912 the great majority of these plots were discontinued, and a commencement was made towards a policy of concentration in experimental investigation. In furtherance of this policy a Central Research Farm has been established at Werribee, and it is there that the initiative with regard to all experimental and research work will be undertaken. The State farms at Rutherglen, Longerenong, and Wyuna are used as district experimental stations for the North-East, the Wimmera, and the Goulburn Valley respectively. The problems investigated on these farms are fully described in the 1915-16 issue of this work.

**Agricultural Colleges.** An Act for the establishment of Agricultural Colleges was passed in 1884, and 14,460 acres, comprising 5,957 acres at Dookie, 2,386 acres at Longerenong, 2,500 acres at Gunyah Gunyah, 2,800 acres at Olangolah, and 817 acres at Bullarto, were reserved as sites for colleges and experimental farms. An additional area of 800 acres has been purchased for cultivation purposes at Dookie. The areas at Dookie and Longerenong are being used for the purpose for which they were reserved, but the other three are devoted to other uses.

In addition to the college and farm lands, provision was made by the Act of 1884 to permanently reserve from sale an area of not more than 150,000 acres of Crown lands, and to vest it in trustees to be appointed, who should hold it in trust for the benefit of and by way of an endowment for State agricultural colleges and experimental farms. The land so reserved now amounts to 71,412 acres, which are let for grazing and agricultural purposes.

The fees for students in residence at the agricultural colleges are :— Maintenance—£20 per annum ; medical attendance and medicines, £1 5s. per annum ; stationery, laundry, and other charges, including sports fees, bring the total cost to £25 per annum. No charge is made for instruction. Accommodation is provided at Dookie for 100 and at Longerenong for 40 students.

**School of Horticulture.**

This school is situated at Burnley, about 3 miles from Melbourne. It is very accessible, being close to Burnley, Hawthorn, and Heyington railway stations and on the route of the Hawthorn electric tram.

The school has been re-organized, a new feature being the instruction given in the principles of agriculture. The various classes in horticulture have also been re-arranged, lectures being given on all phases of the subject. Special attention is devoted to the practical work in the orchards, gardens, and nurseries connected with the school.

The course for the Government Certificate in Horticulture occupies two years and is intended for youths of at least fourteen years of age. Students attend daily (Saturday excepted). The fees for the course are £5 per annum.

Part time classes are held on Tuesday and Thursday afternoons. The instruction is arranged to suit female students, but male students may also attend. The scope of the work of these classes includes garden management and designing, the growing of small fruits, seeds and seedlings, poultry farming, and bee-keeping. The fees for this course are £2 per annum.

The new feature of the school is the formation of classes for studying the principles of agriculture. These classes are established primarily for boys attending secondary schools who are taking Agriculture as one of the subjects for the intermediate certificate of the University of Melbourne. The course for the intermediate certificate covers two years and that for the leaving certificate entails a further two years' attendance. Each class is held on one morning or afternoon of each week. The orchard, nursery, poultry farm, cultivation paddocks, and other accessories of the school are utilized by the students for outdoor practice and observations. Up-to-date farms are also visited by students.

For 1918 the students enrolled numbered 54 in the Horticultural and 109 in the Agricultural Class.

Various particulars relating to the State Experimental Farms and Agricultural Colleges are embodied in the appended statement.

GOVERNMENT EXPERIMENTAL FARMS AND AGRICULTURAL COLLEGES, 1917.

Particulars.	Central Research Farm, Werribee.	Wynna Irrigation Farm.	Rutherglen Farm, &c.	Dookie Agricultural College.	Longerenong Agricultural College.	Burnley School of Horticulture.	Bamawm Experimental Nursery, &c.
	No.	No.	No.	No.	No.	No.	No.
Professional Staff ..	1	1	2	12	5	3	.. 7
Mands employed ..	28	9	..	..	13	8	..
Students ..	..	..	15	75	38	150	..
Value of plant and machinery ..	£ 2,128	£ 1,111	£ 1,860	£ 3,470	£ 1,737	£ 150	£ 112
Value of produce for year ..	7,000	1,500	5,000	6,567	5,400	637	1,280
Receipts—							
Fees ..	..	..	..	1,140	918	160	..
Sale of produce, &c. ..	4,354	1,502	3,669	6,267	3,811	454	244
Other ..	25	34	39	400	..	593	..
Total receipts	4,379	1,536	3,708	7,807	4,729	1,207	244
Expenditure—							
Salaries—							
Professional Staff	298	208	560	3,034	1,605	672	..
General staff ..	3,458	664	4,819	1,879	1,250	686	1,062
Buildings and maintenance ..	1,074	476	2,056	8,801	3,918	664	160
Other ..	2,214	943	1,704	1,008	440	202	88
Total expenditure ..	7,044	2,291	9,139	14,722	7,213	2,224	1,310
Area under—	acres	acres	acres	acres	acres	acres	acres
Cereals for Grain	385	150	418	358	315	..	..
Hay ..	365	35	40	106	40	..	..
Fruit trees, &c. ..	..	1	2	20	17	14	30½
Vines ..	..	1	58	26	10	½	.. 4
Green fodder ..	270	22	215	57	52	..	..
Other crops ..	..	40	..	26	..	1	..
Total area under crop ..	1,020	248½	733	593	434	15½	34½
Area of land in fallow	850	120	387	482	436	..	..
Area under artificially sown grasses	40	106½	20	..	..	7	..
Area resting ..	214	25	..	563	754	..	..
Total area of arable land ..	2,124	500	1,140	1,638	1,624	22½	34½
Balance of area	85	40	173	4,275	762	10½	8
Total area of farm ..	2,209	540	1,313	5,913	2,386	33	87½
Live stock—	No.	No.	No.	No.	No.	No.	No.
Horses ..	85	26	37	96	50	1	2
Dairy cows ..	70	25	13	35	24	3	..
All other cattle	74	15	14	95	19	..	..
Sheep ..	640	20	544	2,199	1,036	..	..
Pigs ..	..	25	82	103	101	3	..

The orchards, nurseries, and gardens of the State are systematically inspected by the officers of the Vegetation Diseases Branch of the Department of Agriculture. Nurseries are inspected every six months, and certified to by

the departmental supervisor if clean and free from disease. Old, worn-out, and infected orchards are destroyed.

There has been considerable alteration in the departmental policy with respect to experimental orchards. The small and comparatively valueless demonstration orchards are being replaced by larger areas on which experimental and demonstration works have been concentrated. Two of these orchards have been commenced—one at Bamawm and the other at Creswick.

Experiments are carried out in the treatment of diseases; lectures and demonstrations are given on the various phases of horticulture; and sites are selected on the farms of intending fruit-growers, to whom advice is given as to the most suitable varieties to be planted and their after treatment.

The fear of introducing the fruit-flies *Tephritis tryoni* and *Halterophora capitata* and diseases arising from other causes has necessitated a thorough examination of fruit from Queensland, New South Wales, and elsewhere. The fruit-fly question is a very grave one, and, should either of the above-named insects obtain a footing in Victoria, a great portion of the large and important fruit industry of our State would be practically ruined.

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

The State has about 12,000,000 acres of woodland, and **Forestry.** of this area 4,160,342 acres are set aside as climatic reserves and for the production of timber. Of the State forest domain, some 3,000,000 acres are situated on the slopes of high mountain ranges, and their protection is essential for the maintenance of streams and springs; over half-a-million acres are situated in the extreme Eastern part of the State and, owing to difficulties of transport, are not at present accessible for practical working; half-a-million acres, chiefly in the central district, which have been cut over, are closed for the protection

of the young timber; while in the remaining area (over 500,000 acres) timber cutting is carried on in various parts.

The timbers of commercial value in Victoria number twenty, all species of the eucalyptus family. Alarmist statements to the effect that there is an increasing scarcity of commercial timber here are ill-founded, as large supplies of hardwood are assured for many years to come.

A forest nursery, with provision for an annual output of from four to five million tree plants, has been completed at Creswick, the nursery at Macedon has been remodelled, and a large new nursery has been established at Broadford. The plantations at Creswick, Lara, and Mt. Alexander are being gradually extended, and large new plantations have been formed in the Wimmera district, in southern Gippsland, and in coastal areas near Frankston. In the past much of this work was experimental, but the experience gained in the propagation and growing of Australian hardwoods, as well as exotic conifers, has proved of great benefit to the community. Transplants are distributed to farmers, municipalities, and State schools. Farmers particularly benefit by planting trees around their homesteads, as the home is thereby protected from wind and weather, and shelter and shade are afforded to live stock, thus insuring healthier flocks and herds and increased returns. In addition to the three nurseries, there are nineteen plantations having a total area of 20,740 acres.

The persons employed in connexion with the State forests and nurseries comprise administrative and professional staff, 15; protective and general staff, 81; and nursery staff, 43. The revenue from licences and royalties in 1917 amounted to £55,917. The expenditure was £68,557, of which sum about 50 per cent. was devoted to the improvement of the natural forests and the extension of plantations.

It is estimated that the quantity of timber produced in the rough in 1917 amounted to 61,000,000 super. feet. In addition, 371,930 tons measurement of fuel timber were produced.

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

Agriculture—  
expenditure  
and revenue  
connected  
with.

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

EXPENDITURE AND REVENUE CONNECTED WITH  
AGRICULTURE, ETC., 1912-13 TO 1916-17.

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.
<i>Expenditure.</i>					
Department of Agriculture	£ 21,182	£ 25,211	£ 26,297	£ 23,622	£ 25,102
Grants to Agricultural and Horticultural Societies, &c.	4,523	4,473	7,880	1,163	826
Development of Export Trade	32,819	40,505	34,275	33,622	33,409
Viticultural Education and Inspection of Vineyards ...	5,499	5,917	3,642	3,479	3,996
Maffra Beet Sugar Factory ...	28,341	32,493	25,228	18,693	42,411
Fruit Cool Stores ...	3,188	3,650	4,115	3,342	7,817
Technical Agricultural Education, &c. ...	27,985	18,478	21,451	19,479	21,585
Publishing Agricultural Reports ...	2,513	2,834	2,555	2,290	2,700
Advances to Settlers on account of Losses by Bush Fires, &c. ...	347	182	6,157	...	...
Rabbit and Vermin Extinction ...	27,309	29,596	32,211	24,257	24,388
Stock and Dairy Supervision	} 21,957	} 23,602	} 23,813	} 20,953	} 21,190
Scab Prevention and Stock Diseases ...					
Labour Colonies ...	395	...	500	500	375
State Forests and Nurseries	52,808	60,977	72,757	54,018	67,411
Miscellaneous ...	16	1,885	2,160	3,229	2,029
<b>Total ...</b>	<b>228,882</b>	<b>249,803</b>	<b>263,041</b>	<b>208,647</b>	<b>253,242</b>
<i>Revenue.</i>					
Department of Agriculture ...	47,713	49,320	51,410	36,252	54,210
State Forests ...	54,754	60,733	65,840	53,430	55,192

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, which advances are gradually being repaid.

The loan expenditure in 1916-17 was £103,647 on account of closer settlement, and £3,203 on account of wire netting.

A special article on "Agriculture and Live Stock in Victoria," which was contributed by the Victorian Department of Agriculture, appeared in the *Year-Book* for 1916-17, page 707.

### AGRICULTURE.

**Progress of cultivation.**

All divisions of the State are suitable for cultivation, but the Wimmera, Mallee, Northern, and Western are the principal wheat-growing districts and furnish about 95 per cent. of the total area under this crop. It was only comparatively recently that the Mallee was devoted to agriculture and that

a new, fertile and important wheat area was added to the resources of the State. The addition of this district is due to the fact that good and payable wheat returns are obtainable with a rainfall which was at one time considered to be wholly inadequate, to the extension of railway lines and to the great improvements in agricultural machinery. Its growing importance is indicated by figures for recent periods, which show that of the wheat produced in the State the proportion obtained from the Mallee was nearly 29 per cent. in 1917-18, as against slightly less than 5 per cent. in 1891-2. The area under cultivation in the Mallee last season was 1,541,504 acres, or about 27 per cent. of the total for the State.

Statistics show that the increase in agricultural activities has been fairly general throughout the State. The area cultivated in 1917-18 was 5,782,954 acres as against an annual average of 3,860,108 acres for the seasons 1900-05 and 2,648,213 acres for the seasons 1890-95. Notwithstanding the great increase in the area cultivated the dairying and pastoral industries show a considerable expansion. The value of butter and cheese exported to oversea countries increased from £537,978 in 1893 to £1,721,522 in 1917-18, while the value of oversea exports of meat increased from £74,732 to £856,245 in the same period.

The increase in cultivation has been associated with new and improved farming methods. The chief of these are the practice of fallowing, the use of fertilizers, the selection of suitable seeds and the increasing attention given to crop rotation. The more general adoption of improved methods in recent years has contributed greatly to the production of the State. The following table shows the progress of cultivation from period to period during the past 63 years :—

ACREAGE CULTIVATED ANNUALLY 1855 to 1918.

Period ended March.				Crop, Annual Average.	Fallow, Annual Average.	Total Cultivation, Annual Average.
				Acres.	Acres.	Acres.
1855-60	..	..	..	233,245	3,444	236,689
1860-65	..	..	..	418,108	20,848	438,956
1865-70	..	..	..	548,952	40,693	589,645
1870-75	..	..	..	699,802	73,855	773,657
1875-80	..	..	..	982,421	103,958	1,086,379
1880-85	..	..	..	1,631,420	171,114	1,802,534
1885-90	..	..	..	1,986,028	312,976	2,299,004
1890-95	..	..	..	2,232,625	415,588	2,648,213
1895-1900	..	..	..	2,938,381	395,734	3,234,115
1900-05	..	..	..	3,207,447	652,661	3,860,108
1905-10	..	..	..	3,375,273	1,029,071	4,404,344
1910-11	..	..	..	3,952,070	1,434,177	5,386,247
1911-12	..	..	..	3,640,241	1,469,608	5,109,849
1912-13	..	..	..	4,079,356	1,627,223	5,706,579
1913-14	..	..	..	4,391,321	1,738,572	6,129,893
1914-15	..	..	..	4,622,759	1,346,545	5,969,304
1915-16	..	..	..	5,711,265	1,358,343	7,069,608
1916-17	..	..	..	4,851,335	1,899,559	6,750,894
1917-18	..	..	..	4,110,225	1,672,729	5,782,954

The principal crops grown in the State are wheat, oats, barley, potatoes and hay. The annual acreage of these for five-year periods from 1855 to 1910 and for each of the last eight seasons are given in the next table:—

## ANNUAL ACREAGE OF FIVE PRINCIPAL CROPS, 1855 to 1918.

Period ended March.	Average Annual Area of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Acres.	Acres.	Acres.	Acres.	Acres.
1855-60 ..	79,079	50,148	3,723	21,129	70,489
1860-65 ..	158,923	116,444	5,963	27,118	89,746
1865-70 ..	230,505	123,435	16,024	35,460	110,293
1870-75 ..	325,650	135,334	22,501	38,028	124,493
1875-80 ..	537,238	129,317	28,354	38,575	170,777
1880-85 ..	1,014,824	165,369	54,022	39,661	282,774
1885-90 ..	1,140,327	206,962	65,267	46,210	434,175
1890-95 ..	1,332,675	214,840	63,354	49,808	440,000
1895-1900 ..	1,704,131	301,317	61,090	45,669	495,337
1900-05 ..	2,002,429	380,597	44,568	44,817	585,608
1905-10 ..	1,965,320	379,078	56,016	52,897	743,167
1910-11 ..	2,308,089	392,681	52,687	62,904	832,669
1911-12 ..	2,164,066	302,238	53,541	47,692	860,205
1912-13 ..	2,085,216	439,242	71,631	47,575	1,203,728
1913-14 ..	2,565,861	442,060	83,351	74,574	977,684
1914-15 ..	2,863,535	434,815	62,492	65,495	895,755
1915-16 ..	3,679,971	353,932	61,400	56,910	1,330,455
1916-17 ..	3,125,692	441,598	93,015	73,618	897,186
1917-18 ..	2,690,216	293,214	84,931	66,966	748,808

Production  
of Principal  
Crops.

The annual production of the five principal crops for quinquennial periods from 1855 to 1910 and for each of the last eight seasons was as follows:—

## ANNUAL PRODUCTION OF PRINCIPAL CROPS, 1855 to 1918.

Period ended March.	Average Annual Production of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Bushels.	Bushels.	Bushels.	tons.	tons.
1855-60 ..	1,734,895	1,444,018	97,042	61,048	110,220
1860-65 ..	2,662,854	2,693,278	110,108	64,399	113,392
1865-70 ..	4,298,676	2,902,655	352,265	99,490	149,110
1870-75 ..	4,472,952	2,370,839	428,410	124,110	153,594
1875-80 ..	6,547,299	2,688,761	618,456	128,156	219,352
1880-85 ..	10,639,318	3,906,176	981,421	143,073	334,190
1885-90 ..	10,948,554	4,391,916	1,209,948	164,068	504,758
1890-95 ..	13,589,257	4,906,870	1,164,066	177,743	589,427
1895-1900 ..	11,631,934	5,229,188	973,661	133,122	563,809
1900-05 ..	16,432,357	8,069,719	921,499	135,593	782,155
1905-10 ..	22,052,448	8,063,570	1,182,288	149,022	1,006,061
1910-11 ..	34,813,019	9,699,127	1,340,387	163,312	1,292,410
1911-12 ..	20,891,877	4,585,326	1,024,584	119,092	1,032,288
1912-13 ..	26,223,104	8,323,639	1,744,527	191,112	1,572,933
1913-14 ..	32,936,245	8,890,321	1,812,890	176,602	1,350,374
1914-15 ..	3,940,947	1,608,419	600,599	189,225	568,956
1915-16 ..	58,521,706	9,328,894	1,734,511	173,821	2,342,094
1916-17 ..	51,162,438	8,289,289	1,799,784	187,992	1,232,721
1917-18 ..	37,737,552	6,141,287	1,970,650	182,195	949,545

Principal  
crops in  
Districts.

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

PERCENTAGE OF TOTAL AREA UNDER EACH PRINCIPAL CROP IN EACH DISTRICT, 1917-18.

District.	Percentage in each District of Area under—					
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Othe Crops.
Central .. ..	1·07	8·77	39·83	47·35	21·52	37·31
North-Central ..	·82	4·35	6·52	18·27	6·81	3·38
Western .. ..	5·14	11·17	18·26	16·75	13·41	7·23
Wimmera .. ..	25·57	28·28	2·93	·42	16·91	2·43
Mallee .. ..	36·03	14·30	3·36	·01	12·74	8·38
Northern .. ..	29·23	28·51	17·64	·11	17·37	13·40
North-Eastern ..	1·58	2·79	·57	2·89	5·27	7·19
Gippsland .. ..	·56	1·83	10·89	14·20	5·97	20·68

NOTE.—For counties contained in each District, see table on page 425.

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

RELATIVE AREAS DEVOTED TO DIFFERENT CROPS IN EACH DISTRICT, 1917-18.

District.	Percentage of Total Area of all Crops under—					
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.
Central .. ..	7·87	7·04	9·25	8·68	44·08	23·08
North-Central ..	19·89	11·46	4·98	11·00	45·81	6·86
Western .. ..	43·97	10·41	4·93	3·57	31·93	5·19
Wimmera .. ..	75·95	9·16	·27	·03	13·98	·61
Mallee .. ..	85·89	3·72	·25	·00	8·46	1·68
Northern .. ..	75·23	7·99	1·43	·01	12·44	2·90
North-Eastern ..	38·98	7·52	·44	1·79	36·33	14·94
Gippsland .. ..	11·47	4·10	7·09	7·29	34·23	35·82
Total of Victoria ..	65·45	7·13	2·07	1·63	18·22	5·50

NOTE.—For counties contained in each District, see table on page 425

**Principal crops compared with population.** The area and produce of the principal crops per head of population are given in the next table for the past seventeen years.

**AREA AND PRODUCTION PER HEAD OF POPULATION OF FIVE PRINCIPAL CROPS, 1901-2 TO 1917-18.**

Year ended March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.
Area per Head of Population.					
	Acres.	Acres.	Acres.	Acres.	Acres.
1902 .. ..	1·45	·27	·03	·03	·54
1903 .. ..	1·65	·36	·03	·04	·48
1904 .. ..	1·62	·36	·04	·04	·61
1905 .. ..	1·88	·28	·04	·04	·37
1906 .. ..	1·70	·26	·03	·04	·49
1907 .. ..	1·66	·31	·04	·04	·51
1908 .. ..	1·47	·32	·05	·04	·54
1909 .. ..	1·40	·33	·05	·04	·75
1910 .. ..	1·63	·30	·05	·05	·67
1911 .. ..	1·83	·30	·04	·05	·64
1912 .. ..	1·62	·23	·04	·04	·64
1913 .. ..	1·54	·32	·05	·03	·89
1914 .. ..	1·84	·32	·06	·05	·70
1915 .. ..	2·01	·31	·04	·05	·63
1916 .. ..	2·58	·25	·04	·04	·93
1917 .. ..	2·22	·31	·07	·05	·64
1918 .. ..	1·91	·21	·06	·05	·53
Produce per Head of Population.					
	Bushels.	Bushels.	Bushels.	Tons.	Tons.
1902 .. ..	10·01	5·56	·57	·10	·73
1903 .. ..	2·12	3·63	·46	·14	·50
1904 .. ..	23·60	11·11	1·01	·14	1·02
1905 .. ..	17·47	5·14	·72	·08	·42
1906 .. ..	19·22	5·94	·87	·10	·71
1907 .. ..	18·43	7·21	1·02	·14	·72
1908 .. ..	9·62	4·13	·84	·11	·54
1909 .. ..	18·33	8·74	1·19	·12	1·11
1910 .. ..	22·42	6·16	·80	·14	·92
1911 .. ..	26·63	7·42	1·03	·13	·99
1912 .. ..	15·62	3·43	·77	·09	·77
1913 .. ..	19·36	6·15	1·29	·14	1·16
1914 .. ..	23·64	6·38	1·30	·13	·97
1915 .. ..	2·77	1·13	·42	·13	·40
1916 .. ..	41·04	6·54	1·22	·12	1·64
1917 .. ..	36·30	5·88	1·28	·13	·87
1918 .. ..	26·85	4·37	1·40	·13	·68

Except in the three seasons 1895-6, 1902-3, 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 values of the five principal crops, based upon prices realized upon farms, for each of the past ten years; also the value of each crop per acre on the average of the five years 1910-14 and for the years 1915, 1916 and 1917:—

VALUES OF FIVE PRINCIPAL CROPS.

Year.	Annual Value of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	£	£	£	£	£
1907 .. ..	2,443,906	791,162	241,507	383,145	3,023,128
1908 .. ..	4,405,303	989,844	253,309	411,840	3,256,308
1909 .. ..	5,501,605	777,547	165,181	517,775	2,432,840
1910 .. ..	5,512,060	909,295	227,382	534,515	2,455,560
1911 .. ..	3,547,266	663,916	261,443	614,540	3,200,109
1912 .. ..	4,343,202	953,750	332,430	678,448	4,010,979
1913 .. ..	5,352,141	777,903	236,804	573,227	2,565,740
1914 .. ..	1,391,647	397,078	161,899	800,269	4,181,827
1915 .. ..	10,972,820	942,607	294,597	1,017,563	4,098,664
1916 .. ..	10,232,488	828,929	299,481	550,086	2,033,990
1917 .. ..	7,547,510	965,973	373,379	519,605	2,801,158
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Value per acre 1910-14, average .. ..	1 13 4	1 16 10	3 15 5	10 14 8	3 8 10
Value per acre 1915	2 19 7	2 13 3	4 16 0	17 17 7	3 1 7
.. .. 1916	3 5 6	1 17 6	3 4 5	7 9 5	2 5 4
.. .. 1917	2 16 1	3 5 11	4 7 11	7 15 2	3 14 10

The value of the five principal crops was £12,207,625 in 1917, as against £13,944,974 in the previous year, £17,326,251 in 1915, and £8,936,686 on the average of the five years 1910 to 1914.

On the experience of the past five seasons the area under wheat production. wheat for grain represented 63 per cent. of the total under crop. The acreage, the total production, and the yield per

acre are given in the next table for quinquennial periods from 1860 to 1905, and for each of the past thirteen seasons:—

### WHEAT PRODUCTION, 1860 TO 1918.

Season ended March.	Wheat.		
	Acres, Annual Average.	Total Production, Annual Average.	Yield per Acre.
		Bushels.	Bushels.
1860-65 .. .. .	158,923	2,662,854	16·76
1865-70 .. .. .	230,505	4,298,676	18·65
1870-75 .. .. .	325,650	4,472,952	13·74
1875-80 .. .. .	537,238	6,547,299	12·19
1880-85 .. .. .	1,014,824	10,639,318	10·48
1885-90 .. .. .	1,140,327	10,948,554	9·60
1890-95 .. .. .	1,332,675	13,589,257	10·20
1895-1900 .. .. .	1,794,131	11,631,934	6·48
1900-1905 .. .. .	2,002,429	16,432,357	8·21
1906 .. .. .	2,070,517	23,417,670	11·31
1907 .. .. .	2,031,993	22,618,043	11·13
1908 .. .. .	1,847,121	12,100,780	6·55
1909 .. .. .	1,779,905	23,345,649	13·12
1910 .. .. .	2,097,162	28,780,100	13·72
1911 .. .. .	2,398,089	34,813,019	14·52
1912 .. .. .	2,164,066	20,891,877	9·65
1913 .. .. .	2,085,216	26,223,104	12·58
1914 .. .. .	2,565,861	32,936,245	12·84
1915 .. .. .	2,863,535	3,940,947	1·38
1916 .. .. .	3,679,971	58,521,706	15·90
1917 .. .. .	3,125,692	51,162,438	16·37
1918 .. .. .	2,690,216	37,737,552	14·03

Although a large area in districts of limited rainfall has been brought under cultivation for wheat growing during late years, the yield per acre for the State on the average of the past thirteen seasons was 11·85 bushels, which is better than the corresponding averages for quinquennial periods of earlier date back to 1880. This satisfactory result is largely due to the use of more prolific varieties of seed and to the more general practice of fallowing and fertilizing. In addition to the area shown for grain, 192,478 acres of wheat were cut for hay last season, so that the total area sown under wheat in 1917-18 was 2,882,694 acres.

The production of wheat in the other Australian States in 1917-18 was as follows:—New South Wales, 37,843,930 bushels, South Australia, 28,692,594 bushels, Western Australia, 9,303,787 bushels, Queensland, 1,035,268 bushels and Tasmania 252,383 bushels. The total production for the Commonwealth was 114,865,514 bushels.

The principal wheat growing areas are the Wimmera, Mallee, and Northern districts. Although other districts provide only small proportions of the area they are not

Wheat  
growing in  
counties.

to be regarded as unsuitable for wheat growing, as their average yield per acre is usually greater than in the areas mentioned. The production of wheat in different counties for each of the past 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.		
	1916.	1917.	1918.	1916.	1917.	1918.	1916.	1917.	1918.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bush.	Bush.	Bush.
<b>Central—</b>									
Bourke ..	9,238	13,800	8,416	185,479	177,699	131,443	20·08	12·88	15·62
Grant ..	21,241	25,468	19,740	421,775	369,745	278,139	19·86	14·51	14·09
Mornington ..	1,592	2,264	466	30,312	7,671	2,693	19·04	3·39	5·78
Evelyn ..	364	688	165	7,257	3,852	1,598	19·94	5·60	9·68
<b>North-Central—</b>									
Anglesey ..	3,887	2,404	2,192	74,504	29,850	21,731	19·17	12·42	9·91
Dalhousie ..	7,310	4,116	3,032	147,034	59,332	30,161	20·11	14·41	9·95
Talbot ..	27,659	21,794	16,899	555,143	390,738	203,603	20·07	17·93	12·05
<b>Western—</b>									
Grenville ..	41,153	40,213	28,184	866,497	443,991	399,885	21·06	11·04	14·19
Polwarth ..	606	1,126	628	13,604	14,869	6,170	22·45	13·21	9·82
Heytesbury ..	91	122	49	1,744	1,766	613	16·64	14·48	12·51
Hampden ..	23,218	31,216	25,344	597,211	356,277	255,404	21·16	11·41	10·08
Ripon ..	84,202	74,491	72,203	1,316,962	993,144	958,350	21·58	13·33	13·27
Villiers ..	3,458	2,854	1,927	58,748	37,860	14,082	16·99	13·27	7·31
Normanby ..	1,684	2,158	691	26,375	31,574	8,878	15·66	14·63	12·85
Dundas ..	12,936	11,671	9,042	151,259	143,103	81,380	11·69	12·26	9·00
Follett ..	627	709	254	11,285	14,975	1,244	18·00	21·12	4·90
<b>Wimmera—</b>									
Lowan ..	245,654	179,678	174,304	4,123,207	3,221,407	2,881,353	16·78	17·93	16·52
Borong ..	540,588	377,319	367,858	10,417,851	8,485,152	8,322,352	19·27	22·49	22·62
Kara Kara ..	204,592	149,700	145,731	3,961,735	2,942,951	2,576,594	19·36	19·66	17·68
<b>Mallee—</b>									
Millewa ..	1,895	2,985	3,141	15,477	45,372	45,103	8·17	15·46	14·36
Weeah ..	222,972	232,409	185,923	2,733,097	3,334,045	1,897,545	12·26	14·56	10·21
Karkaroo ..	607,873	595,041	459,250	6,454,452	8,793,665	5,024,466	10·62	14·78	10·94
Tatchera ..	442,382	415,376	320,880	4,464,386	6,563,338	3,946,538	10·09	15·80	12·30
<b>Northern—</b>									
Gunbower ..	67,785	63,365	58,540	1,039,108	1,007,076	833,156	15·33	15·89	14·23
Gladstone ..	176,646	143,547	135,392	3,169,007	2,742,139	1,918,096	17·94	19·10	14·17
Bendigo ..	206,309	183,847	173,111	3,956,310	3,145,898	2,398,255	19·18	17·11	13·85
Rodney ..	186,466	150,018	134,997	3,756,512	2,203,710	1,710,544	20·15	14·69	12·67
Moira ..	426,410	398,378	284,412	7,623,010	4,454,077	3,236,356	17·88	14·44	11·38
<b>North-Eastern—</b>									
Delatite ..	24,971	19,445	6,791	412,773	224,276	41,096	16·53	11·53	6·05
Bogong ..	60,460	47,024	34,947	979,887	520,379	225,243	16·21	11·07	6·45
Benambra ..	1,012	1,296	639	17,021	22,012	10,962	16·82	16·98	17·16
Wonnangatta ..	15	38	4	225	540	24	15·00	14·21	6·00
<b>Gippsland—</b>									
Croajlongong ..	36	57	32	1,021	912	464	28·36	16·00	14·50
Tambo ..	668	663	406	11,257	10,275	5,338	16·85	15·04	13·12
Dargo ..	788	873	407	11,196	13,365	6,841	14·21	15·31	16·81
Tanjil ..	15,135	15,983	11,958	338,158	247,102	222,016	22·34	15·46	13·57
Buin Buin ..	3,043	3,586	2,171	71,057	58,301	39,306	23·31	16·26	18·34
<b>Total ..</b>	<b>3,679,971</b>	<b>3,125,692</b>	<b>2,690,216</b>	<b>58,521,706</b>	<b>51,182,488</b>	<b>37,737,552</b>	<b>15·90</b>	<b>16·37</b>	<b>14·03</b>

In all of the principal wheat growing counties the area under and the production of wheat were lower in 1917-18 than in the previous

season. The reduction was less marked in the Wimmera than in other centres.

The table which follows gives the average yield of wheat per acre in the principal wheat growing counties for each of the last ten years :—

**AVERAGE YIELD OF WHEAT PER ACRE IN WHEAT GROWING COUNTIES, 1908-9 to 1917-18.**

District and County.	Average Yield of Wheat per Acre (in Bushels) during Year ended March.									
	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.
<b>Western District—</b>										
Ripon .. ..	22·09	14·77	15·97	8·14	19·96	15·50	5·03	21·58	13·33	13·27
<b>Wimmera District—</b>										
Lowan .. ..	12·46	12·77	9·80	9·93	13·69	16·24	1·84	16·78	17·93	16·52
Borong .. ..	17·62	17·06	15·79	11·92	14·81	18·16	·95	19·27	22·49	22·62
Kara Kara ..	17·20	14·60	14·80	12·11	14·70	17·23	1·09	19·36	19·66	17·68
<b>Mallee District—</b>										
Weeah .. ..	12·01	11·66	12·52	4·95	10·03	4·89	·18	12·26	14·56	10·21
Karkaroo ..	9·11	10·17	11·41	5·84	7·58	5·44	·35	10·62	14·73	10·94
Tatchera ..	6·57	10·34	12·44	6·48	7·03	8·66	·37	10·09	15·80	12·30
<b>Northern District—</b>										
Gunbower ..	10·51	12·90	16·12	9·91	10·54	12·26	·23	15·33	15·89	14·23
Gladstone ..	15·19	14·28	14·15	11·63	13·00	17·38	1·52	17·94	19·10	14·17
Bendigo .. ..	15·84	16·71	18·92	12·22	14·37	15·60	·72	19·18	17·11	13·85
Rodney .. ..	15·88	15·21	15·23	11·50	14·60	14·73	1·05	20·15	14·69	12·67
Moira .. ..	10·77	14·49	16·25	10·83	14·52	16·14	1·74	17·88	14·44	11·38

The figures show that in eleven of the twelve principal wheat growing counties the yields in 1917-18 were lower than in the previous season.

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 nearly 62 lbs. on the average of the past ten years. The following statement shows the variation in the f.a.q.

**Wheat standard.**

standard weight of a bushel of Victorian wheat for each season since 1900-01 :—

F.A.Q. WHEAT STANDARD, 1902 TO 1918.

Season ended March.			Weight of Bushel (f.a.q.).	Season ended March.			Weight of bushel (f.a.q.).
			lbs.				lbs.
1902..	..	..	62½	1911..	..	..	62½
1903..	..	..	61	1912..	..	..	61½
1904..	..	..	60½	1913..	..	..	63
1905..	..	..	61½	1914..	..	..	62½
1906..	..	..	63	1915..	..	..	62
1907..	..	..	62½	1916..	..	..	61
1908..	..	..	62½	1917..	..	..	60½
1909..	..	..	62½	1918..	..	..	60
1910..	..	..	62½				

Stocks of wheat and flour.

It is estimated that about 9,500,000 bushels of wheat are required locally for food and seed. The stocks of wheat and flour in the State at 30th June, 1918, and at the same date in each of the previous eight years, were as follows :—

WHEAT AND FLOUR ON HAND, 30TH JUNE, 1910 TO 1918.

At 30th June.	Quantity in Bushels.		
	Wheat.	Flour (equivalent in Wheat).	Total.
1910 ... ..	9,698,000	652,200	10,350,200
1911 ... ..	15,388,600	746,400	16,135,000
1912 ... ..	7,337,316	786,926	8,124,242
1913 ... ..	8,780,673	585,688	9,366,361
1914 ... ..	8,002,311	940,138	8,942,449
1915 ... ..	582,448	510,300	1,092,748
1916 ... ..	42,578,379	519,162	43,097,541
1917 ... ..	63,852,078	1,078,875	64,930,953
1918 ... ..	70,031,000	1,658,000	71,689,000

Wheat Marketing Scheme.

Owing to the insufficiency of freight to transport the large wheat harvest of 1915-16, it became necessary for the Governments of Victoria and the other wheat-producing

States to make arrangements for marketing the grain. A scheme was therefore entered into between the Governments of the Commonwealth and of the States of New South Wales, Victoria, South Australia, and Western Australia, with a view to the equitable participation by all growers in the sale of the wheat crop and the proceeds thereof.

For this purpose it was decided that oversea shipping should be under the control of chartering agents appointed by the Commonwealth Government, and that all freights should be allotted between the States in accordance with the exportable surplus of each. It was agreed that local realizations should be controlled by local administrations in each State, subject, however, to the general control of prices by the central body.

The Australian Wheat Board, consisting of Ministerial representatives of the Commonwealth and of the States, and an elected representative of the wheat growers, Mr. Clement Giles, of South Australia, has the duty of realizing the crop overseas. Oversea sales are generally arranged by the London Wheat Committee and the Australian Wheat Board, which have the advice of representatives of certain shipping agents who constitute an Advisory Board.

In this State the crop was bought by the State Government and the internal operations are controlled by a body known as the Victorian Wheat Commission. The authority under which the crop is dealt with is conferred by the *Wheat Marketing Act 1915*. The provisions of this Act were extended to cover the 1916-17 harvest and further extended to cover the 1917-18 harvest. The position of the wheat pool as regards Victoria for the three seasons 1915-16, 1916-17, and 1917-18 was as follows on 30th September, 1918:—

	Season 1915-16.	Season 1916-17.	Season 1917-18.
Total number of bushels received to 30th September, 1918 ..	59,157,000	50,340,000	36,124,000
Amount paid to growers (cash at station) to 30th September, 1918	£12,338,000	£8,143,000	£5,800,000
Total receipts for sales from three pools to 30th September, 1918 .. ..		£18,823,000	
Bank overdraft at 30th September, 1918..		£4,399,000	

In connexion with the 1915-16 harvest, advances had at the date mentioned been made to the extent of 4s. 9d. per bushel, from which there had been deducted freight and handling charges.

Advances to the amount of 3s. 3d. per bushel had been paid on account of the 1916-17 and 1917-18 harvests.

Wheat  
production  
of the world.

Reliable information relating to the wheat production of the world in 1916 and 1917 is not available. In 1915 the quantity produced was 4,371,038,000 bushels as against 3,645,437,000 bushels in 1914, 4,128,711,000 bushels in 1913, 3,791,951,000 bushels in 1912, and 3,551,795,000 bushels in 1911. On the average of the five years 1911 to 1915 the production was 3,898 million bushels, as compared with a yearly average yield of 3,332 million bushels in 1905-9 and 3,008 million bushels in the period 1900-4.

Oats.

In 1917-18 the area harvested for oats in Victoria was 293,214 acres, from which a yield of 6,141,287 bushels was obtained, giving an average of 20.94 bushels to the acre. The following statement shows the harvest results for this crop for each of the past thirteen seasons and for five-year periods prior thereto back to 1865:—

OATS GROWN, 1865 TO 1918

Period ended March.	Area under Crop (Annual Average)	Produce (Annual Average).	Average per Acre.
	Acres.	Bushels.	Bushels.
1865-70 .. .. .	123,435	2,902,655	23.52
1870-75 .. .. .	135,334	2,370,839	17.52
1875-80 .. .. .	129,317	2,638,761	20.79
1880-85 .. .. .	165,369	3,906,176	23.62
1885-90 .. .. .	206,962	4,391,916	21.22
1890-95 .. .. .	214,840	4,906,870	22.84
1895-1900 .. .. .	301,317	5,229,188	17.35
1900-05 .. .. .	380,597	8,069,719	21.20
1906 .. .. .	312,052	7,232,425	23.18
1907 .. .. .	380,493	8,845,654	23.25
1908 .. .. .	398,749	5,201,408	13.04
1909 .. .. .	419,869	11,124,940	26.50
1910 .. .. .	384,226	7,913,423	20.60
1911 .. .. .	392,681	9,699,127	24.70
1912 .. .. .	302,238	4,585,326	15.17
1913 .. .. .	439,242	8,323,639	18.95
1914 .. .. .	442,060	8,890,321	20.11
1915 .. .. .	434,815	1,608,419	3.70
1916 .. .. .	353,932	9,328,894	26.36
1917 .. .. .	441,598	8,289,289	18.77
1918 .. .. .	293,214	6,141,287	20.94

In addition to the area for grain shown for last season there were 532,634 acres of oats cut for hay, so that the total area sown with oats in 1917-18 was 825,848 acres. During 1917-18 there were exported from Victoria to oversea countries 285,425 bushels of oats and 2,515,406 lbs. of oatmeal.

Barley.

The area under barley in 1917-18 was 84,931 acres, of which 41,065 were under malting, and 43,866 under other

barley. The figures in the subjoined table show the acreage, production and yield per acre for the last ten years :—

### CULTIVATION OF BARLEY, 1908-09 TO 1917-18.

Year ended March.	Area under Crop.		Produce.		Average per Acre.		
	Malting.	Other.	Malting.	Other.	Malting.	Other.	Total.
	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1909 ..	42,382	21,766	1,013,384	497,797	23·63	22·87	23·38
1910 ..	38,762	19,841	658,105	365,279	16·98	18·41	17·46
1911 ..	30,609	22,078	804,893	535,494	26·30	24·25	25·44
1912 ..	36,748	16,793	725,803	298,781	19·75	17·79	19·14
1913 ..	52,311	19,320	1,269,634	474,893	24·27	24·58	24·35
1914 ..	44,584	38,767	971,334	841,556	21·79	21·71	21·75
1915 ..	31,268	31,224	368,647	231,952	11·79	7·43	9·61
1916 ..	29,473	31,927	868,879	865,632	29·48	27·11	28·25
1917 ..	43,131	49,884	806,280	993,504	18·69	19·91	19·35
1918 ..	41,065	43,866	980,219	990,431	23·87	22·58	23·20

During 1917-18, 1,602,870 bushels of barley were used locally in the production of 1,614,720 bushels of malt.

The area planted with potatoes in 1917-18 was 66,966 acres, and the production was 182,195 tons, which represented a yield of 2·72 tons per acre, as compared with 2·55 tons in the previous season and 3·05 tons in 1915-16. The following table shows the potato returns for the past thirteen years and for earlier years in five-year periods back to 1860 :—

### POTATO PRODUCTION, 1860 TO 1918.

Period ended June.			Area under Crop (Annual Average).	Produce (Annual Average).	Average per Acre.
			Acres.	Tons.	Tons.
1860-65 ..	..	..	27,118	64,399	2·37
1865-70 ..	..	..	35,460	99,490	2·81
1870-75 ..	..	..	38,028	124,110	3·26
1875-80 ..	..	..	38,517	128,156	3·33
1880-85 ..	..	..	39,661	143,073	3·61
1885-90 ..	..	..	46,210	164,068	3·55
1890-95 ..	..	..	49,808	177,743	3·57
1895-1900 ..	..	..	45,669	133,122	2·91
1900-05 ..	..	..	44,817	135,593	3·03
1906 ..	..	..	44,670	115,352	2·58
1907 ..	..	..	55,372	166,839	3·01
1908 ..	..	..	54,149	135,110	2·50
1909 ..	..	..	47,903	152,810	3·19
1910 ..	..	..	62,390	174,970	2·80
1911 ..	..	..	62,904	163,312	2·60
1912 ..	..	..	47,692	119,092	2·50
1913 ..	..	..	47,575	191,112	4·02
1914 ..	..	..	74,574	176,602	2·37
1915 ..	..	..	65,495	189,225	2·89
1916 ..	..	..	56,910	173,821	3·05
1917 ..	..	..	73,618	187,992	2·55
1918 ..	..	..	66,966	182,195	2·72

The estimated value of the potatoes produced last season was £519,605, as against £550,086 for the preceding year, and £1,017,563 for the year 1915-16.

**Hay.** In 1917 the production of hay amounted to 949,545 tons, as against 1,232,721 tons in the previous year and 2,342,094 tons in 1915. The quantity of straw returned for the season 1917-18 was 52,424 tons as against 78,302 tons for the previous year. The hay returns for five-year periods from 1860 to 1909 and for each of the past eight seasons are shown in the following table:—

## HAY PRODUCTION, 1860 TO 1917.

Period.	Area cut for Hay (Annual Average).		Produce (Annual Average).		Average per Acre.
	Acres.		Tons.		Tons.
1860-64 .. ..	89,746		113,392		1.26
1865-69 .. ..	110,293		149,110		1.35
1870-74 .. ..	124,493		158,594		1.27
1875-79 .. ..	170,777		219,352		1.28
1880-84 .. ..	282,774		334,190		1.18
1885-89 .. ..	434,175		504,758		1.16
1890-94 .. ..	440,000		539,427		1.34
1895-99 .. ..	495,337		563,809		1.14
1900-04 .. ..	585,608		782,155		1.34
1905-09 .. ..	743,167		1,006,061		1.35
1910 .. .. ..	832,669		1,292,410		1.55
1911 .. .. ..	860,205		1,032,288		1.20
1912 .. .. ..	1,203,728		1,572,933		1.31
1913 .. .. ..	977,684		1,350,374		1.38
1914 .. .. ..	895,755		568,956		.64
1915 .. .. ..	1,330,455		2,342,094		1.76
1916 .. .. ..	897,186		1,232,721		1.37
1917 .. .. ..	748,808		949,545		1.27

The estimated value of hay was £2,801,158 for 1917, as compared with £2,033,990 for 1916 and £4,098,664 for 1915. Of the total hay produced in 1917, 672,391 tons were oaten, 240,054 tons were wheaten, and 37,100 tons were made from lucerne and other crops, and the yields per acre were 1.26, 1.25, and 1.57 tons respectively.

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

## PRICES OF PRODUCE, 1903 TO 1918.

Year.	Average Price in February and March.						
	Wheat.	Oats.	Barley.		Hay.	Potatoes.	
			Malting.	Other.		Early Crop.	Main Crop (after March).
	Per bushel.	Per bushel.	Per bushel.	Per bushel.	Per ton.	Per ton.	Per ton.
<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	
1903..	6 0	3 2½	4 5½	3 8	100 1	91 3	47 1
1904..	2 8	1 1½	2 10½	1 9½	27 2	52 6	26 1
1905..	2 11½	1 6	3 2½	2 1	33 6	110 0	84 0
1906..	2 10½	1 10½	3 11	2 8½	38 0	115 6	101 5
1907..	2 9	1 10½	4 2	2 2½	38 2	59 1	37 6
1908..	4 0½	3 0½	4 11½	3 7	88 7	70 4	54 11
1909..	3 9½	1 9½	3 9½	2 5	46 0	80 0	51 0
1910..	3 9½	1 11½	3 8½	2 4½	41 0	78 0	57 0
1911..	3 2	1 10½	4 3½	2 0½	38 0	82 0	63 0
1912..	3 4½	2 10½	5 7	3 11½	62 0	116 0	101 0
1913..	3 3½	2 3½	4 1	3 1	51 0	116 0	66 0
1914..	3 3	1 9	3 1½	2 0½	38 0	81 0	62 0
1915..	7 0½	4 11½	5 8½	4 10½	147 0	80 0	85 0
1916..	3 9	2 0½	3 11½	2 10	35 0	201 0	106 0
1917..	4 0	2 0	3 11½	2 10	33 0	114 0	53 0
1918..	4 0	3 1½	4 2½	3 4½	59 0	79 0	55 0

Other Crops. The area under other than principal crops and the production since March, 1912, are shown in the subjoined table:—

OTHER THAN PRINCIPAL CROPS, 1912-13 TO 1917-18.

Crop.	1912-13.		1913-14.		1914-15.	
	Area.	Production.	Area.	Production.	Area.	Production.
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize .. ..	19,986	715,299	17,962	800,529	19,433	1,018,419
Rye .. ..	1,428	17,141	1,779	19,029	1,955	13,415
Peas .. ..	11,875	232,856	11,774	206,846	12,159	114,493
Mangel-wurzel	1,121	Tons. 14,615	952	Tons. 15,642	893	Tons. 8,921
Beet, Carrots, Parsnips, and Turnips .. ..	627	5,628	470	3,166	563	2,249
Onions .. ..	4,977	28,641	6,121	24,755	8,937	31,528
Green Forage ..	84,460	..	93,963	..	139,654	..
Grass and Clover Seeds .. ..	2,429	Bushels. 23,206	1,452	Bushels. 16,349	149	Bushels. 1,100
Hops .. ..	131	Cwt. 1,387	117	Cwt. 961	115	Cwt. 903
Tobacco .. ..	138	661	284	2,037	196	1,192
Vines—Grapes..	24,579	733,579	22,435	836,493	21,801	620,876
Flax .. ..	648	{ 1,189 fibre 4,536 seed }	1,046	{ 1,096 fibre 3,768 seed }	671	{ 1,385 fibre 1,827 seed }
Gardens and Or- chards .. ..	73,623	..	77,960	..	87,237	..
Minor Crops ..	5,942	..	6,476	..	6,904	..
Land in Fallow	1,627,223	..	1,733,572	..	1,346,545	..
Artificial Grasses	1,085,346	..	1,094,566	..	1,202,130	..
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize .. ..	22,258	999,886	23,076	1,172,330	20,987	1,152,787
Rye .. ..	3,137	42,857	3,481	42,953	1,597	17,021
Peas .. ..	8,221	147,488	9,642	154,964	11,058	191,856
Mangel-wurzel	1,091	Tons. 13,067	860	Tons. 10,307	690	Tons. 7,826
Beet, Carrots, Parsnips, and Turnips .. ..	758	4,938	524	2,025	500	2,809
Onions .. ..	9,294	37,587	6,324	28,163	5,134	21,745
Green Forage ..	60,426	..	49,667	..	55,903	..
Grass and Clover Seeds .. ..	2,435	Bushels. 24,087	1,769	Bushels. 13,174	2,312	Bushels. 22,059
Hops .. ..	107	Cwt. 855	87	Cwt. 975	64	Cwt. 838
Tobacco .. ..	160	596	73	410	82	†
Vines—Grapes ..	22,353	1,084,766	23,264	1,013,197	25,236	759,570
Flax .. ..	361	{ 1,987 fibre 1,370 seed }	443	{ 1,371 fibre 1,481 seed }	419	{ 925 fibre 1,337 seed }
Gardens and Or- chards .. ..	91,499	..	93,833	..	95,180	..
Minor Crops ..	6,497	..	7,183*	..	6,928*	..
Land in Fallow	1,358,343	..	1,399,559	..	1,672,729	..
Artificial Grasses	1,182,995	..	1,292,817	..	1,268,310	..

\* For details see page 443.

† Not available.

**Maize.** The area under maize for grain in 1917-18 was 20,987 acres, and the production was 1,152,787 bushels, which was the largest total recorded and represented a yield of 54·93 bushels per acre, as compared with 50·80 bushels in the preceding season and 44·92 bushels in 1915-16. Of the total production for last season 87 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 past thirteen seasons and for five-year periods prior thereto back to 1890:—

### MAIZE PRODUCTION, 1890 TO 1918.

Period ended June.	Area under Maize for Grain (Annual Average).	Total Production (Annual Average).	Produce per Acre.
	Acres.	Bushels.	Bushels.
1890-5 .. .. .	7,483	376,844	50·36
1895-1900 .. .. .	9,894	528,970	53·46
1900-5 .. .. .	10,704	699,630	65·36
1906 .. .. .	11,785	641,216	54·41
1907 .. .. .	11,559	704,961	60·99
1908 .. .. .	10,844	508,761	46·92
1909 .. .. .	14,004	650,462	46·45
1910 .. .. .	19,112	1,158,031	60·59
1911 .. .. .	20,151	982,103	48·74
1912 .. .. .	18,223	792,660	43·50
1913 .. .. .	19,986	715,299	35·79
1914 .. .. .	17,962	800,529	44·57
1915 .. .. .	19,433	1,018,419	52·41
1916 .. .. .	22,258	999,886	44·92
1917 .. .. .	23,076	1,172,330	50·80
1918 .. .. .	20,987	1,152,787	54·93

On the average of the past five seasons the yield per acre was 49·5 bushels as against 65·4 in 1900-5, and 53·5 in 1895-1900. 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 in earlier periods.

**Rye.** The area under rye in 1917-18 was 1,597 acres, from which 17,021 bushels of grain were obtained. The production was 42,953 bushels in the previous season, and 42,857 bushels in 1915-16. The North-Eastern district supplied 43 per cent. of the total area and 32 per cent. of the production in 1917-18.

**Peas.** The area under peas in 1917-18 was 11,058 acres, and the return 191,856 bushels, the former being 1,416 acres more and the latter 36,892 bushels more than in the previous year. Last season peas were grown to some extent in all districts except the Mallee. The counties from which the largest returns were obtained

were Grant 48,736 bushels, Bourke 30,291 bushels, Tanjil 19,523 bushels, Buln Buln 19,296 bushels, and Mornington 12,619 bushels. The production of peas in the five counties mentioned was equal to 68 per cent. of the total for the whole State.

In 1917-18 there were 690 acres under mangel-wurzel, as against 860 in the previous season, 1,091 in 1915-16, 893 in 1914-15, 952 in 1913-14, and 1,121 in 1912-13. The production last year was 7,826 tons, as compared with an average of 11,952 tons for the preceding five-year period. Mangolds are grown principally in the counties of Villiers, Grant, Buln Buln, Tanjil, Mornington, and Heytesbury. The production for last season in the counties mentioned represented 82 per cent. of the total for the State.

The cultivation of beet, carrots, parsnips and turnips, exclusive of those grown in market gardens, showed a decrease in area as compared with the previous season. In 1917-18 the extent of land sown was 500 acres, as against 524 in the preceding year, 758 in 1915-16, 563 in 1914-15, 470 in 1913-14, and 627 in 1912-13. The produce for last year was 2,809 tons, as compared with 2,025 tons in the previous season, and 4,938 tons in 1915-16.

Onions are grown in nearly every county south of the Dividing Range. The returns for last season show that in Bourke the yield was 3,650 tons from 785 acres; in Grenville, 5,307 tons from 1,404 acres; in Villiers, 2,430 tons from 488 acres; in Buln Buln, 2,334 tons from 568 acres; in Mornington, 1,355 tons from 313 acres; in Grant, 2,176 tons from 640 acres; and in Polwarth, 4,099 tons from 836 acres. The following is a statement showing the area and yield for the last twenty years:—

#### ONION CULTIVATION, 1898-9 TO 1917-18.

Year.	Area.	Produce.	Year.	Area.	Produce.
	Acres.	Tons.		Acres.	Tons.
1898-9 ..	4,472	17,308	1908-9 ..	5,340	24,384
1899-1900 ..	4,436	19,905	1909-10 ..	6,434	31,715
1900-1 ..	2,815	12,766	1910-11 ..	6,161	37,484
1901-2 ..	4,151	20,859	1911-12 ..	3,652	20,911
1902-3 ..	5,565	27,467	1912-13 ..	4,977	28,641
1903-4 ..	4,176	25,218	1913-14 ..	6,121	24,755
1904-5 ..	2,862	12,969	1914-15 ..	8,937	31,528
1905-6 ..	4,889	25,597	1915-16 ..	9,294	37,587
1906-7 ..	4,705	28,000	1916-17 ..	6,324	28,163
1907-8 ..	4,249	22,649	1917-18 ..	5,134	21,745

The production of onions in 1917-18 was nearly 28 per cent. below the average of the preceding five years.

**Green Forage.** The area devoted to green forage in 1917-18 was 55,903 acres, as compared with 49,667 in the previous season, 60,426 in 1915-16, 139,654 in 1914-15, 98,963 in 1913-14, 84,460 in 1912-13, and 75,177 in 1911-12.

**Ensilage.** The practice of preserving forage in a green state has existed in Victoria for many years, but only a small number of farmers have adopted it. The returns for the past ten seasons are given in the next table.

#### ENSILAGE RETURNS, 1908-9 TO 1917-18.

Year ended March.	Number of Farms on which made.	Number of Silos (Pits and Stacks).	Weight of Materials used.
			Tons.
1909 .. .. .	392	494	18,205
1910 .. .. .	518	656	27,280
1911 .. .. .	460	555	25,969
1912 .. .. .	371	450	20,888
1913 .. .. .	287	385	17,877
1914 .. .. .	270	362	19,505
1915 .. .. .	161	221	9,055
1916 .. .. .	269	353	16,356
1917 .. .. .	179	223	10,974
1918 .. .. .	117	158	9,852

**Grass and clover seed.** The area harvested for grass and clover seed last season was 2,312 acres, as compared with 1,769 acres in the previous year, 2,435 acres in 1915-16, 149 acres in 1914-15, and 1,452 acres in 1913-14. The production in 1917-18 was 22,059 bushels, as against 13,174 bushels in the previous year, 24,087 bushels in 1915-16, 1,100 bushels in 1914-15, and 16,349 bushels in 1913-14.

**Hops.** The hop-growing industry attained its maximum development in 1883-4, when 1,758 acres yielded 15,717 cwt. In 1917-18 the return from 64 acres was 838 cwt., the area cultivated being the smallest since 1871-2. Delatite, Bogong, Dargo, Polwarth, Heytesbury, and Buln Buln were the only counties in which hops were grown last season.

**Flax.** The flax (*Linum Usitatissimum*) growing industry is assisted by the Commonwealth Government, which gives producers a bounty of 10 per cent. on the market value of the fibre produced. Notwithstanding this assistance the area under flax in 1917-18 was the second smallest since 1908-9. The whole of last season's produce came from the county of Buln Buln. Particulars

of the crop for the last nine years are given in the following statement :—

FLAX : 1909-10 TO 1917-18.

Year.	No. of Growers.	Area under Crop.	Seed Produced.	Fibre Produced.	Straw awaiting Treatment.
			Cwt.	Cwt.	Tons.
1909-10 .. ..	106	Acres. 1,213	1,515	676	836
1910-11 .. ..	33	600	2,457	748	235
1911-12 .. ..	29	443	1,958	1,327	75
1912-13 .. ..	55	648	4,536	1,189	615
1913-14 .. ..	62	1,046	3,768	1,096	652
1914-15 .. ..	49	671	1,827	1,318	25
1915-16 .. ..	22	361	1,370	1,987	..
1916-17 .. ..	13	443	1,481	1,371	..
1917-18 .. ..	..	419	1,337	925	..

In 1917-18 imports into Victoria from countries outside Australia included linseed to the value of £6,480, linseed oil worth £8,619, and fibre worth £362,542.

**Tobacco.** Tobacco production reached its maximum in 1880-1, when 17,333 cwt. of dry leaf was produced. The subsequent sixteen years were marked by great variations in area and produce, and since 1896-7 the industry has fallen to small proportions. The area devoted to tobacco last year was only 82 acres, of which 52 were in Delatite, 28 in Bogong, and 2 in Evelyn. Particulars relating to the cultivation of tobacco for the last twenty years are as follows :—

CULTIVATION OF TOBACCO, 1898-9 TO 1917-18.

Year.	Number of Growers.	Area.	Produce.
		Acres.	Cwt. (dry)
1898-9.. ..	31	78	190
1899-1900 .. ..	28	155	1,365
1900-1.. ..	16	109	311
1901-2.. ..	17	103	345
1902-3.. ..	24	171	781
1903-4.. ..	25	129	848
1904-5.. ..	20	106	1,112
1905-6.. ..	31	169	1,405
1906-7.. ..	30	133	603
1907-8.. ..	49	345	2,764
1908-9.. ..	60	413	2,647
1909-10 .. ..	50	321	2,704
1910-11 .. ..	57	329	1,090
1911-12 .. ..	58	356	3,686
1912-13 .. ..	54	138	661
1913-14 .. ..	67	284	2,037
1914-15 .. ..	46	196	1,192
1915-16 .. ..	39	160	596
1916-17 .. ..	26	73	410
1917-18 .. ..	..	82	..

During the period 1904-1915 the area under vines decreased by 6,712 acres, or by nearly 24 per cent., and the number of growers decreased by 521, or by 23 per cent. Since 1915 there has been a fairly large increase in the area and the number of growers. Vineyards are distributed fairly well over the State, but there are certain districts where the principal industries are connected with vine-growing. The Shire of Mildura produced last season 654,724 cwt. of grapes; Rutherglen, 10,176 cwt.; Swan Hill, 20,643 cwt.; Stawell, 14,917 cwt.; Ararat, 12,244 cwt.; Rodney, 5,968 cwt.; and Shepparton, 5,545 cwt. At Mildura the crop is principally dried for raisins and currants. The results of fifteen years' operations are given below:—

## VINE PRODUCTION, 1904 TO 1918.

Year ended June.	Number of Growers.	Area.	Produce.			
			Grapes gathered.	Wine Made.	Raisins Made.	Currants Made.
			Acres.	Cwt.	Gallons.	Cwt.
1904 ..	2,260	28,513	654,965	2,551,150	53,447	7,490
1905 ..	2,253	28,016	452,433	1,832,386	30,295	5,974
1906 ..	2,009	26,402	498,590	1,726,444	42,975	6,403
1907 ..	1,860	25,855	752,826	2,044,833	98,127	11,730
1908 ..	1,967	26,465	535,804	1,365,600	68,617	10,440
1909 ..	1,637	24,430	561,679	1,437,106	69,536	11,929
1910 ..	1,606	22,768	548,828	991,941	81,044	27,408
1911 ..	1,652	23,412	592,438	1,362,420	79,318	26,394
1912 ..	1,650	24,193	683,250	983,423	102,924	46,789
1913 ..	1,808	24,579	733,579	1,206,111	109,677	48,337
1914 ..	1,776	22,435	836,493	1,121,491	120,303	62,098
1915 ..	1,739	21,801	620,876	605,636	111,006	28,527
1916 ..	1,700	22,353	1,084,766	1,380,367	180,104	70,556
1917 ..	1,751	23,254	1,013,197	1,302,660	142,970	66,449
1918 ..	1,843	25,236	759,570	800,068	104,911	53,799

Of the total quantity of grapes gathered in 1918, 135,635 cwt. was used for making wine, 601,400 cwt. for raisins and currants, and 22,535 cwt. for table consumption and export. Of the 104,911 cwt. of raisins made, 73,518 cwt. were sultanas almost entirely from Mildura.

Raisins are produced in Victoria upon a scale far in excess of the State's requirements. It is estimated that a year's consumption of raisins is about 20,000 cwt.; consequently, about 85,000 cwt. of the production in 1918 is available for Inter-State or oversea export. A year's consumption of currants is about 30,000 cwt., which would enable approximately 24,000 cwt. of last season's production to be exported to other States or oversea.

The total number of persons in the State growing fruit for sale was 7,314 in 1917-18, as against 7,309 in the previous season, 7,319 in 1915-16, 6,811 in 1914-15, and 6,498 in 1913-14. The area under orchards in each of those years was 80,508, 79,247

**Orchards.**

76,382, 70,392, and 63,058 acres respectively. The orchards are distributed fairly evenly over the whole State. The counties having the largest areas last season were as follows:—Evelyn, 15,073 acres; Bourke, 14,347 acres; Mornington, 13,116 acres; Rodney, 8,681 acres; Moira, 4,592 acres; Talbot, 3,575 acres; Bendigo, 3,080 acres; Karkaroc, 2,985 acres; Borung, 1,879 acres; Grant, 1,790 acres; Tatchera, 1,514 acres; and Buln Buln, 1,194 acres.

In the following table will be found a statement of the number of bearing and non-bearing fruit trees and plants for the seasons 1913-14 and 1916-17:—

RETURN SHOWING THE NUMBER OF FRUIT TREES, PLANTS, Etc., IN ORCHARDS AND GARDENS WHERE FRUIT WAS GROWN FOR SALE, 1913-14 AND 1916-17.

Fruit.	Number of Trees, Plants, &c.					
	1913-14.			1916-17.		
	Not Bearing.	Bearing.	Total.	Not Bearing.	Bearing.	Total.
Apples ..	989,176	1,606,321	2,595,497	1,060,675	1,818,520	2,879,195
Pears ..	398,290	445,276	843,566	455,822	580,476	1,036,298
Quinces ..	30,010	66,040	96,050	35,073	72,147	107,220
Plums ..	137,246	350,887	488,133	162,335	396,282	558,617
Cherries ..	67,331	250,229	317,560	62,489	230,388	292,877
Peaches ..	321,991	353,134	675,125	446,638	582,402	1,029,040
Apricots ..	99,985	255,413	355,398	154,473	278,926	433,339
Nectarines ..	6,418	6,266	12,684	9,636	11,198	20,834
Oranges ..	136,657	54,698	191,355	284,643	101,493	386,136
Lemons ..	33,335	38,687	72,022	84,363	48,421	132,784
Loquats ..	1,503	5,060	6,563	2,031	3,847	5,878
Medlars ..	82	153	235	37	176	213
Figs ..	13,213	27,835	41,048	17,827	28,837	46,664
Passion-fruit ..	10,356	8,794	19,150	9,301	18,514	27,815
Guavas ..	538	1,081	1,619	44	251	295
Pomegranates ..	130	87	217	47	116	163
Persimmons ..	243	486	729	185	460	645
<b>Total Large Fruits</b>	<b>2,246,504</b>	<b>3,470,447</b>	<b>5,716,951</b>	<b>2,785,559</b>	<b>4,172,454</b>	<b>6,958,013</b>
Raspberries ..	..	558,288	558,288	..	636,749	636,749
Strawberries ..	..	3,458,859	3,458,859	..	3,894,479	3,894,479
Gooseberries ..	..	227,858	227,858	..	230,244	230,244
Mulberries ..	782	1,037	1,819	342	1,104	1,446
Olives ..	3,886	4,198	8,084	3,006	6,351	9,357
Currants (Red, White, and Black) ..	5,470	59,259	64,729	7,507	34,409	41,916
Almonds ..	11,039	19,022	30,061	11,115	21,348	32,463
Walnuts ..	8,988	4,044	13,032	7,524	5,909	13,433
Filberts ..	439	3,800	4,239	835	649	1,484
Chestnuts ..	451	600	1,051	570	427	997
<b>Total Nuts ..</b>	<b>20,917</b>	<b>27,466</b>	<b>48,383</b>	<b>20,044</b>	<b>28,333</b>	<b>48,377</b>

The area of orchards growing fruit for sale in 1917-18 was 80,508 acres, which is the largest area recorded. The striking feature

of the figures relating to the production of orchards in 1917-18, as compared with the previous year, is the increase in the quantity of apples and the reduction in the quantities of pears and peaches gathered. Details of the produce from orchards growing fruit for sale for each of the past ten years are as follows :—

### ORCHARDS GROWING FRUIT FOR SALE, 1908-9 TO 1917-18.

Year ended March.	Number of Fruit-growers.	Area of Gardens and Orchards.	LARGE FRUITS GATHERED.			
			Apples.	Pears.	Quinces.	Plums.
			Bushels.	Bushels.	Bushels.	Bushels.
1909 .. ..	5,586	Acres. 50,675	1,241,826	373,145	99,608	167,012
1910 .. ..	5,647	51,578	1,121,702	253,195	50,559	232,657
1911 .. ..	5,780	53,325	1,667,271	640,436	86,355	325,677
1912 .. ..	5,955	55,769	1,330,961	239,431	54,425	151,936
1913 .. ..	6,285	59,119	2,036,756	669,898	90,119	260,830
1914 .. ..	6,498	63,058	1,653,035	476,430	67,799	292,389
1915 .. ..	6,811	70,392	509,697	401,301	32,949	88,698
1916 .. ..	7,319	76,382	2,953,968	601,357	100,566	337,154
1917 .. ..	7,309	79,247	617,929	661,962	80,093	258,218
1918 .. ..	7,314	80,508	1,864,508	414,721	72,436	242,598

Large Fruits Gathered—continued.							
	Cherries.	Peaches.	Apricots.	Oranges.	Lemons.	Figs.	Others.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1909 .. ..	95,012	282,040	149,262	22,363	36,548	23,687	17,462
1910 .. ..	100,054	291,766	292,496	34,027	51,130	22,675	10,566
1911 .. ..	121,756	317,317	160,884	59,723	71,041	31,054	21,200
1912 .. ..	96,663	260,258	281,460	48,982	65,833	17,891	10,259
1913 .. ..	152,257	289,731	138,881	44,039	48,170	25,223	19,496
1914 .. ..	151,262	361,414	308,307	63,542	57,562	23,764	15,639
1915 .. ..	48,411	277,435	109,301	83,220	66,704	17,362	16,040
1916 .. ..	98,382	303,992	256,229	63,434	56,569	21,433	16,546
1917 .. ..	40,024	787,406	217,424	59,985	53,940	25,063	25,650
1918 .. ..	69,743	430,770	238,420	75,315	76,296	26,885	30,521

	SMALL FRUITS GATHERED.					NUTS GATHERED.			
	Rasp-berries.	Straw-berries.	Goose-berries.	Currants, Red, Black, & White.	Others.	Almonds.	Walnuts.	Filberts.	Chest-nuts.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	lbs.	lbs.	lbs.	lbs.
1909	8,640	4,874	6,950	1,278	2,747	91,230	23,100	3,323	3,355
1910	6,143	6,472	5,876	1,428	1,738	81,008	25,368	1,760	5,003
1911	9,231	7,788	6,430	1,334	2,607	126,877	24,242	3,209	8,546
1912	6,658	6,103	4,173	1,429	1,333	100,982	26,329	1,473	8,821
1913	5,207	3,839	3,874	876	1,179	90,317	22,127	1,220	8,305
1914	4,580	4,351	4,912	802	1,233	92,621	21,649	2,143	11,361
1915	6,011	2,290	223	183	1,072	70,139	26,026	2,664	9,316
1916	3,534	3,347	5,061	491	2,069	62,148	18,173	660	8,344
1917	4,996	4,960	3,902	273	1,822	53,590	7,895	2,339	11,384
1918	7,539	5,175	5,052	443	2,080	47,900	16,673	1,510	14,788

The following return shows the average produce per bearing tree for the seasons 1910-11, 1913-14, and 1916-17:—

PRODUCE OF FRUIT TREES, 1910-11, 1913-14, AND 1916-17.

Fruit Trees.	AVERAGE PER BEARING TREE.		
	1910-1911	1913-1914.	1916-17.
	Bushels.	Bushels.	Bushels.
Apples .. .. .	1·15	1·03	·34
Pears .. .. .	1·76	1·07	1·14
Quinces .. .. .	1·49	1·03	1·11
Plums .. .. .	·02	·83	·65
Cherries .. .. .	·50	·80	·17
Peaches .. .. .	1·09	1·02	1·35
Apricots .. .. .	·68	1·21	·78
Nectarines .. .. .	1·11	1·18	1·41
Oranges .. .. .	1·49	1·16	·59
Lemons .. .. .	1·48	1·49	1·11
Loquats .. .. .	1·19	·24	·29
Medlars .. .. .	·14	·29	·07
Figs .. .. .	·88	·85	·87
Passion Vines .. .. .	·98	·75	·44
Guavas .. .. .	·14	·02	·42
Pomegranates .. .. .	1·73	·54	·32
Persimmons .. .. .	1·50	·68	·82
	lbs.	lbs.	lbs.
Almonds .. .. .	6·03	4·87	2·51
Walnuts .. .. .	5·43	5·35	1·34
Filberts .. .. .	·88	·56	3·60
Chestnuts .. .. .	6·65	18·94	26·66

In addition to the fruits shown (p. 440), large quantities of melons, rhubarb and tomatoes were produced in the orchards, the following being the quantities returned for 1917-18—Melons, 16,350 cwt.; rhubarb, 18,472 dozen bundles; and tomatoes, 31,672 cwt. There were also 3,310 acres laid down in gardens growing fruit for private use, the value of the produce from which was estimated at about £6,620.

According to prices received by growers the value of <sup>value of fruit</sup> fruit which reaches market was estimated to be £423,500 <sup>sold.</sup> in 1909-10, £524,380 in 1910-11, £558,604 in 1911-12, £629,863 in 1912-13, £742,900 in 1913-14, £470,970 in 1914-15, £742,100 in 1915-16, £575,264 in 1916-17, and £737,025 in 1917-18. This, of course, does not represent the actual value of all the fruit grown, as large quantities are privately consumed in various ways.

No very reliable estimate of the value of such fruit can be prepared, but it may be set down at about £35,000.

**Market gardens.** The area under market gardens for the year 1917-18 was 11,362 acres. As these gardens are generally situated near large centres of population, and the producers are consequently able to dispose of the bulk of their goods with a minimum loss from waste, &c., an average return of £25 per acre is regarded as a fair estimate. On this basis, the total value of the produce may be given as £284,050. This does not include crops of one acre and over of potatoes, onions, mangel-wurzel, beet, carrots, parsnips, and turnips grown in market gardens, such crops being tabulated under their respective heads in the returns relating to agriculture.

**Dried fruit.** The quantity of dried fruit (weight after drying) was for the first time collected in 1895-6, when 179,460 lbs. were returned, and it increased to 636,294 lbs. in 1900-1, after which date the quantity, principally by reason of a reduction in apricots, declined to 306,603 lbs. in 1902-3. In 1909-10 the maximum production—811,935 lbs.—was recorded. In 1917-18 the production was 765,303 lbs. The details for the last ten seasons are as follows:—

#### DRIED FRUIT, 1903-9 TO 1917-18.

Year ended June.	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Pears.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1909 ..	69,120	56,183	84,514	170,620	26,796	30,322	437,555
1910 ..	46,767	76,015	109,661	539,910	22,160	17,422	811,935
1911 ..	26,391	80,123	84,211	334,111	9,554	31,819	566,209
1912 ..	21,929	72,400	143,112	492,041	31,027	16,502	777,011
1913 ..	48,853	84,053	56,151	61,465	27,274	38,633	316,429
1914 ..	39,899	155,031	118,187	363,356	33,151	7,900	717,524
1915 ..	16,817	28,788	70,897	43,606	31,981	55,581	247,670
1916 ..	290,258	128,520	61,667	69,215	33,939	22,224	605,823
1917 ..	27,109	118,999	357,329	149,940	10,567	108,379	772,323
1918 ..	134,342	221,728	88,241	235,534	47,201	38,257	765,303

A striking feature of the returns for last season was the decrease in dried peaches and pears, and the great increases in apples, prunes, and apricots. Nearly all the dried apples came from Evelyn and Mornington, and slightly more than one half of the dried prunes came from Rodney. The bulk of the other dried fruit, except prunes, comes from Mildura, where in 1917-18 there were made, in addition to fruits included above, 11,269,888 lbs. of raisins.

**Minor crops.** The following is a return of the minor crops for the last two seasons. The items do not in all cases represent the whole of the respective crops grown, but 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, 1916-17 AND 1917-18.

Crop.	1916-17.		1917-18.	
	Area.	Produce.	Area.	Produce.
	Acres.		Acres.	
Beans ... ..	314	1,987 bushels	841	21,984 bushels
Chicory ... ..	658	515 tons (dry)	664	518 tons (dry)
Flowers ... ..	221	...	164	...
Garlic ... ..	4	240 cwt.	8	290 cwt.
Herbs ... ..	12	...	5	...
Millet—Broom ... ..	1,096	{ 5,256 cwt. fibre 1,613 cwt. seed	921	{ 4,562 cwt. fibre 3,318 cwt. seed
„ Japanese ... ..			47	215 cwt. seed
Mustard ... ..	...	...	72	29 cwt.
Nursery ... ..	1,162	...	1,247	...
Opium poppies ... ..	1	6 lbs.	1	3½ lbs.
Pumpkins ... ..	2,064	11,103 tons	1,464	14,679 tons
Seeds—Agricultural and Garden ... ..	189	...	109	...
Sugar Beet ... ..	1,320	15,159 tons	1,200	14,487 tons
Sunflowers ... ..	95	1,006 cwt.	76	863 cwt.
Total ... ..	7,183	...	6,928	...

**Land in fallow.** While the fallowing of land in Victoria commenced in 1858, and increased in popularity in later years, it is only within the past thirteen years that this method of cultivation has become fairly general throughout the State. The area fallowed in 1917-18 was 1,672,729 acres, as compared with 853,829 acres in 1904-5, and 517,242 acres in 1898-9. The acreage so treated in each of the last twenty years was as follows:—

LAND IN FALLOW.

Year ended March.	Acres.	Year ended March.	Acres.
1899 ... ..	517,242	1909 ... ..	1,034,422
1900 ... ..	509,244	1910 ... ..	1,175,750
1901 ... ..	602,870	1911 ... ..	1,434,177
1902 ... ..	681,778	1912 ... ..	1,469,608
1903 ... ..	492,305	1913 ... ..	1,627,233
1904 ... ..	632,521	1914 ... ..	1,738,572
1905 ... ..	853,829	1915 ... ..	1,346,545
1906 ... ..	1,049,915	1916 ... ..	1,358,343
1907 ... ..	990,967	1917 ... ..	1,899,559
1908 ... ..	894,300	1918 ... ..	1,672,729

Nearly all of the fallowed area is devoted to wheat production. Of the 1,672,729 acres in fallow last season 609,511 were in the Wimmera, 479,760 in the Northern, and 413,147 in the Mallee District. The area for these three districts represented 90 per cent. of the total for the State.

The increase in the proportion of farmers using manure indicates the popularity and the value of this method of treating the soil. Last year the number of farmers who used manure was 30,109, as compared with 21,586 in 1905, and 7,318 in 1898. The following table shows the number of farmers using manure, and the quantity used in each of the last fifteen years:—

#### MANURE USED FOR FERTILIZATION, 1903 TO 1917.

Year.	Farmers using.	Area used on.	Manure used—	
			Natural.	Artificial.
		Acres.	Tons.	Tons.
1903 ...	19,921	1,205,443	207,817	41,639
1904 ...	20,167	1,521,946	190,903	45,940
1905 ...	21,586	1,791,537	210,507	54,674
1906 ...	23,072	1,985,148	205,906	60,871
1907 ...	23,733	2,018,079	232,394	62,337
1908 ...	24,437	2,053,987	235,492	64,715
1909 ...	26,690	2,407,331	197,446	77,579
1910 ...	27,845	2,714,854	203,884	86,316
1911 ...	26,159	2,676,408	205,739	82,581
1912 ...	29,524	3,029,418	222,253	94,010
1913 ...	30,610	3,401,013	219,423	105,612
1914 ...	31,874	3,728,279	209,534	117,935
1915 ...	33,378	4,336,252	187,602	123,667
1916 ...	33,165	3,870,742	181,268	117,812
1917 ...	30,109	3,336,418	167,114	106,119

The area on which manure was used represented only 7 per cent. of that under crop in 1898, but since then the proportion manured has rapidly increased. In 1901, it was 19 per cent. ; in 1903, 36 per cent. ; in 1905, 56 per cent. ; in 1909, 66 per cent. ; in 1913, 77 per cent. ; and in 1917, 81 per cent. During 1917-18 the quantity of manure imported into Victoria from oversea countries was 86,352 tons, valued at £181,014. This included 67,138 tons of rock phosphates from Ocean Island valued at £138,517.

**Characteristics  
of Victorian  
soils.**

This subject is fully dealt with in the Year-Book for 1915-16, page 740.

**Persons  
employed on  
Farming,  
Dairying, and  
Pastoral Hold-  
ings.**

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 ten years the numbers were as follows :—

NUMBER OF PERSONS EMPLOYED UPON FARMING,  
DAIRYING, AND PASTORAL HOLDINGS, 1908 TO 1917.

Year.			Males.	Females.	Total
1908	...	...	94,990	52,410	147,400
1909	...	...	96,873	52,782	149,655
1910	...	...	99,948	54,083	154,031
1911	...	...	100,689	55,040	155,729
1912	...	...	100,665	52,868	153,533
1913	...	...	101,353	51,837	153,190
1914	...	...	98,354	49,242	147,596
1915	...	...	98,617	49,038	147,655
1916	...	...	95,535	50,964	146,499
1917	...	...	95,890	51,992	147,882

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; but females partly engaged in outdoor duties in connexion with the holdings are included therein. It is estimated that the temporary labour employed on farms and pastoral holdings is equivalent to at least 25,000 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 1917-18. The information has been furnished by the occupiers of holdings:—

### WAGES, AGRICULTURAL AND PASTORAL, 1917-18.

Occupations.	Range.	Prevailing Rate.
Ploughmen .. .. .	30s. to 60s. per week ..	32s. 6d. per week
Farm labourers .. .. .	25s. to 40s. „ ..	30s. „
Threshing machine hands .. .. .	9d. to 15d. per hour ..	1s. per hour
Harvest hands .. .. .	6s. to 10s. per day ..	9s. per day
Milkers .. .. .	20s. to 40s. per week ..	30s. per week
Maize pickers (without rations) .. .. .	5d. to 9d. per bag ..	6d. per bag
Hop pickers „ „ .. .. .	3d. to 5d. per bushel ..	4d. per bushel
Married couples .. .. .	30s. to 60s. per week ..	40s. per week
Female servants .. .. .	10s. to 25s. „ ..	17s. 6d. „
Men cooks .. .. .	25s. to 60s. „ ..	30s. „
Stockmen .. .. .	£60 to £156 per annum ..	£78 per annum
Generally useful men .. .. .	20s. to 40s. per week ..	27s. 6d. per week
Shearers, hand* .. .. .	22s. 6d. to 30s. per 100 sheep	30s. per 100 sheep
„ machine* .. .. .	22s. 6d. to 30s. „ ..	30s. „
Bush carpenters .. .. .	30s. to 60s. per week ..	40s. per week
Gardeners, market .. .. .	20s. to 50s. „ ..	30s. „
„ orchard .. .. .	20s. to 50s. „ ..	30s. „
Vineyard hands .. .. .	20s. to 50s. „ ..	30s. „

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

## 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 for 50 years is shown in the next table, which gives the numbers of horses, milch cows, other cattle, sheep and pigs, and their numbers per head of population and per square mile in each of the last six census years.

## LIVE STOCK IN VICTORIA AT SIX CENSUS PERIODS.

Census Year.	Horses (including foals).	Cattle—		Sheep.	Pigs.
		Milch 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
<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
<i>Per Square Mile.</i>					
1861 .. ..	·87	2·25	5·97	65·78	·70
1871 .. ..	2·38	2·41	6·42	119·22	2·06
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

The great increase in milch cows since 1891 indicates the growth of the dairying industry which followed the regular and successful transport of Victorian butter to England. By reducing horses and cattle to an equivalent in sheep on the assumption that one of the former will eat as much as ten, and one of the latter as much as six sheep, interesting comparisons of the carrying capacity of the land at different periods may be instituted. Calculations made on this basis show that each square mile carried an equivalent of 306 sheep in 1911 as against 237 in 1881—an increase of 29 per cent. in the carrying capacity of the land in 30 years.

Size of holdings, showing areas cultivated and grazed.

Information relating to land occupied and cultivation and live stock thereon was collected in March, 1913. The land privately owned was summarized according to different-sized holdings, and, in the instances where Crown lands were held in conjunction therewith these were, regardless of size, scheduled with the holdings to which they were attached. The particulars are given in the two succeeding tables:—

### SIZE OF HOLDINGS SHOWING AREAS UNDER CULTIVATION AND PASTURE, MARCH, 1913.

Privately-owned Land.			Crown Land held in conjunction with that privately owned.	Total Area Occupied.	Area under—		
Size of Holdings. (In Acres.)	Number of Holdings.	Area Occupied.			Cultivation.	Pasture, &c.	
		Acres.	Acres.	Acres.	Acres.	Acres.	
1 to 5	4,158	12,627	44,966	57,593	3,458	54,135	
6 " 15	5,052	51,293	13,442	64,735	18,894	47,841	
16 " 30	5,259	117,141	58,577	175,713	96,188	139,530	
31 " 50	4,288	175,898	111,784	287,682	50,506	237,076	
51 " 100	7,356	558,534	145,742	704,276	138,352	565,924	
101 " 200	9,891	1,477,244	334,088	1,811,332	329,657	1,481,675	
201 " 300	5,698	1,428,071	428,597	1,856,668	311,947	1,544,721	
301 " 320	2,894	914,365	454,144	1,368,509	233,921	1,134,588	
321 " 400	3,179	1,149,040	351,048	1,500,088	263,975	1,236,113	
401 " 500	3,073	1,390,510	283,553	1,674,063	363,700	1,310,363	
501 " 600	2,451	1,352,618	402,941	1,755,554	362,674	1,392,880	
601 " 640	2,509	1,633,779	154,348	1,788,127	433,671	1,354,456	
641 " 700	1,267	851,436	334,013	1,185,499	207,262	978,237	
701 " 800	1,608	1,210,866	273,910	1,489,766	302,622	1,187,144	
801 " 900	1,135	966,221	224,076	1,190,297	245,126	945,171	
901 " 1,000	1,211	1,158,447	404,668	1,563,115	319,990	1,243,125	
1,001 " 1,500	2,784	3,417,332	1,074,628	4,491,960	875,165	3,616,795	
1,501 " 2,000	1,208	2,091,974	293,421	2,385,395	457,373	1,928,022	
2,001 " 2,500	552	1,239,679	484,480	1,724,159	214,073	1,510,086	
2,501 " 3,000	305	840,565	714,723	1,555,288	119,619	1,435,669	
3,001 " 4,000	348	1,208,523	148,751	1,357,274	163,726	1,193,548	
4,001 " 5,000	167	754,331	222,295	976,626	68,913	907,713	
5,001 " 7,500	135	1,125,333	253,977	1,379,360	71,262	1,308,098	
7,501 " 10,000	82	700,479	88,871	789,350	40,643	748,702	
10,001 " 15,000	78	963,016	391,783	1,354,799	21,926	1,332,873	
15,001 " 20,000	38	646,029	7,460	653,489	7,084	646,405	
20,001 " 30,000	20	494,237	396	494,633	8,747	485,886	
30,001 " 40,000	11	362,726	3,839	366,565	1,023	365,542	
40,001 " 50,000	3	135,558	1,232	136,790	596	136,194	
50,001 and upwards	..	1	..	51,400	230	51,170	
Total	..	66,811	28,429,357	7,710,753	36,140,110	5,670,428	30,469,682

Size of holdings and live stock thereon.

The last table shows the areas devoted to cultivation and grazing on different-sized holdings, in March, 1913, whilst the next table, which is a supplementary one, gives the numbers of horses, cattle, sheep, and pigs on these holdings at the same date.

SIZE OF HOLDINGS AND LIVE STOCK THEREON,  
MARCH, 1913.

Size of Holdings. (In Acres.)		Live Stock on Land Occupied.				
		Horses.	Cattle.		Sheep.	Pigs.
			Dairy Cows.	Other Cattle.		
1 to	5	4,633	5,480	4,039	2,308	1,684
6 "	15	7,343	10,182	6,813	4,424	4,250
16 "	30	10,500	14,825	10,766	12,697	6,643
31 "	50	10,831	19,056	13,923	17,652	8,662
51 "	100	25,605	55,862	38,211	68,230	23,323
101 "	200	48,133	119,585	87,462	228,752	48,969
201 "	300	38,494	83,342	70,488	302,428	31,535
301 "	320	22,265	35,668	35,541	197,667	17,065
321 "	400	27,441	47,801	48,253	303,947	12,345
401 "	500	30,435	42,224	49,042	395,625	14,109
501 "	600	25,791	32,928	41,697	392,867	9,716
601 "	640	22,835	16,648	26,125	292,312	5,480
641 "	700	12,719	13,015	20,996	237,750	4,289
701 "	800	19,358	16,147	27,360	387,856	5,118
801 "	900	15,935	13,715	25,960	358,213	5,228
901 "	1,000	18,099	14,164	26,848	436,856	4,198
1,001 "	1,500	47,940	33,438	77,594	1,427,735	10,206
1,501 "	2,000	24,208	12,998	38,953	977,380	3,751
2,001 "	2,500	12,519	7,693	25,304	649,203	2,261
2,501 "	3,000	6,983	4,332	15,699	515,414	1,351
3,001 "	4,000	9,616	5,411	19,939	726,481	1,856
4,001 "	5,000	4,750	2,872	13,590	473,833	507
5,001 "	7,500	6,776	3,952	29,987	831,290	1,495
7,501 "	10,000	3,933	1,583	13,167	504,726	258
10,001 "	15,000	3,611	1,512	17,905	761,201	457
15,001 "	20,000	1,918	777	8,344	504,279	104
20,001 "	30,000	1,398	544	4,748	334,753	104
30,001 "	40,000	1,069	180	5,794	269,172	85
40,001 "	50,000	278	74	820	116,723	61
50,001 and upwards	..	220	12	250	41,650	3
Total	..	465,636	615,520	805,618	11,773,924	224,582

The figures in the last two tables are exclusive of live stock travelling and those in cities, towns, &c.; also of 1,892 holdings containing 1,078,688 acres of Crown lands not held in conjunction with any private land, on which there were 36,151 acres of cultivation, 5,277 horses, 20,882 cattle, 84,737 sheep, and 3,901 pigs. The position disclosed was that 61,029 persons holding up to 1,000 acres each of private land occupied in the aggregate 14,398,125 acres of such land, as well as 4,024,897 acres of Crown land—a total of 18,423,022 acres, or 51 per

cent. of the total area in occupation. These occupiers controlled 64 per cent. of the total cultivation, and 49 per cent. of the pasture, and possessed 73 per cent. of the horses, 88 per cent. of the dairy cows, 66 per cent. of the other cattle, 90 per cent. of the pigs, and 31 per cent. of the sheep.

Size of holdings  
in 1910 and  
1913.

Particulars of the size of holdings and cultivation thereon are given in the following table for the years 1910 and 1913. Similar details have not been compiled for a later period than 1913:—

### SIZE OF HOLDINGS AND CULTIVATION THEREON.

Size of Holdings. (In acres.)	Year	Privately-owned Land.		Crown Land held in conjunction with that privately owned.	Total Area Occupied.	Area under—	
		Number of Holdings.	Area Occupied.			Cultiva- tion.	Pasture, &c.
			Acres.	Acres.	Acres.	Acres.	Acres.
1 to 100	1910	23,305	836,826	442,413	1,279,239	228,227	1,051,012
	1913	26,113	915,493	374,511	1,290,004	245,498	1,044,506
101 „ 320	1910	17,583	3,686,498	1,209,660	4,896,158	839,664	4,056,494
	1913	18,483	3,819,680	1,216,829	5,036,509	875,525	4,160,984
321 „ 640	1910	9,676	4,623,839	1,900,058	6,523,897	1,182,254	5,341,643
	1913	11,212	5,475,942	1,191,890	6,667,832	1,424,020	5,243,812
641 „ 1,000	1910	4,354	3,553,261	1,800,551	5,353,812	863,080	4,490,732
	1913	5,221	4,187,010	1,241,667	5,428,677	1,075,000	4,353,677
1,001 „ 2,500	1910	4,159	6,178,744	2,464,135	8,642,879	1,254,392	7,388,487
	1913	4,544	6,748,985	1,852,529	8,601,514	1,546,611	7,054,903
2,501 „ 5,000	1910	749	2,571,414	1,348,979	3,920,423	298,146	3,622,277
	1913	820	2,803,419	1,085,769	3,889,188	352,258	3,536,930
5,001 „ 10,000	1910	239	1,651,979	1,397,984	3,049,963	85,379	2,964,584
	1913	267	1,825,862	942,848	2,168,710	111,910	2,056,800
10,001 and up- wards	1910	175	3,298,227	145,420	3,443,647	45,770	3,397,877
	1913	151	2,652,966	404,710	3,057,676	89,606	3,018,070
Total	1910	60,240	26,400,818	10,709,200	37,110,018	4,796,912	32,313,106
	1913	66,811	28,429,357	7,710,753	36,140,110	5,670,428	30,469,682

The number of holdings of over 10,000 acres was 195 in 1906, 175 in 1910, and 151 in 1913, and the aggregate areas comprised therein were 4,134,067 acres, 3,298,227 acres, and 2,652,966 acres in the corresponding years. The reduction was equivalent to 22·6 per cent. in the number and 35·8 per cent. in the acreage of such estates during the seven years ended March, 1913. In all other holdings of the sizes mentioned in the above table there were increases in both numbers and acreage in the seven years referred to.

Size of holdings and how they were utilized, 1910 and 1913.

To illustrate the uses to which the land was applied in 1910 and 1913, various percentages relating to holdings of different sizes are given for those years in the succeeding table, which also shows the live stock carried by the holdings, reduced to their equivalent in sheep :—

SIZE OF HOLDINGS AND HOW UTILIZED, 1910 AND 1913.

Size of Holdings of Private Land. (In Acres.)	Year.	Percentage in each Division to Total of—				Live Stock Grazed reduced to equivalent in Sheep.	
		Area Occupied.	Area under Cultivation.	Area used for Pasture, &c.	Equivalent in Sheep Grazed.	Total.	Per Acre used for Grazing, &c.
1 to 100	1910	3.45	4.76	3.25	6.28	1,586,653	1.51
	1913	3.57	4.33	3.43	7.08	1,766,873	1.69
101 „ 320	1910	13.19	17.50	12.55	17.50	4,415,168	1.09
	1913	13.94	15.44	13.66	17.67	4,410,283	1.06
321 „ 640	1910	17.58	24.65	16.53	17.00	4,290,653	.80
	1913	18.45	25.12	17.21	17.14	4,278,079	.82
641 „ 1,000	1910	14.42	17.99	13.90	12.18	3,076,406	.68
	1913	15.02	18.95	14.29	12.15	3,031,015	.70
1,001 „ 2,500	1910	23.29	26.15	22.87	20.10	5,074,837	.69
	1913	23.80	27.27	23.15	20.34	5,076,868	.72
2,501 „ 5,000	1910	10.57	6.22	11.21	8.81	2,224,312	.61
	1913	10.76	6.22	11.61	9.22	2,300,276	.65
5,001 „ 10,000	1910	8.22	1.78	9.17	6.29	1,589,021	.54
	1913	6.00	1.98	6.75	6.95	1,735,240	.84
10,001 and upwards	1910	9.28	.95	10.52	11.84	2,989,460	.88
	1913	8.46	.69	9.90	9.45	2,358,478	.78
Total	1910	100.00	100.00	100.00	100.00	25,245,510	.78
	1913	100.00	100.00	100.00	100.00	24,957,112	.82

Horses and cattle have been reduced to an equivalent in sheep on the assumption that one head of the former will eat as much as ten, and one of the latter as much as six sheep. From this return it will be seen that, in 1913, 51 per cent. of the land occupied was in areas not exceeding 1,000 acres, and, while this portion furnished 64 per cent. of the cultivation, it contained nearly 49 per cent. of the total area under pasture, and supported 54 per cent. of the grazing stock. Dairying was carried on principally in the small holdings and pigs were most numerous where dairying prevailed. Nearly 56 per cent. of the dairy cows and about 61 per cent. of the pigs were on holdings of not more than 320 acres. The sheep-carrying capacity per acre of the total grazing area in 1913 was slightly in excess of that for 1910. The proportionate decrease of pastoral areas in estates of from 5,001 to 10,000 acres between the years mentioned is very noticeable, especially as it was accompanied by an increase in the number of live stock grazed.

Land occupied  
in different  
districts.

The following tables show the land in occupation in March, 1918, in districts, and the uses to which the land was applied :—

### LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA, MARCH, 1918.

(Areas of 1 acre and upwards.)

District.	Number of Occupiers.	ACRES OCCUPIED.				Total.
		For Agricultural Purposes.	For Pasture.		Other Purposes and Unproductive.	
			Sown Grasses, Clover, or Lucerne.	Natural Grasses.		
Central ...	17,588	430,143	167,481	2,123,359	143,010	2,863,993
North-Central ...	5,888	125,798	56,851	1,859,824	64,608	2,107,081
Western ...	11,839	381,143	199,798	6,003,720	226,985	6,811,646
Wimmera ...	6,558	1,515,313	124,456	4,049,185	296,058	5,985,012
Mallee ...	5,976	1,541,504	4,922	3,209,805	778,369	5,534,600
Northern ...	12,059	1,525,213	47,969	3,666,525	31,391	5,271,098
North-Eastern ...	5,291	128,158	7,778	3,648,340	121,600	3,905,876
Gippsland ...	8,825	135,682	659,055	3,573,835	564,679	4,933,251
Total ...	74,024	5,782,954	1,268,310	28,134,593	2,226,700	37,412,557
PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.						
Central ...	...	15.02	5.85	74.14	4.99	100.00
North-Central ...	...	5.97	2.70	88.27	3.06	100.00
Western ...	...	5.60	2.93	88.14	3.33	100.00
Wimmera ...	...	25.32	2.08	67.66	4.94	100.00
Mallee ...	...	27.85	.09	58.00	14.06	100.00
Northern ...	...	28.94	.91	69.56	.59	100.00
North-Eastern ...	...	3.28	.20	93.41	3.11	100.00
Gippsland ...	...	2.75	13.36	72.44	11.45	100.00
Total ...	...	15.46	3.39	75.20	5.95	100.00
PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.						
Central ...	23.76	7.44	13.21	7.55	6.43	7.66
North-Central ...	7.96	2.17	4.48	6.61	2.90	5.63
Western ...	15.99	6.59	15.75	21.34	10.20	18.21
Wimmera ...	8.86	26.20	9.81	14.39	13.30	16.00
Mallee ...	8.07	26.66	.39	11.41	34.91	14.79
Northern ...	16.29	26.37	3.78	13.03	1.41	14.09
North-Eastern ...	7.15	2.22	.62	12.97	5.46	10.44
Gippsland ...	11.92	2.35	51.96	12.70	25.39	13.18
Total ...	100.00	100.00	100.00	100.00	100.00	100.00

It will be seen from these tables that the largest area under cultivation and the largest proportion of cultivation to land occupied are found in the Northern, Wimmera and Mallee districts. Of the occupied land, about 29 per cent. in the Northern, 28 per cent. in the Mallee, and 25 per cent. in the Wimmera districts are devoted to agriculture, and these divisions supply 79 per cent. of the cultivation in

Victoria. In the North-Central, Western, and North-Eastern districts the land occupied is largely devoted to grazing; and in Gippsland considerable attention has been given to the cultivation of grasses, 52 per cent. of all the sown grasses in the State being found in that district.

The next table contains particulars of the distribution of horses, cattle, and sheep on agricultural and pastoral lands in March, 1918.

Areas occupied and stock thereon, in districts.

AREA OCCUPIED AND STOCK THEREON, 1918.

District.	Acres Occupied for—		Number of—		
	Agriculture.	Pasture.	Horses.	Cattle.	Sheep.
Central ...	430,143	2,290,840	107,598	229,391	1,307,507
North-Central ...	125,798	1,916,675	27,573	79,505	1,298,730
Western ...	381,143	6,203,518	72,201	324,789	4,576,510
Wimmera ...	1,515,313	4,173,641	71,205	46,680	2,258,867
Mallee ...	1,541,504	3,214,727	53,163	33,046	713,692
Northern ...	1,525,213	3,714,494	96,159	175,770	2,283,133
North-Eastern ...	128,158	3,656,118	36,879	178,220	1,054,679
Gippsland ...	135,682	4,232,890	49,283	303,648	1,266,892
Total ...	5,782,954	29,402,903	514,061	1,371,049	14,760,013

The area occupied does not include 2,226,700 acres which are mostly in an unproductive state. Cattle were more numerous than in the previous year in every district, and sheep were more numerous in all districts except Gippsland. The number of sheep in the Mallee was nearly 49 per cent. greater than in 1917.

The following return shows the live stock in Victoria in each of the last five years. Tables showing the stock classified in conjunction with holdings in March, 1913, and sheep classified in different sized flocks in March, 1917, are given on pages 449 and 463 :—

Live stock in Victoria, 1914 to 1918.

LIVE STOCK IN VICTORIA, 1914 TO 1918.

Live Stock.	1914.	1915.	1916.	1917.	1918.
Horses (including foals) ...	562,331	552,053	493,779	514,403	514,061
Cattle—					
Dairy Cows ...	656,080	610,517	451,088	488,086	534,388
Other (including calves) ...	872,473	752,025	592,516	687,012	836,661
Sheep ...	12,113,682	12,051,685	10,545,632	12,576,587	14,760,013
Pigs ...	221,277	243,196	192,002	254,436	323,159

In the subjoined table will be found a statement of the average and the range of prices ruling in Melbourne during the years 1916 and 1917 for live stock. The information has been extracted from the *Melbourne Stock and Station Journal* :—

### PRICES IN MELBOURNE OF LIVE STOCK, 1916 AND 1917.

Stock.	Prices in 1916.						Prices in 1917.									
	Average.			Range.			Average.			Range.						
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.				
<i>Horses.</i>																
Extra heavy draught ..	43	7	6	32	0	0 to 52	0	0	40	5	0	35	0	0 to 43	0	0
Medium draught ..	31	0	0	23	0	0 to 38	10	0	29	17	6	27	0	0 to 32	10	0
Delivery Cart ..	21	17	6	18	5	0 to 30	0	0	22	7	6	20	0	0 to 23	10	0
Indian Remounts ..	21	12	6	20	10	0 to 27	0	0	22	10	0	19	0	0 to 23	10	0
Saddle and Harness ..	9	0	0	8	0	0 to 12	10	0	8	17	6	7	15	0 to 10	10	0
Ponies ..	11	12	6	9	15	0 to 16	10	0	12	17	6	10	10	0 to 14	0	0
<i>Fat Cattle.</i>																
<i>Bullocks—</i>																
Extra Prime.. ..	25	1	0	22	0	0 to 29	7	0	25	5	0	22	10	0 to 29	15	0
Prime .. ..	21	3	0	19	0	0 to 22	18	0	22	5	0	19	9	0 to 26	16	0
Good .. ..	17	19	0	16	19	0 to 19	5	0	19	10	0	17	8	0 to 23	17	0
Good Light and Handy																
Weights .. ..	16	1	0	15	0	0 to 17	7	0	17	10	0	15	16	0 to 20	17	0
Second .. ..	14	9	0	12	17	0 to 15	15	0	16	0	0	13	18	0 to 19	10	0
<i>Cows—</i>																
Best .. ..	15	1	0	14	0	0 to 16	16	0	16	16	0	14	0	0 to 22	5	0
Others .. ..	10	19	0	9	2	0 to 14	1	0	13	2	0	10	4	0 to 17	1	0
<i>Dairy Cattle.</i>																
Best Milkers .. ..	18	0	0	12	10	0 to 27	15	0	20	15	0	15	18	0 to 25	0	0
Springers, best ..	14	0	0	9	17	0 to 18	5	0	17	2	0	13	12	0 to 20	5	0
<i>Fat Sheep.</i>																
<i>Wethers (cross)—</i>																
Extra Prime.. ..	2	2	7	1	12	1 to 2	18	3	2	2	11	1	14	7 to 2	15	6
Prime .. ..	1	16	10	1	8	0 to 2	4	3	1	18	1	1	11	7 to 2	9	6
Good .. ..	1	12	1	1	4	0 to 1	18	0	1	13	2	1	7	0 to 2	2	9
<i>Ewes (cross)—</i>																
Extra Prime .. ..	1	19	2	1	11	0 to 2	10	0	1	18	4	1	13	5 to 2	7	6
Prime .. ..	1	14	1	1	7	0 to 2	0	10	1	14	0	1	8	8 to 2	3	6
Good .. ..	1	9	1	1	3	0 to 1	15	9	1	9	8	1	4	7 to 1	19	4
<i>Wethers (merino)—</i>																
Extra Prime.. ..	1	14	9	1	6	6 to 2	0	6	1	16	8	1	8	10 to 2	8	9
Prime .. ..	1	9	11	1	4	0 to 1	15	1	1	12	3	1	6	3 to 2	3	0
Good .. ..	1	5	8	1	0	6 to 1	10	3	1	7	9	1	2	8 to 1	17	3
Ewes (merino) best ..	1	5	1	0	19	6 to 1	11	0	1	4	0	0	19	6 to 1	13	6
<i>Fat Lambs.</i>																
Extra Prime .. ..	1	13	4	1	6	9 to 2	1	3	1	14	3	1	6	0 to 2	2	0
Prime .. ..	1	7	10	1	1	6 to 1	14	6	1	9	5	1	3	0 to 1	16	4
Good .. ..	1	3	2	0	18	1 to 1	8	5	1	4	5	0	19	0 to 1	10	0
Second .. ..	1	0	3	0	15	9 to 1	3	10	1	1	0	0	16	6 to 1	0	3
<i>Pigs.</i>																
<i>Back Fatters—</i>																
Extra Heavy Prime ..	7	19	0	5	10	0 to 10	10	0	7	11	0	5	5	0 to 10	5	0
Extra Prime and																
Weighty .. ..	5	14	0	4	10	0 to 7	10	0	5	5	0	3	9	0 to 7	10	0
<i>Baconers—</i>																
Extra Prime.. ..	4	8	0	3	13	0 to 5	12	0	4	6	0	3	15	0 to 5	0	0
Prime .. ..	3	17	0	3	2	0 to 4	19	0	3	9	0	2	17	0 to 3	18	0
Porkers .. ..	2	14	0	2	4	0 to 3	8	0	2	7	0	1	17	0 to 2	13	0

The most striking feature of the figures is the enhanced value of dairy cattle. The average price paid for best milkers increased from £12 16s. in 1915 to £18 in 1916, and £20 15s. in 1917.

Stock Slaughtered. The following is a statement of the stock slaughtered on farms and stations, as well as in municipal abattoirs, during each of the last ten years :—

STOCK SLAUGHTERED, 1903 TO 1917.

Year.	Number Slaughtered.		
	Sheep and Lambs.	Cattle.	Pigs.
1908 .. ..	3,309,865	279,710	225,162
1909 .. ..	3,708,512	287,548	210,613
1910 .. ..	4,245,881	319,665	257,287
1911 .. ..	4,348,363	347,926	345,547
1912 .. ..	4,153,269	368,512	331,364
1913 .. ..	4,742,231	410,694	286,931
1914 .. ..	4,550,272	470,011	260,017
1915 .. ..	2,973,803	356,174	216,003
1916 .. ..	2,647,200	247,781	214,228
1917 .. ..	2,499,002	217,480	298,073

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

PURPOSES FOR WHICH STOCK WERE SLAUGHTERED, 1903 TO 1917.

Year.	For Butcher and Private Use.			For Freezing.			For Preserving and Salting.			For Boiling Down.		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1908	2,480,072	260,529	71,309	773,396	15,789	2,296	10,775	2,015	151,478	45,622	1,377	79
1909	2,718,344	276,759	67,117	941,309	7,399	225	10,962	2,235	143,206	37,897	1,155	65
1910	2,592,514	302,282	91,850	1,573,516	13,009	1,557	41,420	3,624	163,844	38,431	750	36
1911	2,678,517	321,251	134,546	1,578,132	17,354	1,609	69,486	7,640	209,177	22,228	1,681	215
1912	2,610,665	344,706	148,394	1,409,243	10,793	3,120	104,472	10,129	179,717	28,889	2,884	133
1913	2,587,895	355,868	107,089	2,107,180	36,692	..	41,034	15,383	179,710	6,122	2,751	132
1914	2,733,802	385,548	76,464	1,710,152	64,838	1,713	34,141	15,276	181,756	22,177	4,349	84
1915	2,910,848	338,475	86,580	47,546	175	..	9,762	12,082	129,259	5,647	5,442	164
1916	2,206,952	233,010	46,922	418,418	8,243	156	20,925	4,850	167,003	905	778	147
1917	2,168,582	209,909	99,059	196,267	1,124	671	133,140	5,540	197,880	1,013	907	169

The increase which took place in the number of sheep and lambs slaughtered for freezing, until it was checked by a drought in 1914, shows the growing importance of the frozen meat trade of the State. Of the 4,742,231 sheep and lambs slaughtered in Victoria in 1913, 2,107,180, or 44 per cent., were frozen, as compared with 651,914, or 23 per cent., in 1906. In 1917-18 the oversea exports included 5,081,026 lbs. of lamb and 2,697,239 lbs. of mutton, valued at £129,748 and £57,985 respectively. The scarcity of shipping accounted for the small quantities exported in the last two years.

Mutton and  
Lamb frozen  
for Export.

The soil and climate of Victoria are well suited to the economical production of both mutton and lamb, and, as there is practically no limit to the demand for these products, in Europe, the possibilities for those engaged in raising sheep for export are very great, especially as the number of sheep in the world is not keeping pace with the increase in population. The importance of this export trade to Victorian sheep owners is evidenced by the figures in the appended statement showing the numbers of carcasses frozen for export in 1894, a few years after the inception of the trade, and in each of the past seven years. The quantity frozen for export in the three years 1915 to 1917 was small in comparison with previous years. The chief reasons for this were, in 1915, the drought of the preceding year and, in 1916 and 1917, the scarcity of shipping.

#### MUTTON AND LAMB FROZEN FOR EXPORT.

Year.	Number of Carcasses frozen for Export.		
	Mutton.	Lamb.	Total.
1894 .. ..	250,000	..	250,000
1911 .. ..	624,940	953,192	1,578,132
1912 .. ..	566,541	842,702	1,409,243
1913 .. ..	948,162	1,159,018	2,107,180
1914 .. ..	653,329	1,056,823	1,710,152
1915 .. ..	..	47,546	47,546
1916 .. ..	52,724	365,694	418,418
1917 .. ..	66,730	129,537	196,267

**Dairying.** The dairying industry is one of the principal sources of the wealth of the community. The value of dairy produce for 1917 was £7,213,950 as compared with £6,898,630 in the previous year, £4,952,846 in 1915, £4,937,610 in 1914, and £5,163,416 in 1913. The following table shows the numbers of cowkeepers and cows, and the total production of butter and cheese, in each of the last ten years:—

## DAIRYING, 1908 TO 1917.

Year.	Number of Cow-keepers.	Number of Dairy Cows at end of Year.	Butter Made.	Cheese Made.
			lbs.	lbs.
1908 .. ..	49,158	609,166	48,461,398	4,328,644
1909 .. ..	50,870	625,063	55,166,555	5,025,834
1910 .. ..	52,610	668,777	70,603,787	4,530,893
1911 .. ..	53,319	699,555	86,500,474	4,549,843
1912 .. ..	54,447	655,939	67,655,834	4,176,778
1913 .. ..	55,423	656,080	73,381,567	4,856,321
1914 .. ..	55,553	610,517	62,421,288	4,395,502
1915 .. ..	53,381	451,088	42,345,113	3,497,278
1916 .. ..	53,940	488,086	59,568,771	5,869,562
1917 .. ..	54,348	534,388	64,405,711	5,285,003

The reduction in the figures for 1915 was due to a severe drought which occurred in the preceding year.

**Butter and cheese made on farms.**

The next table shows the quantities of butter and cheese made on farms in each of the past ten years:—

## BUTTER AND CHEESE MADE ON FARMS.

Year.	Butter.		Cheese.
	lbs.		lbs.
1908 .. ..	4,078,230		1,854,962
1909 .. ..	5,611,927		1,857,879
1910 .. ..	5,540,271		1,823,263
1911 .. ..	5,233,355		1,502,582
1912 .. ..	5,428,690		2,004,865
1913 .. ..	5,679,670		2,008,370
1914 .. ..	4,845,529		1,722,506
1915 .. ..	4,750,866		1,367,243
1916 .. ..	5,080,408		1,680,929
1917 .. ..	4,704,151		1,311,893

Butter and  
cheese made  
in factories.

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

**BUTTER, CHEESE, ETC., MADE IN FACTORIES, 1908 TO 1917-18.**

Year.	Butter Made.	Cream Sold.	Cheese Made.	Concentrated, Condensed, and Powdered Milk Made.
	lbs.	gallons.	lbs.	lbs.
1908 ...	44,383,168	17,527	2,473,682	3,781,548
1909 ...	49,554,628	19,417	3,167,955	3,894,859
1910 ...	65,063,516	29,910	2,707,630	3,004,842
1911 ...	81,267,119	34,028	3,047,261	13,697,691
1912 ...	62,227,144	41,952	2,171,913	18,456,094
1913 ...	67,701,897	45,762	2,847,951	21,479,263
1914 ...	57,575,759	54,388	2,672,996	19,093,750
1915 ...	37,594,247	27,934	2,130,035	16,690,426
1916-17 ...	54,488,363	68,842	4,188,633	33,280,635
1917-18 ...	59,701,560	60,890	3,973,110	37,805,070

NOTE.—In addition, 1,041,330 lbs. of casein were made in 1917-18.

The quantities of milk in gallons received at factories and creameries were 104,980,863 in 1908, 116,034,058 in 1909, 149,490,103 in 1910, 191,128,362 in 1911, 150,079,730 in 1912, 166,339,178 in 1913, 144,317,040 in 1914, 93,846,750 in 1915, 138,746,860 in 1916-17, and 151,615,600 in 1917-18.

Exports of  
butter and  
cheese.

In 1917-18 there were exported from Victoria to countries outside Australia 24,323,648 lbs. of butter, valued at £1,644,299, all of which was Australian produce. The quantity sent to the United Kingdom was 21,251,106 lbs., valued at £1,411,013. The quantity of cheese exported to oversea countries was 1,237,051 lbs., and the value thereof £57,223.

**Wool production.** 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 1917-18 and earlier seasons was as follows:—

**VICTORIAN WOOL CLIP AND ESTIMATED TOTAL PRODUCTION FOR THE SEASON, 1917-18.**

Districts.	Wool Clip, 1917-18.			
	Sheep	Lambs.	Total.	
	lbs.	lbs.	lbs.	
Central ... ..	6,269,105	765,584	7,034,689	
North-Central ... ..	6,507,202	891,223	7,398,425	
Western ... ..	27,239,526	2,639,663	29,929,189	
Wimmera ... ..	14,019,727	1,552,070	15,571,797	
Mallee ... ..	4,111,895	517,123	4,629,018	
Northern ... ..	11,453,001	1,490,524	12,943,525	
North-Eastern ... ..	5,105,896	723,600	5,829,496	
Gippsland ... ..	5,673,328	796,365	6,469,693	
Total Clip	1917-18	80,379,680	9,426,152	89,805,832
	1916-17	79,647,862	8,199,062	78,846,924
	1915-16	55,801,193	3,725,255	59,526,448
	1914-15	65,005,305	5,085,597	70,090,902
	1913-14	74,157,932	5,868,688	80,026,620
	1912-13	65,666,190	4,170,780	69,836,970
	1911-12	81,962,229	6,504,990	88,467,219
	1910-11	73,959,226	6,115,044	80,074,270
	1909-10	71,006,003	5,673,606	76,679,609
1908-9	65,289,108	3,641,093	68,930,201	
	1914-15.	1915-16.	1916-17.	1917-18.
	lbs.	lbs.	lbs.	lbs.
Wool clip ... ..	70,090,902	59,526,448	78,846,924	89,805,832
Wool stripped from Victorian skins (estimated)	25,315,965	22,803,750	15,998,100	15,618,850
Wool on Victorian skins exported (estimated) ...				
Total production ...	95,406,867	82,330,198	94,845,024	105,424,682
Total value ...	£3,410,913	£4,066,003	£5,927,814	£6,410,077

The wool produced last season was 11 per cent. more than in the previous season. In 1917 there were 10,615,505 sheep and 3,897,752 lambs shorn, as compared with 9,378,572 sheep and 3,214,914 lambs in 1916 and 8,671,434 sheep and 1,616,025 lambs in 1915.

Weight of  
a fleece.

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

**WEIGHT OF A FLEECE, 1908 TO 1917.**

Year.	Weight of a Fleece.		
	Sheep.	Lambs.	Sheep and Lambs combined.
	lbs.	lbs.	lbs.
1908 .. .. .	5·98	2·11	5·45
1909 .. .. .	6·70	2·29	5·86
1910 .. .. .	6·99	2·50	6·15
1911 .. .. .	7·28	2·33	6·29
1912 .. .. .	6·31	2·20	5·68
1913 .. .. .	7·50	2·35	6·46
1914 .. .. .	6·37	2·16	5·58
1915 .. .. .	6·44	2·31	5·79
1916 .. .. .	7·53	2·55	6·26
1917 .. .. .	7·57	2·42	6·19

In 1917 the average wool clip for sheep was the heaviest and that for lambs was the fourth heaviest recorded for the State.

The production of wool in Victoria, the quantity and value of that used locally for manufacturing purposes and the balance available for export in each of the last ten years were as follows :—

**WOOL PRODUCTION: HOME CONSUMPTION AND EXPORTABLE BALANCE, 1908 TO 1917.**

Year.	Production.		Used in Manufactures.		Available for Export.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1908	87,526,450	3,556,168	5,470,740	190,197	82,065,710	3,365,971
1909	95,332,829	4,044,755	5,239,806	180,036	90,093,023	3,864,719
1910	101,803,644	4,318,100	5,309,730	186,648	96,493,914	4,131,452
1911	110,463,041	4,142,747	5,774,870	228,920	104,688,171	3,913,827
1912	88,762,612	3,751,083	5,535,483	247,943	83,227,129	3,503,140
1913	106,833,690	4,032,954	5,917,410	240,395	100,916,280	3,792,559
1914	95,406,867	3,410,913	6,118,450	254,935	89,288,417	3,155,978
1915	82,330,198	4,066,003	11,052,250	460,510	71,277,948	3,605,493
1916	94,845,024	5,927,814	8,669,460	433,473	86,175,564	5,494,341
1917	105,424,682	6,410,077	7,344,030	397,800	98,080,652	6,012,277

Prices  
of wool.

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

PRICES OF WOOL, 1915-16 TO 1917-18.

Class of Wool.	Average Price per lb. in—		
	1915-16.	1916-17.	1917-18.
<b>GREASY MERINO.</b>			
Extra Super (Western District)...	23d. to 24½d.	30d. to 33½d.	28d. to 31½d.
Super ... ..	20d. to 22d.	26d. to 29d.	24d. to 27d.
Good ... ..	14d. to 16d.	18d. to 24d.	18d. to 23d.
Average ... ..	12d. to 13d.	15d. to 17d.	15d. to 17d.
Wasty and Inferior ... ..	7d. to 9d.	9d. to 12d.	10d. to 12d.
Extra Super Lambs ... ..	18d. to 20d.	22d. to 25½d.	23d. to 26½d.
Super Lambs ... ..	15d. to 17d.	18d. to 21d.	18d. to 22d.
Good Lambs ... ..	12d. to 14d.	15d. to 17d.	15d. to 17d.
Average Lambs ... ..	9d. to 11d.	11d. to 14d.	11d. to 14d.
Inferior Lambs ... ..	5d. to 7d.	6d. to 9d.	6d. to 9d.
<b>GREASY CROSSBRED.</b>			
Extra Super Comebacks ... ..	22½ to 24d.	26d. to 30½d.	26d. to 29½d.
Super Comebacks ... ..	20d. to 23d.	23d. to 27d.	23d. to 27d.
Fine Crossbred ... ..	17d. to 18d.	18d. to 22d.	20d. to 24d.
Medium Crossbred ... ..	14d. to 16d.	14d. to 17d.	15d. to 19d.
Coarse Crossbred and Lincoln ... ..	13d. to 15d.	13d. to 15d.	13d. to 15d.
Super Fine Crossbred Lambs ... ..	15d. to 19d.	18d. to 22d.	16d. to 20d.
Good Crossbred Lambs ... ..	11d. to 12d.	12d. to 15d.	12d. to 15d.
Coarse and Lincoln Lambs ... ..	9d. to 10d.	9d. to 11d.	10d. to 12d.
<b>SCOURED.</b>			
Extra Super Fleece ... ..	31d. to 34d.	42d. to 45½d.	42d. to 47½d.
Super Fleece ... ..	27d. to 30d.	36d. to 40d.	38d. to 41d.
Good Fleece ... ..	22d. to 26d.	32d. to 34d.	34d. to 37d.
Average Fleece ... ..	20d. to 22d.	28d. to 30d.	28d. to 33d.
<b>RECORD PRICES FOR THE SEASON.</b>			
Greasy Merino Fleece ... ..	24½d.	33½d.	31½d.
" Comeback Fleece ... ..	24d.	30½d.	29½d.
" Merino Lambs ... ..	20d.	25½d.	26½d.
" Comeback Lambs ... ..	19½d.	24d.	24½d.
Scoured Fleece ... ..	38½d.	45½d.	47½d.

Flocks of  
sheep in  
districts.

Returns which were collected in March, 1917, give full information in regard to the flocks of sheep in Victoria. The numbers of flocks and of sheep at that time in the different districts were as follows :—

### NUMBERS OF FLOCKS AND OF SHEEP IN DISTRICTS, 1917.

District.	Number of—		Average Number of Sheep to a Flock.	Percentage of—	
	Flocks	Sheep.		Flocks.	Sheep.
Central .. ..	3,250	1,190,656	366	12·36	9·49
North-Central ..	2,242	1,129,735	504	8·53	9·01
Western .. ..	5,475	3,928,864	718	20·82	31·32
Wimmera .. ..	4,009	1,782,890	445	15·25	14·21
Mallee .. ..	1,162	479,316	412	4·42	3·82
Northern .. ..	4,876	1,817,676	373	18·55	14·49
North-Eastern ..	2,328	951,596	409	8·85	7·58
Gippsland .. ..	2,949	1,264,282	429	11·22	10·08
Total .. ..	26,291	12,545,015	477	100·00	100·00

The figures do not include 31,572 sheep which were travelling on roads or were located in cities and towns. There were some very large-sized flocks in the Western District, and, as a consequence, it contained 31·3 per cent. of the total sheep in the State, though it possessed only 20·8 per cent. of the total flocks. In the Central, North-Eastern, and Gippsland districts, which contained 32 per cent. of the flocks and 27 per cent. of the sheep, there was a much better distribution, and also evidence that the raising of lambs and the production of wool were combined more with cultivation than in other districts of the State. The average number of sheep to a flock was 477 in 1917, as compared with 478 in 1913, 531 in 1910, 642 in 1908, and 706 in 1906. The number of flocks increased from 24,834 in 1913 to 26,291 in 1917. In the four years the flocks increased by 761 in the Central, 165 in the North-Central, 152 in the Northern, 180 in the North-Eastern, and 516 in the Gippsland districts. On the other hand, the flocks in the Mallee, Western, and Wimmera districts decreased by 196, 99, and 22 respectively. During the four years mentioned the number of sheep increased by 684,363, the principal increases being in the Northern, Gippsland, and North-Eastern districts.

Excluding sheep travelling and those in cities and towns, the following table contains a classification for the whole State of sheep according to sizes of flocks:—

## SHEEP ACCORDING TO SIZES OF FLOCKS, 1917.

Size of Flocks.	Number of—		Percentage of—	
	Flocks.	Sheep.	Flocks.	Sheep.
Under 500 .. ..	20,292	2,926,977	77·18	23·33
500 to 1,000 ..	3,311	2,261,996	12·60	18·03
1,000 „ 2,000 ..	1,670	2,255,242	6·35	17·98
2,000 „ 3,000 ..	433	1,023,854	1·65	8·16
3,000 „ 5,000 ..	266	976,156	1·01	7·78
5,000 „ 7,000 ..	128	754,934	·49	6·02
7,000 „ 10,000 ..	90	739,784	·34	5·90
10,000 „ 15,000 ..	67	844,249	·25	6·73
15,000 „ 20,000 ..	15	257,024	·06	2·05
Over 20,000 .. ..	19	504,799	·07	4·02
Total .. ..	26,291	12,545,015	100·00	100·00

A comparison of the above figures with those for 1913 and earlier years shows that the number of large sheep-owners had substantially declined, while the number of those owning the smallest-sized flocks had very greatly increased. Flocks of 20,000 and over numbered 19 in 1917, as against 25 in 1913, 37 in 1910, 52 in 1908, and 56 in 1906. Flocks of from 15,000 to 20,000 numbered 15 in 1917, 29 in 1913, 35 in 1910, 39 in 1908, and 50 in 1906. Flocks of less than 500 were 20,292 in number in 1917, as compared with 19,582 in 1913, 18,589 in 1910, 15,797 in 1908, and 11,647 in 1906. From these figures it will be seen that, while flocks of over 15,000 decreased by 68 per cent., those of less than 500 increased by 74 per cent. during the eleven years 1906 to 1917. Owners of more than 15,000 sheep possessed 6·1 per cent. of the sheep in the State in 1917, as against 22·5 per cent. in 1906. On the other hand, owners of less than 500 sheep possessed 23·3 per cent. of the total sheep in 1917, as compared with 15·1 per cent. in 1906. Sixteen of the 19 largest and 11 of the 15 second largest flocks in 1917 were in the Western District.

Areas of holdings and numbers and sizes of flocks of sheep.

The numbers and sizes of flocks of sheep on holdings of various areas in March, 1917, are given in the next table. The striking feature of this return is the large number of flocks which were depastured on farms of from 100 to 500 acres. The flocks on these farms numbered 10,854 or 41 per cent. of the total for the State.

AREAS OF HOLDINGS AND NUMBERS AND SIZES OF FLOCKS THEREON, 1917.

Area of Holdings. (Acres.)	Number and Size of Flocks.																				Total.			
	Under 500.		500 to 1,000.		1,000 to 2,000.		2,000 to 3,000.		3,000 to 5,000.		5,000 to 7,000.		7,000 to 10,000.		10,000 to 15,000.		15,000 to 20,000.		Over 20,000.		Number of Flocks.	Number of Sheep.		
	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.	Number of Flocks.	Number of Sheep.				
1 and under 50	1,112	25,363	2	1,517	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,114	26,880		
50 "	1,338	64,392	4	2,766	1	1,191	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,343	68,349		
100 "	500	1,254,466	511	331,623	63	76,077	22	7,385	1	3,055	..	..	..	..	..	..	..	..	..	..	10,854	1,672,606		
500 "	1,000	5,255	1,032,660	1,227	828,562	297	375,004	350	820,951	164	598,746	31	176,923	4	35,158	1	10,540	..	..	..	5,538	4,941,236		
1,000 "	5,000	2,224	534,983	1,533	1,072,966	1,231	1,693,334	46	80,587	114	114,163	81	297,682	74	449,659	47	379,864	16	191,531	..	374	1,542,058		
5,000 "	10,000	33	6,982	20	14,752	56	80,587	46	114,163	81	297,682	11	45,789	18	109,166	35	292,165	41	524,745	2	43,742	164	1,252,125	
10,000 "	20,000	18	2,767	7	5,200	12	17,223	9	22,968	11	45,789	18	109,166	35	292,165	41	524,745	11	188,362	3	52,824	15	404,056	
20,000 "	50,000	28	4,517	5	3,670	8	9,606	3	7,757	3	11,722	3	15,686	3	25,166	1	7,438	..	..	..	..	..	11	18,028
50,000 "	100,000	5	470	2	1,360	2	2,220	..	..	..	..	1	6,400	1	6,400	..	..	..	..	..	2	57,001	6	63,278
100,000 and upwards	3	177	..	..	..	..	..	..	..	..	..	1	6,100	..	..	..	..	..	..	..	..	..	..	
Total ..	20,292	2,926,977	3,311	2,261,996	1,670	2,255,242	433	1,023,854	266	976,166	128	754,934	90	739,784	67	844,249	15	257,024	19	504,799	26,291	12,545,015		

In the following statement are given the numbers of horses, cattle, sheep and pigs in the various Australian States and New Zealand, according to returns dated March, 1918, for Victoria and Tasmania; December, 1917, for Queensland and Western Australia; and June, 1918, for New South Wales and South Australia. The returns for the Northern Territory are for December, 1916, and those for New Zealand relate to April, 1918, in the case of sheep, and to January, 1918, in the case of other stock.

## LIVE STOCK IN AUSTRALASIA.

State, etc.	Horses.	Cattle.		Sheep.	Pigs.
		Milch Cows.	Other.		
Victoria .. ..	514,061	534,388	836,661	14,760,013	323,159
New South Wales ..	759,000	..	2,900,000*	38,000,000	359,763†
Queensland .. ..	733,014	399,508	4,917,050	17,204,268	172,699
South Australia ..	262,840	126,012	187,233	6,229,519	110,353
The Northern Territory ..	21,674	..	420,362*	47,520	500
Western Australia ..	178,151	37,979	919,107	6,384,191	111,844
Tasmania .. ..	42,396	..	197,938*	1,711,116	54,653
New Zealand .. ..	378,991	797,569	2,090,645	26,538,302	258,269

\* Including milch cows. † June, 1917.

## BEE-KEEPING.

The returns for 1917-18 show that there were in that year 4,427 bee-keepers, who owned 44,112 frame and 14,034 box hives, producing 4,646,472 lbs. and 328,416 lbs. of honey respectively, and 64,980 lbs. of beeswax. The quantities of honey and beeswax produced in 1917-18 were the largest recorded. The numbers of bee-keepers owning 20 hives and upwards was 632 as compared with 344 in the previous season. The quantity of honey produced in the Wimmera, the chief producing district, was 1,631,171 lbs. in 1917-18, as compared with 800,505 lbs. in the previous season, 390,494 lbs. in 1915-16, 345,747

lbs. in 1914-15, and 691,263 lbs. in 1913-14. The more important particulars of the industry for the past ten years are given below:—

### BEE-KEEPING, 1908-9 to 1917-18.

Season ended May.			Number of Bee-keepers.	Number of Hives.	Honey produced.	Beeswax produced.
					lbs.	lbs.
1909	..	..	4,303	40,595	2,373,628	38,674
1910	..	..	3,976	42,632	1,611,284	22,369
1911	..	..	4,043	52,762	2,308,405	34,695
1912	..	..	3,787	53,711	1,635,260	28,405
1913	..	..	4,796	52,723	3,277,590	45,354
1914	..	..	5,643	55,565	1,961,746	37,323
1915	..	..	2,639	35,051	700,672	20,017
1916	..	..	3,633	31,233	933,933	18,707
1917	..	..	3,661	36,561	1,547,023	22,131
1918	..	..	4,427	58,146	4,974,888	64,980

The poor results for the seasons 1914-15 and 1915-16 were due to the prolonged drought of 1914.

### POULTRY FARMING.

The numbers of the various kinds of poultry in the State, in March, 1911, were as follows:—

Fowls	..	..	..	3,855,538
Ducks	..	..	..	288,413
Geese	..	..	..	59,851
Turkeys	..	..	..	190,077

Taking the above figures as a basis, it is estimated that the gross value of poultry and egg production for the year 1917 was £2,160,650.

The following table shows the numbers of poultry and poultry-owners as ascertained in each of the last four census years:—

### POULTRY AND POULTRY-OWNERS: 1881, 1891, 1901, AND 1911.

Census.	Poultry-owners.	Fowls.	Ducks.	Geese.	Turkeys.
1881 .. ..	97,152	2,332,529	181,698	92,654	153,078
1891 .. ..	142,797	3,487,989	303,520	89,145	216,440
1901 .. ..	132,419	3,619,938	257,204	76,853	209,823
1911 .. ..	144,162	3,855,538	288,413	59,851	190,077

Relatively to population poultry-owners and poultry were fewer in 1911 than in the previous census year.

## RABBITS, HARES, AND WILD-FOWL.

State  
expenditure  
on rabbit  
destruction.

Active operations for the destruction of rabbits, &c., on Crown lands were first undertaken by the Government in 1880, and from that date to 30th June, 1917, sums amounting to £735,064 had been expended in connexion therewith, including subsidies to Shire Councils for the destruction of wild animals. The following are the amounts spent since 1879 :—

## EXPENDITURE ON DESTRUCTION OF RABBITS, ETC.

	£		£
1879-80 to 1888-9	... 142,963	1907-8 ...	... 17,585
1889-90 to 1898-9	... 208,638	1908-9 ...	... 22,756
1899-1900	... 14,801	1909-10	... 23,005
1900-1...	... 15,817	1910-11	... 23,123
1901-2...	... 17,250	1911-12	... 29,524
1902-3...	... 16,489	1912-13	... 27,309
1903-4...	... 15,759	1913-14	... 29,596
1904-5...	... 16,603	1914-15	... 32,211
1905-6...	... 16,477	1915-16	... 24,257
1906-7...	... 16,513	1916-17	... 24,388

In addition to the expenditure of £735,064 referred to above, a loan of £150,000 for the purchase of wire-netting to be advanced to land-holders was allocated to shires in 1890, and one of £50,000 in 1896, both of which have been repaid. Further sums amounting to £45,850 in 1908-9, £10,734 in 1909-10, £43,648 in 1910-11, £21,116 in 1911-12, £54,061 in 1912-13, £62,428 in 1913-14, £19,731 in 1914-15, £3,078 in 1915-16 and £3,208 in 1916-17, were advanced from loans for the purchase of wire-netting for supply to municipalities and land-owners. A complete system, administered by an officer called the Chief Inspector under the Vermin Destruction Act, exists for effectually keeping the rabbits under control.

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

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

## RABBITS, HARES, AND WILD-FOWL SOLD AT THE MELBOURNE FISH MARKET, 1908 to 1917-18.

Year.	Rabbits.	Hares.	Wild-fowl.
	pairs.	brace.	brace.
1908 ...	231,216	148	20,634
1909 ...	235,548	163	42,240
1910 ...	245,208	130	34,180
1911 ...	320,292	222	24,420
1912 ...	480,192	363	29,562
1913 ...	605,724	93	23,598
1914 ...	732,444	488	19,614
1915 ...	508,324	51	6,934
1916-17 ...	580,368	132	17,448
1917-18 ...	746,160	256	28,062

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

### RABBITS AND HARES AND RABBIT AND HARE SKINS EXPORTED OVERSEA.

Year.	Frozen Rabbits and Hares.		Rabbit and Hare Skins.	
	Quantity.	Value.	Quantity.	Value.
	pairs.	£	lbs.	£
1908 ... ..	1,743,466	84,835	3,545,687	139,388
1909 ... ..	1,675,578	82,182	3,293,652	161,156
1910 ... ..	1,372,087	68,469	3,395,383	199,562
1911 ... ..	1,373,501	69,426	3,435,928	156,877
1912 ... ..	1,111,902	57,233	3,904,379	221,614
1913 ... ..	2,044,501	107,818	4,182,044	271,463
1914-15 ... ..	2,478,273	127,721	1,827,557	68,777
1915-16 ... ..	1,420,182	90,588	1,195,455	44,325
1916-17 ... ..	1,426,888	111,632	498,137	35,361
1917-18 ... ..	3,701,662	280,422	938,874	108,765

The number of rabbits and hares exported oversea in 1917-18 was the greatest for eleven years.

### 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 1917-18 :—

#### VICTORIAN FISHERIES—MEN AND BOATS EMPLOYED, 1917-18.

Fishing Stations.	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
Anderson's Inlet .. ..	5	5	£ 207	£ 85
Barwon Heads and Ocean Grove .. ..	8	5	795	32
Brighton .. ..	4	6	62	89
Corner Inlet, Welshpool, and Toora .. ..	31	27	1,190	1,856
Dromana .. ..	18	16	530	194
Frankston .. ..	8	8	295	50
Geelong .. ..	76	26	1,950	1,360
Gippsland Lakes .. ..	230	230	12,500	6,000
Kerang .. ..	3	3	25	115
Lorne .. ..	7	4	77	38
Mallacoota .. ..	25	23	2,056	665
Mentone .. ..	10	8	108	57

VICTORIAN FISHERIES—MEN AND BOATS EMPLOYED, 1917-18—  
continued.

Fishing Stations.	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
Mordialloc .. .. .	12	11	£ 518	£ 165
Mornington .. .. .	23	17	933	510
Portarlington and St. Leonards .. .. .	59	54	3,205	1,101
Portland .. .. .	31	20	1,810	438
Port Albert .. .. .	39	37	1,879	713
Port Fairy .. .. .	42	36	4,270	407
Port Melbourne .. .. .	71	43	1,941	718
Queenscliff .. .. .	100	67	7,820	391
Sandringham .. .. .	5	5	540	5
Sorrento, Portsea, and Rye .. .. .	27	21	1,189	173
St. Kilda .. .. .	12	6	79	147
Warrnambool .. .. .	11	10	290	151
Western Port (Cowes, Hastings, Grantville, Flinders, San Remo, and Tooradin) .. .. .	112	90	6,170	1,590
Williamstown .. .. .	23	11	753	170
<b>Total .. .. .</b>	<b>992</b>	<b>789</b>	<b>51,192</b>	<b>17,220</b>

Melbourne Fish Market. The quantities and values of fish sold in the Melbourne Fish Market during each of the years 1916-17 and 1917-18 were as shown hereunder:—

FISH SOLD IN THE MELBOURNE FISH MARKET,  
1916-17 AND 1917-18.

	1916-17.		1917-18.	
	Quantity.	Value.	Quantity.	Value.
Fresh Fish (Victorian) lbs.	9,005,795	£ 100,564	9,677,485	£ 114,516
Crayfish .. doz.	27,847	16,708	28,473	16,087
Imported Fish (fresh or frozen).. lbs.	2,819,174	59,907	2,205,505	41,353
Oysters .. bags	13,385	18,280	14,324	18,340
<b>Total .. .. .</b>	<b>..</b>	<b>195,459</b>	<b>..</b>	<b>190,296</b>

In addition to the above, 4,091 cwt. of smoked fish, and 229 baskets of prawns were sold in this market in 1917-18.

**Victorian  
Fish sold.**

The quantity and value of fish caught in Victorian waters and sold in the Melbourne and Ballarat markets and elsewhere in 1917-18 were as follows:—

### VICTORIAN FISH SOLD IN 1917-18.

Markets.	Quantity.		Value.	
	Fish.	Crayfish.	Fish.	Crayfish.
	lbs.	doz.	£	£
Melbourne ... ..	9,677,485	11,365	114,516	6,423
Ballarat ... ..	432,620	1,570	4,312	619
Other ... ..	196,069	2,370	2,320	1,339
<b>Total ... ..</b>	<b>10,306,174</b>	<b>15,305</b>	<b>121,148</b>	<b>8,381</b>

**Fish  
Imported.**

In connexion with this subject, the quantities and values of the different classes of fish imported are of interest. The available figures for 1909 and 1917-18 are appended:—

### FISH IMPORTED, 1909 AND 1917-18.

	1909.—Interstate.		1909.—Oversea.		1917-18.—Oversea.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
<b>Fish—</b>		£		£		£
Fresh or Frozen lbs.	1,772,999	22,720	758,545	11,076	617,149	11,554
Smoked .. ..	127,016	662	99,793	3,322	20,271	1,959
Fresh Oysters cwt.	16,941	8,529	7,935	4,145	1,583	1,098
Potted, &c. ..	..	41	..	4,559	..	496
Preserved in tins, &c. lbs.	117,177	3,266	4,823,366	116,931	3,896,606	193,035
N.E.I. cwt.	214	356	5,815	9,434	2,698	10,457
<b>Total .. ..</b>	<b>..</b>	<b>35,574</b>	<b>..</b>	<b>149,467</b>	<b>..</b>	<b>218,599</b>

The most important item in this table is fish preserved in tins and other air-tight vessels, of which 3,358,893 lbs. came from the United States and Canada in 1917-18.

**Imports by  
United  
Kingdom  
of staple  
articles  
produced  
in Victoria.**

In Victoria the natural conditions are eminently suitable for agricultural and pastoral pursuits, and there is room for considerable expansion in these avenues of production. There is little need to fear over-production, as the United Kingdom offers an almost unlimited market for many articles which could be supplied from this State. This is readily seen from the figures in the subjoined table, which show the average annual values of certain articles imported into the United Kingdom from Australia, other British Possessions, and Foreign Countries for the

pre-war period 1907 to 1913, and for the years ended 31st December, 1915, 1916, and 1917—years representing war conditions :—

**AVERAGE ANNUAL IMPORTS OF CERTAIN ARTICLES INTO UNITED KINGDOM FROM AUSTRALIA, OTHER BRITISH POSSESSIONS, AND FOREIGN COUNTRIES, 1907-13, 1915, 1916, AND 1917.**

Articles.	Period.	Annual Value of Imports into United Kingdom from—			
		Australia.	Other British Possessions.	Foreign Countries.	All Countries.
		£	£	£	£
Butter .. .. .	1907-13	3,131,811	1,762,922	18,884,656	23,779,389
	1915	2,551,214	2,865,692	21,605,839	27,022,745
	1916	1,239,861	3,637,209	14,036,932	18,964,002
	1917	5,213,397	3,872,326	9,809,984	18,895,707
Cheese .. .. .	1907-13	13,102	5,704,495	1,256,492	6,974,089
	1915	91,729	8,323,321	2,692,050	11,107,100
	1916	4	10,784,960	2,160,801	12,945,765
	1917	482,327	15,513,142	3,466,921	19,462,390
Wheat .. .. .	1907-13	4,497,083	14,371,951	23,170,834	42,039,873
	1915	94,167	21,480,832	35,731,500	57,306,499
	1916	2,759,641	19,733,609	49,519,694	72,012,944
	1917	8,920,735	19,496,798	56,089,065	84,506,598
Wheatmeal and Flour .. .. .	1907-13	216,477	1,512,672	4,384,232	6,113,431
	1915	1,300	2,740,910	5,568,643	8,310,853
	1916	457,604	3,680,348	4,430,457	8,568,409
	1917	2,453,767	5,251,874	10,763,861	18,469,502
Meat .. .. .	1907-13	4,103,980	6,651,731	34,457,389	45,218,100
	1915	9,741,690	15,088,379	61,321,165	86,151,234
	1916	4,871,132	20,661,534	67,859,810	93,382,476
	1917	7,361,789	21,603,705	72,651,949	101,617,443
Fruit—Fresh, Dried and Preserved .. .. .	1907-13	395,110	1,409,440	12,933,186	14,737,736
	1915	276,487	1,491,176	15,299,872	17,067,535
	1916	1,030,705	1,680,545	16,765,840	19,477,090
	1917	291,091	1,603,057	9,071,812	10,965,960
Wine .. .. .	1907-13	127,388	29,076	3,848,344	4,004,808
	1915	120,636	43,668	2,752,972	2,917,276
	1916	94,987	45,110	3,371,725	3,511,822
	1917	58,655	28,430	2,316,376	2,403,461
Wool .. .. .	1907-13	13,621,012	13,085,172	5,697,694	32,403,873
	1915	19,477,337	18,685,278	3,864,720	42,027,335
	1916	15,445,409	18,653,957	3,457,648	37,560,014
	1917	29,400,631	16,897,523	3,206,363	49,504,517
Skins, Furs, and Hides .. .. .	1907-13	1,928,626	4,105,504	7,937,906	13,972,036
	1915	2,261,727	5,488,680	6,691,344	14,441,751
	1916	1,348,981	5,641,062	7,588,128	14,578,171
	1917	1,082,088	8,096,772	9,788,678	18,967,543
Tallow and Stearine .. .. .	1907-13	1,352,280	725,532	1,464,632	3,542,494
	1915	1,333,612	646,678	931,175	3,111,465
	1916	457,739	933,183	911,662	2,302,584
	1917	1,013,131	566,841	399,302	1,979,274
Leather .. .. .	1907-13	409,128	3,034,535	6,498,824	9,942,487
	1915	1,156,888	4,655,284	9,817,554	15,659,726
	1916	586,975	5,447,407	9,216,376	15,250,758
	1917	572,672	4,923,638	5,037,448	10,533,758
Total—Eleven Articles .. .. .	1907-13	29,801,002	52,393,030	120,534,289	202,728,321
	1915	37,136,787	81,709,898	168,276,834	285,123,519
	1916	28,296,038	90,888,924	179,369,073	298,554,035
	1917	56,850,293	97,854,106	182,601,759	337,306,158

The value of the above-mentioned articles imported into the United Kingdom from Australia amounted to £56,850,293 in 1917 as compared

with £28,296,038 in 1916, £37,136,787 in 1915, and £29,801,002 on the average of the years 1907 to 1913.

Agriculture in  
Victoria and  
Great Britain.

The figures relating to agriculture and live stock in Victoria and Great Britain in 1917 are for comparative purposes placed side by side in the table which follows :—

### AGRICULTURE AND LIVE STOCK IN VICTORIA AND GREAT BRITAIN, 1917.

					Victoria.	Great Britain.
Area	..	..	..	acree	56,245,760	56,208,959
Wheat	..	..	..	bushels	37,737,552	59,749,960
Oats	..	..	..	"	6,141,287	130,495,968
Barley	..	..	..	"	1,970,650	49,920,536
Peas	..	..	..	"	191,856	2,216,728
Potatoes	..	..	..	tons	182,195	4,451,080
Turnips and swedes	..	..	..	"	2,809*	20,216,784
Mangolds	..	..	..	"	7,826	8,534,872
Hay	..	..	..	"	949,545	8,460,585
Horses	..	..	..	No.	514,061	1,323,923
Cattle	..	..	..	"	1,371,049	7,437,007
Sheep	..	..	..	"	14,760,013	24,043,091
Pigs	..	..	..	"	323,159	2,051,486

\* 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.

The taking out of a "miner's right" entitles the holder **Miners' Rights.** 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. It confers the privilege to take possession for mining purposes of a defined parcel of Crown lands, which is called a "claim." The revenue in 1916-17 from miners' rights was £2,373.

Leases for the purpose of mining for gold are granted for **Mining Leases.** 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 1916-17 was £5,457.

The area of Crown and private lands under occupation for mining purposes on 31st December, 1917, was 88,600 acres. The subjoined table shows the area being worked for different minerals :—

AREA UNDER OCCUPATION FOR MINING PURPOSES, 31st DECEMBER, 1917 (CROWN LANDS AND PRIVATE LAND).

Nature of Mineral, &c.						Area.
						Acres.
Gold	..	..	..	..	..	73,776
Coal (ordinary)	..	..	..	..	..	4,022
Coal (brown)	..	..	..	..	..	359
Antimony	..	..	..	..	..	*
Clay Shum	..	..	..	..	..	54
Copper	..	..	..	..	..	150
Copper and Silver	..	..	..	..	..	71
Felspar	..	..	..	..	..	8
Gypsum	..	..	..	..	..	667
Infusorial Earth	..	..	..	..	..	59
Iron	..	..	..	..	..	1,373
Kaolin	..	..	..	..	..	144
Lime	..	..	..	..	..	63
Magnesite	..	..	..	..	..	114
Manganese	..	..	..	..	..	2,115
Marble	..	..	..	..	..	27
Molybdenite	..	..	..	..	..	274
Oil	..	..	..	..	..	102
Pigments and Clay	..	..	..	..	..	35
Pigments and Limestone	..	..	..	..	..	89
Pigments and Oil	..	..	..	..	..	133
Porphyry	..	..	..	..	..	12
Quicksilver	..	..	..	..	..	55
Silicate of Alumina	..	..	..	..	..	51
Silver, Bismuth, Wolfram, and Phosphates	..	..	..	..	..	48
Slate	..	..	..	..	..	40
Tin	..	..	..	..	..	3,045
Wolfram	..	..	..	..	..	256
Wolfram and Tin	..	..	..	..	..	131
Water-right Licences	..	..	..	..	..	1,227
<b>Total</b>						<b>88,600</b>

\* Included in certain gold mining leases.

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 Mining Department from consolidated revenue, of which a statement is appended, loan moneys amounting to £511,257 (including £240,235 expended on the State Coal Mine), and portions of surplus revenues of past years amounting to

Mining development.

£84,971, have been expended or advanced for developmental purposes since 1st July, 1904.

### STATE EXPENDITURE ON MINING: 1912-13 to 1916-17.

	1912-13.	1913-14.	1914-15	1915-16.	1916-17.
Expenditure from Consolidated Revenue.					
	£	£	£	£	£
Mining Department ... ..	25,272	26,921	26,922	26,550	24,154
State Coal Mine ... ..	170,884	201,578	211,415	202,953	238,213
Coal Mines Regulation—Sinking Fund and Depreciation Fund ...	40,918	36,653	55,204	41,468	2,951
Victorian coal—Allowance to Railway Department on carriage of Diamond drills for prospecting ...	11,503	9,006	9,063	7,621	6,994
Testing plants ... ..	15,756	14,576	16,945	9,901	8,816
Geological and underground surveys of mines ... ..	3,368	4,283	6,457	10,081	4,639
Mining Development—Advances to companies, &c., boring for gold, coal, &c. ...	6,357	7,009	5,422	2,579	2,348
Miscellaneous ... ..	12,608	14,877	26,010	31,460	29,868
	3,576	2,729	2,606	2,148	4,816
	290,242	317,632	360,044	334,761	322,799
Expenditure from Surplus Revenue.					
Mining Development—Advances to companies, &c., boring for gold, coal, &c. ...	831	635	1,195	793	7
Expenditure from Loan Moneys.					
State Coal Mine ... ..	446	69,992	20,492	...	...
Total ... ..	291,519	388,259	381,731	335,554	322,806

Yearly grants are also made to Schools of Mines, particulars of which will be found on page 336 of this work. Since 1st July, 1896, £511,257 has been apportioned from loan receipts and expended on mining development, details of which expenditure appear in the next statement:—

### LOAN MONEY EXPENDED ON MINING DEVELOPMENT.

	£
Advances to companies—Development of mining ..	62,740
"    "    "    Boring for gold and coal, &c. ..	62,532
Construction of roads and tracks for mining ..	57,579
Plant for testing metalliferous material ..	12,357
Construction of races and dams ..	8,260
Advances to miners for prospecting ..	27,839

LOAN MONEY EXPENDED ON MINING DEVELOPMENT—continued.

	£
Purchase of cyanide process patent rights .. .. .	20,000
Equipping Schools of Mines with mining appliances .. .. .	9,975
State Coal Mine .. .. .	240,235
Miscellaneous .. .. .	9,740
Total .. .. .	511,257

The advances from loan moneys and revenue to mining companies to 30th June, 1917, for the development of mining totalled £207,485, of which sum £21,501 had up to that date been repaid, £35,601 realized, and £96,411 written off, leaving £53,972 outstanding. Interest received during 1916-17 amounted to £549 and interest outstanding on 30th June, 1917, to £2,121.

The mineral production of the State 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 1917.

TOTAL MINERAL PRODUCTION TO 31st DECEMBER, 1917.

Metals and Minerals.	Recorded prior to 1917.		Recorded during 1917		Total Recorded to end of 1917.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Fine. ozs.	£	Fine. ozs.	£	Fine. ozs.	£
Gold .. .. .	70,106,829	297,794,151	201,872	857,500	70,308,701	298,651,651
Silver .. .. .	1,410,297*	212,398	7,669*	1,406	1,417,966*	213,804
	30,577	7,880	..	..	30,577	7,880
Platinum .. .. .	311	1,671	..	..	311	1,671
	tons.		tons.		tons.	
Coal, black .. .. .	6,883,787	3,489,985	466,220	335,259	7,350,007	3,825,244
"  brown .. .. .	84,663	28,663	39,144	10,571	123,807	39,234
Ore—copper .. .. .	18,730	218,590	..	..	18,730	218,590
"  tin .. .. .	16,043	816,996	139	19,709	16,182	836,705
"  antimony .. .. .	75,145	428,258	12,052	58,489	87,197	486,747
"  silver-lead .. .. .	793	5,760	..	..	793	5,760
"  iron .. .. .	5,434	12,540	..	..	5,434	12,540
"  manganese .. .. .	247	919	..	..	247	919
Wolfram .. .. .	82	6,702	22‡	3,600	104‡	10,302
Diamonds .. .. .	..	128	..	..	..	128
Sapphires, &c. .. .. .	..	630	..	..	..	630
Gypsum .. .. .	26,494	20,234	1,187	1,335	27,681	21,569
Magnesite .. .. .	729	2,235	74	222	803	2,457
Kaolin .. .. .	9,073	15,718	1,573	1,500	10,646	17,218
Diatomaceous earth .. .. .	6,167	24,977	750	2,600	6,917	27,577
Pigment clays .. .. .	106	156	16	24	122	180
Phosphate rock .. .. .	400	1,150	1,525	1,525	1,925	2,675
Molybdenite .. .. .	..	..	50	500	50	500
Bluestone, freestone, granite, &c.† .. .. .	..	4,885,745	..	205,992	..	5,091,737
Limestone, &c.† .. .. .	..	..	..	..	..	..
Total .. .. .	..	307,975,486	..	1,500,232	..	309,475,718

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

Gold was first found in Victoria in 1849 in the Pyrenees Ranges, but it was not until 1851 that the first discovery of any importance took place. In the latter part of that year the Clunes, Anderson's Creek, Ballarat, and Bendigo fields were successively discovered and over 200,000 ounces of gold were produced. Next year the gold rush took place, and it is estimated that, in 1852, 40,000 men were camped at Ballarat, 25,000 at Castlemaine and 40,000 at Bendigo. The production of gold in 1852 amounted to 2,286,535 ounces and in the ten years 1852-1861 it totalled over 25,000,000 ounces. The largest quantity produced in any one year was 3,053,744 ounces in 1856. The annual value of the output for the ten years 1852-1861 averaged over £10,000,000 sterling. The estimated value of gold produced from 1851 to 1917, as shown in the preceding statement, is £298,651,651. This sum is based on the average value of Victorian gold received at the Melbourne Mint, which in 1917 was £3 19s. 3d. per ounce.

Gold raised  
in Victoria.

The quantities of gold raised in Victoria in different periods are shown in the subjoined table:—

Period.	Quantities (Fine Ozs.).	Period.	Quantities (Fine Ozs.).
1851-60 ..	23,334,263*	1907 ..	695,576
1861-70 ..	16,276,566*	1908 ..	671,508
1871-80 ..	10,156,297*	1909 ..	654,222
1881-90 ..	7,103,448*	1910 ..	570,383
1891-1900 ..	7,476,038*	1911 ..	504,000
1901 ..	730,453	1912 ..	480,131
1902 ..	720,866	1913 ..	434,932
1903 ..	767,297	1914 ..	413,218
1904 ..	765,600	1915 ..	329,068
1905 ..	747,166	1916 ..	256,643
1906 ..	772,290	1917 ..	201,872

\* Gross ozs.

The yield has been on the down grade since 1906, the return for 1917 being the lowest for the State since 1851. The quantities raised in the other principal gold-producing States in 1917 were 970,317 ozs. in Western Australia, 179,305 ozs. in Queensland, and 82,171 ozs. in New South Wales. The total production of gold in the world in 1916 was 22,107,700 ozs.

The yield of gold for the past two years in each mining district of the State, as estimated by the mining registrars, is shown in the following table. The quantities represented by the aggregate figures, which are given in gross ounces, exceed the total output of 1916 by 6,606 ounces, but fall short of that of 1917 by 4,938 ounces.

**DISTRICT YIELDS OF GOLD, ALLUVIAL AND QUARTZ,  
1916 AND 1917.**

Mining District.	1916.			1917.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	OZS.	OZS.	OZS.	OZS.	OZS.	OZS.
Ararat and Stawell ...	26,061	3,326	29,387	12,665	1,772	14,437
Baliarat ...	5,660	21,808	27,468	5,792	14,267	20,059
Beechworth ...	34,785	22,453	57,238	37,289	13,973	51,212
Bendigo ...	5,001	86,780	91,781	2,114	63,960	66,074
Castlemaine ...	7,104	36,999	44,103	9,479	29,373	38,852
Gippsland ...	1,825	6,009	7,834	4,450	3,954	8,404
Maryborough ...	20,551	4,432	24,983	11,727	1,389	13,116
Total ...	100,987	181,807	282,794	83,466	128,688	212,154

The amount of the dividends declared in each of the last five years by gold-mining companies operating in each mining district of the State was as follows:—

**DIVIDENDS PAID BY GOLD MINING COMPANIES IN EACH  
MINING DISTRICT, 1913 TO 1917.**

Mining District.	Amount Distributed.				
	1913.	1914.	1915.	1916.	1917.
	£	£	£	£	£
Ararat and Stawell ...	40,550	36,675	30,950	27,500	14,583.
Ballarat ...	19,767	19,167	5,060	4,200	...
Beechworth ...	27,324	35,447	44,910	30,165	32,874
Bendigo ...	133,744	126,548	61,911	8,875	8,288
Castlemaine ...	46,414	47,225	39,300	19,760	28,225
Gippsland ...	650	750	1,350	450	675
Maryborough ...	5,750	5,000	10,600	7,600	2,500
Total ...	274,199	270,812	193,421	98,550	87,145

By comparison with 1916 the amount of the dividends declared in 1917 shows a decrease of nearly 12 per cent.

**Gold miners.** The average number of men employed in mining is estimated annually by the Mines Department. The figures for the last ten years are given below :—

**NUMBER OF MEN EMPLOYED IN GOLD MINING, 1908 TO 1917.**

Year.	Alluvial Miners.	Quartz Miners.	Total.
1908 ... ..	8,673	12,180	20,853
1909 ... ..	7,925	10,746	18,671
1910 ... ..	6,638	9,915	16,553
1911 ... ..	5,144	8,871	14,015
1912 ... ..	4,156	7,700	11,856
1913 ... ..	4,222	7,709	11,931
1914 ... ..	3,637	6,761	10,398
1915 ... ..	2,867	5,888	8,755
1916 ... ..	2,587	3,815	6,402
1917 ... ..	...	..	6,069

The number of men employed in each mining district in 1917 was as follows :—Ararat and Stawell 361, Ballarat 531, Bendigo 2,101, Beechworth 1,234, Castlemaine 959, Gippsland 260, and Maryborough 623.

**Value of machinery on gold-fields.** The value of the mining plants employed in alluvial and quartz mining during each of the last five years was as shown hereunder :—

**VALUE OF MACHINERY ON GOLD-FIELDS, 1913 TO 1917.**

Year.	Approximate Value of Machinery Employed in—		
	Alluvial Mining.	Quartz Mining.	Total.
1913 ... ..	£ 538,279	£ 1,129,513	£ 1,667,792
1914 ... ..	448,742	1,051,689	1,500,431
1915 ... ..	479,004	1,011,300	1,490,304
1916 ... ..	498,729	974,378	1,473,107
1917 ... ..	...	...	825,450

Dredging  
and sluicing.

A feature of alluvial mining in Victoria for the past sixteen years has been the treatment in bulk of low-grade auriferous alluvial deposits and their overburden by bucket dredges and pump hydraulic sluicing plants on barges. In 1917 the number of bucket dredges at work was 26, and the number of pump hydraulic sluices 16, in addition to which 25 jet elevators and 6 gravitation plants were operating. Particulars relating to these dredging and sluicing plants for the past five years are as follows :—

## DREDGING AND SLUICING.

Year.	Number of Plants.	Area Worked.	Quantity of Material Treated.	Gold Obtained.	Tin Obtained.
		acres.	cub. yds.	ozs.	tons.
1913 .. ..	97	565	16,796,585	65,433	32
1914 .. ..	85	459	13,979,696	56,796	45
1915 .. ..	73	366	11,788,247	50,152	87
1916 .. ..	73	344	10,235,000	48,724	105
1917 .. ..	73	306	10,038,633	44,756	120

These plants employed 800 men in 1917. The yield of gold per cubic yard of material was 2·1 grains in 1917, which was ·2 of a grain less than in the previous year.

## Cyanidation.

The quantity of tailings treated at old lode and alluvial mines by the cyanide process and the yield of gold therefrom are shown in the subjoined table for the past five years :—

## CYANIDATION.

Year.	Number of Plants.	Quantity of Tailings Treated.	Yield of Gold.	Value of Yield.
		tons.	ozs.	£
1913 .. ..	207	692,256	45,397	163,371
1914 .. ..	194	607,260	39,920	144,969
1915 .. ..	140	317,636	21,511	79,160
1916 .. ..	105	203,016	14,635	49,332
1917 .. ..	66	127,012	8,930	34,369

Records show that the total amount of tailings which have been treated by the cyanide and other processes is 15,754,910 tons, and that the gold that has been won thereby amounts to 1,251,111 ounces, which is equal to an average yield of 1 dwt. 14 grs. per ton.

A Sludge Abatement Board, appointed by the Government, is intrusted with the duty of regulating the disposal of mining sludge, and preventing the silting of streams and injury to lands by battery sand and infertile *débris*.

**Government batteries.** Batteries for testing small quantities of ore for prospectors have been erected by the Government in various mining districts. The number of these plants and their operations in the last five years were as follows:—

#### GOVERNMENT BATTERIES.

Year.	Number of Batteries.	Quantity of Ore Treated.	Yield of Gold.
		tons.	ozs.
1913 .. ..	26	2,742	2,127
1914 .. ..	27	2,128	1,321
1915 .. ..	28	4,761	3,012
1916 .. ..	30	4,511	2,450
1917 .. ..	33	3,278	2,102

Since 1897, the year in which the first battery was erected, 59,225 tons of ore have been crushed for 37,827 ounces.

**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 30,000,000,000 tons. These deposits are practically untouched, as the total output of brown coal for all years has been only 123,807 tons, of which 39,144 tons were obtained in 1917. The quantity taken from the State Brown Coal Mine at Morwell in 1917 was 34,936 tons.

The State  
coal-field.

There is a State coal mine at Wonthaggi, on the Powlett River Coal-field, the development of which was undertaken 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, 1917, was 405,498 tons, valued at £283,848. The total output up to the end of 1917 was 3,490,628 tons, valued at £1,646,052. The average number of men employed at the mine throughout the year ended 30th June, 1917, was 1,182, and comprised 501 coal miners, 391 others below ground, and 290 surface men. The mine was worked 243 days during the year, and the earnings of the miners averaged 17s. 8-97d. per day after deducting the cost of explosives and lights.

Victorian  
Coal  
production  
and value.

The quantity of coal, exclusive of brown coal, raised in Victoria up to the end of 1917 was 7,350,007 tons, valued at £3,825,244. The total production prior to 1892, and the annual production for the years 1892 to 1917, together with the value per ton at the pit's mouth, are given in the following table :—

#### COAL PRODUCTION AND VALUE PER TON.

Period.	Production.	Value per ton at pit's mouth.	Period.	Production.	Value per ton at pit's mouth.
	tons.	s. d.		tons.	s. d.
Prior to 1892	77,914	18 8	1905 ..	155,136	10 2
1892 ..	23,363	17 2	1906 ..	160,631	10 0
1893 ..	91,726	10 9	1907 ..	138,585	11 6
1894 ..	171,660	11 1	1908 ..	113,462	11 5
1895 ..	194,226	12 2	1909 ..	128,173	12 0
1896 ..	226,562	10 0	1910 ..	369,059	10 3
1897 ..	236,277	9 2	1911 ..	653,864	9 2
1898 ..	242,859	8 6	1912 ..	589,143	8 9
1899 ..	262,380	8 8	1913 ..	593,913	9 3
1900 ..	211,596	9 7	1914 ..	617,536	9 4
1901 ..	209,329	14 1	1915 ..	588,104	9 4
1902 ..	225,164	13 11	1916 ..	417,183	10 4
1903 ..	64,200	12 9	1917 ..	466,220	14 5
1904 ..	121,742	11 6			

In addition to the above there were raised, up to the end of 1917, 123,807 tons of brown coal, valued at £39,234. The output in 1917 was 39,144 tons, valued at £10,571.

The quantities of coal produced in the other States in 1917 were as follows :—New South Wales 8,292,867 tons, Queensland 1,048,473 tons, Western Australia 326,550 tons, and Tasmania (in 1916) 55,575 tons.

Minimum  
wage of  
miners.

The minimum wage, fixed by Wages Boards, for each of the principal occupations connected with coal and gold mining is given in the subjoined statement. The gold

mining rates apply to the whole of Victoria except the mining districts of Ararat, Gippsland and Beechworth :—

### MINIMUM WAGE OF MINERS.

Occupation.	Minimum wage per week of 48 hours.	Occupation.	Minimum wage per week of 48 hours.
Coal Mining—	s.	Gold Mining—	s.
Miners .. .. .	60	Miners (quartz), shaft or winze sinking—	
" in wet places .. .. .	65	Machine labour .. .. .	64
Shaft sinkers .. .. .	66	Hand labour .. .. .	62
" in wet shafts .. .. .	66*	Other quartz miners—	
Wheelers .. .. .	50	Machine labour .. .. .	60
Timbermen and repairers .. .. .	60	Hand labour .. .. .	58
Blacksmiths .. .. .	60	Miners (alluvial), shaft or winze sinking—	
Carpenters .. .. .	60	Machine labour .. .. .	69
Brushers .. .. .	60	Hand labour .. .. .	67
Bracemen .. .. .	50	Other alluvial miners—	
Winch drivers .. .. .	49	Machine labour .. .. .	62
Screen hands .. .. .	46	Hand labour .. .. .	60
Labourers (underground) .. .. .	49	Other underground workers .. .. .	52
" (surface) .. .. .	45	Retortmen .. .. .	54
Engine-drivers .. .. .	66	Bracemen .. .. .	55
		Winch drivers .. .. .	55
		Timber dressers .. .. .	57
		Timbermen repairing shafts .. .. .	65
		Carpenters .. .. .	63
		Blacksmiths .. .. .	64
		Batterymen .. .. .	54
		Engine-drivers .. .. .	66

\* Per week of 36 hours.

The wages of miners in coal mines are contract rates. As stated on page 481, the earnings of the miners in the State coal mine averaged 17s. 8·97d. per day in the year 1916-17, after deducting the cost of explosives and lights.

The numbers of fatal and non-fatal accidents in gold and coal mines during the last ten 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.

Year.	Gold Mines.			Coal Mines.		
	Miners Employed.	Persons Killed.	Persons Injured.	Miners Employed.	Persons Killed.	Persons Injured.
1908 .. .. .	20,853	19	87	542	1	7
1909 .. .. .	18,671	15	99	607	7	..
1910 .. .. .	16,553	12	66	1,532	3	22
1911 .. .. .	14,051	19	65	1,754	..	23
1912 .. .. .	11,856	16	76	1,486	2	19
1913 .. .. .	11,931	9	61	1,377	4	24
1914 .. .. .	10,398	15	45	1,405	2	21
1915 .. .. .	8,755	10	34	1,312	3	20
1916 .. .. .	6,402	6	19	1,282	..	18
1917 .. .. .	6,069	5	17	1,885	3	24

As a result of gold mining accidents during the past ten years 126 persons were killed and 569 were injured and rendered unfit for work for a period of at least fourteen days. These numbers were equivalent to annual rates of 1.00 and 4.53 respectively per 1,000 employed. Coal mining accidents during the same period accounted for 25 deaths and 178 injuries resulting in disablement for at least fourteen days, these being equal to yearly rates of 1.90 and 13.50 respectively per 1,000 employees.

Boring for  
gold, coal,  
&c.

The record of boring operations conducted by the Mines Department during the past five years is as follows :—

### GOVERNMENT BORING OPERATIONS.

Year.	Drills worked by—		Bores put down for—			Total Depth Bored.
	Steam.	Other Power.	Gold.	Coal.	Total.	
1913 .. ..	6	7	58	55	113	feet. 39,185
1914 .. ..	3	7	84	21	105	29,038
1915 .. ..	1	15	153	2	155	28,780
1916 .. ..	1	11	119	8	127	19,627
1917 .. ..	1	14	21	115	136	25,400

The most striking feature of the figures for 1917 is the large number of bores put down for coal.

Up to the end of 1917 the quantity of antimony ore produced in Victoria was 87,197 tons valued at £486,747. Antimony. Nearly the whole of it was obtained at Costerfield. The production for 1917 was 12,052 tons of ore, which yielded 2,572 tons of concentrates valued at £53,489. For the previous year the production was 12,382 tons of ore, which yielded 3,259 tons of concentrates of the value of £77,275.

**Tin.** The production of tin ore in the State up to the end of 1917 was 16,182 tons, valued at £836,705. In the year 1917 the quantity produced was 139 tons, as against 122 tons in the preceding year, and 96 tons in 1915. Of the tin won during the past three years nearly the whole was obtained in the Beechworth district.

**Gypsum.** The quantity of gypsum produced in the State in 1917 was 1,187 tons, which was obtained at Boort. The output for the previous year was 1,853 tons, which was taken from the same locality. Up to the end of 1917 the quantity raised in Victoria was 27,681 tons, valued at £21,569.

**Kaolin.** The quantity of kaolin produced in 1917 was 1,573 tons, of which 861 tons came from Egerton, 200 tons from Pyalong, 312 tons from Stawell, and 200 tons from Heathcote. The quantity raised in the previous year was 810 tons. Up to the end of last year the total output was 10,646 tons, valued at £17,218.

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

#### QUARRIES: 1913 TO 1917-18.

Year.	Number of Quarries.	Quantity of Stone Operated on—				Approximate Total Value of Stone Raised.
		Bluestone.	Free-stone.	Granite.	Limestone.	
		c. yds.	c. yds.	c. yds.	c. yds.	£
1913 ...	89	841,803	2,861	1,485	60,566	167,567
1914 ...	93	914,310	2,886	953	57,733	183,376
1915 ...	102	1,157,280	1,384	1,392	49,121	209,539
1916-17 ...	103	628,155	22,796	1,365	43,998	125,106
1917-18 ...	103	744,630	24,190	2,250	44,450	171,992

In 1917-18 the number of persons employed in quarries was 1,214, and the wages paid amounted to £141,456. These figures include the employees and wages connected with stone-breaking and tar-paving works, most of which are carried on in conjunction with quarries and cannot be separated therefrom.

**MANUFACTURING INDUSTRIES.****Industrial  
progress.**

The earliest year for which there are statistical records of the factories in the State is 1850, at which date the number of manufacturing establishments is shown to have been 68. Subsequently fair and regular progress was made in the industry until in 1900, the year before Federation, there were 3,097 factories working. The years immediately following Federation were marked by increased industrial activity, which has been well maintained in the last ten years, during which period nearly all existing lines of manufacture have shown a notable expansion, and many industries new to the State have been firmly established. Since 1904 the number of factories has increased by 34 per cent., the number of employees by 55 per cent., the amount of salaries and wages paid by 161 per cent., the value of output by 190 per cent., the value of machinery and plant by 86 per cent., and the engine power of factories by 265 per cent. The difference between the cost of materials used and the value of the output was equivalent to an added value of £210 17s. 3d. per person employed in 1917-18, as compared with £128 in 1904. This favorable economic result coincides with a larger proportion of establishments using mechanical power in 1917-18, when 78 per cent. were so equipped, as against 60 per cent. in 1904, and with the increased aggregate engine power of factories previously referred to. The increase in the added value relatively to employees, the larger proportion of factories using power, and the higher aggregate power of establishments as a whole connote increasing industrial efficiency. Concurrent with an increase in the output per person employed, there has been a decrease of 27 per cent. in the proportion of child labor in factories during the past ten years.

An interesting feature of manufacturing activities is the great increase in the strength of the largest sized factories. Since 1904 the number of factories employing over 100 hands has increased by 66 per cent., and the number of hands employed therein by 95 per cent., as against increases of 33 per cent. in the number of, and 35 per cent. in the hands engaged in, factories employing less than 100. The figures relating to distinct industries show that a steady progress has been maintained in almost every class during recent years. This is most noticeable in industries associated with the manufacture of clothing and textile fabrics (including boots) and with the preparation of food, &c.

The appended table summarizes the position of the industries at various stages since 1871, but except for the period 1904 to 1917-18 the information for different years is not strictly comparable, for the reason that it has not been compiled upon the same basis throughout.

### GROWTH IN THE MANUFACTURING INDUSTRIES.

Year.	Number of Factories.	Number of Persons employed.	Amount of Salaries and Wages paid.	Value of Plant, Machinery, Land and Buildings.	Value of Output.
			£.	£	£
1871 .. ..	1,740	19,468	*	4,725,125	*
1881 .. ..	2,488	43,209	*	8,044,296	†13,370,836
1891 .. ..	3,141	52,225	*	16,472,859	‡22,390,251
1901 .. ..	3,249	66,529	*	12,298,500	\$19,478,780
1904 .. ..	4,208	76,287	4,794,365	13,668,185	23,126,180
1911 .. ..	5,126	111,948	8,911,019	18,257,889	41,747,863
1912 .. ..	5,263	116,108	10,102,244	19,457,795	45,410,773
1913 .. ..	5,613	118,714	10,714,336	20,775,738	47,936,647
1914 .. ..	5,650	118,399	11,099,940	21,975,646	49,439,985
1915 .. ..	5,413	113,834	11,036,345	22,529,072	51,466,093
1916-17 ..	5,445	116,970	11,833,517	23,784,289	60,047,284
1917-18 ..	5,627	118,241	12,502,601	25,460,282	67,066,715

\* Particulars not available. † 1880. ‡ 1890. § 1900.

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 latest, No. 2558, having come into force at the beginning of 1915. All these Acts were consolidated by the *Factories and Shops Act* 1915 (No. 2650). The general provisions of factory legislation, including "Wages Boards," are fully dealt with in Part "Social Condition" of this work.

In the year 1902 the classification of industries for statistical purposes, as shown in the next table, was adopted by the Statisticians of Australia. A factory was 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 following table shows for the year 1917-18 the number of factories in each industry, the power used, the number of persons employed, the wages paid, the values of materials and

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1917-18.

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fuel and light used, and the value of articles produced or work done :—

Production.

Nature of Industry.	Number of Manufactories.		Average Number of Persons Employed.				Value of—			
	Actual Horse-power of Engines used.	Working Proprietors.	Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Employees.	Working Proprietors.	Employees.					
<i>Class I.—Treating Raw Material the product of Pastoral Pursuits, or Vegetable Products, not otherwise classed.</i>							£	£	£	£
Boiling down .. .. .	17	152	10	109	..	2	15,247	4,018	141,068	184,960
Bone milling .. .. .	15	562	18	83	..	1	11,288	6,742	44,203	70,713
Tanning .. .. .	45	2,476	42	1,707	..	11	256,727	22,454	1,803,470	2,385,512
Fellmongering .. .. .	31	1,000	27	698	..	..	91,026	17,153	2,228,217	2,675,724
Chaffcutting and grain crushing ..	194	2,234	174	615	..	..	50,104	9,071	403,241	534,777
Other .. .. .	8	69	3	132	..	..	17,573	666	45,447	73,227
<b>Total .. .. .</b>	<b>310</b>	<b>6,493</b>	<b>274</b>	<b>3,344</b>	<b>..</b>	<b>14</b>	<b>441,965</b>	<b>60,104</b>	<b>4,665,646</b>	<b>5,924,913</b>
<i>Class II.—Oils and Fats, Animal and Vegetable.</i>										
Oil, grease, glue .. .. .	9	153	6	91	..	17	13,619	4,967	144,829	220,461
Soap and candle .. .. .	17	463	13	613	..	143	91,604	24,315	637,006	951,114
<b>Total .. .. .</b>	<b>26</b>	<b>616</b>	<b>19</b>	<b>704</b>	<b>..</b>	<b>160</b>	<b>105,223</b>	<b>29,282</b>	<b>781,835</b>	<b>1,171,575</b>

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1917-18—continued.

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Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
<i>Class III.—Processes relating to Stone, Clay, Glass, &amp;c.</i>						£	£	£	£	
Brick, pottery, &c. ..	78	4,465	65	1,762	..	80	231,090	81,378	44,998	445,729
Cement, including cement pipes ..	9	1,577	2	237	..	5	31,917	27,510	33,766	159,006
Glass, including bottles ..	9	346	9	1,033	..	12	141,442	38,602	64,013	271,537
„ bevelling ..	17	61	11	157	..	4	21,236	623	44,495	85,711
Marble and stone dressing ..	39	187	51	250	..	5	36,054	1,491	33,948	102,470
Modelling ..	7	49	6	72	..	1	9,503	235	8,509	21,875
Other ..	13	152	9	150	..	..	20,175	8,529	7,724	45,081
Total ..	172	6,837	153	3,661	..	107	494,417	158,368	237,453	1,131,409
<i>Class IV.—Working in Wood.</i>										
Cooperage ..	9	179	7	109	..	..	19,071	1,173	26,555	56,519
Saw-milling (forest) ..	162	3,215	171	1,931	..	4	248,940	1,060	11,200	460,510
Saw-milling, moulding, &c. ..	235	7,084	215	3,839	..	54	498,150	18,520	1,116,470	1,875,000
Mantelpiece ..	9	69	9	164	1	4	22,179	382	35,651	60,367
Wood carving, turning ..	29	428	33	243	..	6	30,780	1,818	39,523	92,744
Other ..	9	132	4	120	..	34	16,963	647	32,668	61,911
Total ..	453	11,107	439	6,406	1	102	836,083	23,600	1,262,067	2,616,051

*Class V.—Metal Works, Machinery,  
&c.*

Agricultural implement .. ..	62	1,271	63	1,878	..	26	261,045	20,911	435,665	830,876
Engineering, iron foundry, &c. ..	388	8,045	419	6,813	1	118	1,011,930	110,900	1,414,000	3,096,090
Railway workshop .. ..	19	1,543	..	3,613	..	6	557,829	25,270	594,756	1,295,640
Sheet-iron, tin, &c. .. ..	77	438	59	1,053	..	210	137,463	6,055	384,758	657,750
Brass, copper smithing .. ..	66	442	78	773	2	44	92,562	6,985	116,937	266,078
Wireworking .. ..	17	195	15	205	..	10	27,496	971	77,962	142,282
Metallurgical, &c., cyanide .. ..	20	331	17	167	..	..	18,725	4,966	72,446	113,530
Oven, range .. ..	17	103	19	110	..	..	13,372	943	23,617	48,332
Other .. ..	51	1,053	49	426	2	7	60,289	6,271	238,407	369,602
<b>Total .. ..</b>	<b>717</b>	<b>13,421</b>	<b>719</b>	<b>15,038</b>	<b>5</b>	<b>421</b>	<b>2,180,711</b>	<b>183,272</b>	<b>3,358,608</b>	<b>6,820,180</b>

*Class VI.—Connected with Food and  
Drink or the preparation thereof.*

Bacon curing .. ..	21	1,066	22	412	..	21	65,870	8,880	889,200	1,084,440
Butter, cheese, butterine .. ..	185	3,315	38	1,523	..	158	231,197	49,745	4,571,865	5,180,833
Meat freezing, preserving .. ..	18	5,823	6	1,220	..	52	164,075	36,100	929,240	1,231,560
Biscuit .. ..	7	399	7	808	..	609	130,790	15,214	527,759	800,626
Flourmilling .. ..	55	4,469	33	981	..	7	155,330	39,980	3,489,300	3,989,510
Jam, sauce, &c. .. ..	37	699	24	1,329	2	1,289	229,795	16,167	1,111,712	1,614,707
Oatmeal, starch, &c. .. ..	33	1,670	14	379	..	279	75,063	13,954	498,593	672,368
Sugar, confectionery, &c. .. ..	58	4,217	53	1,622	8	1,611	299,656	67,948	2,619,876	3,523,998
Aerated water, cordial, &c. .. ..	127	415	117	710	9	79	98,152	3,765	214,693	444,536
Malt .. ..	22	292	8	230	1	6	38,819	11,082	376,950	518,140
Brewing .. ..	18	3,734	9	862	..	4	177,276	39,200	660,090	1,334,344
Distilling .. ..	10	332	2	200	..	3	31,906	12,283	155,398	287,579
Condiments, coffee, cocoa, &c. .. ..	18	691	10	204	1	123	41,108	5,647	305,693	405,775
Tobacco, &c. .. ..	14	383	10	1,012	1	717	216,503	4,210	949,302	1,414,934
Other .. ..	26	1,389	18	230	2	25	34,424	11,828	53,925	148,095
<b>Total .. ..</b>	<b>649</b>	<b>28,894</b>	<b>371</b>	<b>11,722</b>	<b>24</b>	<b>4,983</b>	<b>1,989,964</b>	<b>336,003</b>	<b>17,353,596</b>	<b>22,651,445</b>

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1917-18—*continued.*

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Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
						£	£	£	£	
<i>Class VII.—Clothing and Textile Fabrics, and Fibrous Material.</i>										
Woolen mill .. ..	11	3,495	9	863	..	1,195	196,942	30,222	580,069	1,036,081
Clothing, tailoring, &c. ..	435	454	416	1,621	31	7,085	657,997	13,708	1,533,075	2,648,371
Dressmaking and millinery ..	459	321	87	212	317	8,433	474,000	8,905	1,053,070	1,821,898
Underclothing, shirt .. ..	180	630	88	207	108	5,565	318,848	8,800	971,652	1,580,033
Hat, cap .. ..	43	479	40	667	7	1,080	172,171	10,257	326,662	637,482
Hoisery .. ..	48	427	34	126	31	1,346	100,212	3,032	485,072	714,053
Oilskin, waterproof clothing ..	4	15	3	49	..	164	23,332	630	51,334	93,967
Boot, shoe .. ..	231	1,793	289	4,826	11	3,439	858,874	15,536	2,093,803	3,442,302
Fur .. ..	24	12	22	57	12	180	17,426	511	64,040	107,171
Rope, twine, &c. .. ..	9	1,252	7	520	..	362	85,445	8,342	375,052	559,919
Sail, tent, &c. .. ..	17	27	11	79	..	70	15,283	326	111,192	143,580
Other .. ..	27	152	19	190	4	425	46,825	2,840	205,359	309,827
<b>Total .. ..</b>	<b>1,488</b>	<b>9,057</b>	<b>1,025</b>	<b>9,422</b>	<b>521</b>	<b>29,344</b>	<b>2,967,355</b>	<b>103,109</b>	<b>7,850,380</b>	<b>13,094,684</b>

<i>Class VIII.—Books, Paper, Printing, Engraving, &amp;c.</i>											
Printing .. .. .	362	3,284	403	4,407	10	1,343	820,870	24,552	1,151,253	2,650,127	
Account-book, stationery, &c. ..	23	454	24	536	2	566	102,299	3,342	248,665	469,855	
Fancy box .. .. .	31	166	20	167	7	705	59,039	1,292	155,114	275,447	
Die sinking, engraving, &c. ..	19	64	19	190	1	16	27,050	757	23,602	78,798	
Other .. .. .	16	1,865	10	459	..	55	68,087	24,037	139,437	328,920	
Total .. .. .	451	5,833	476	5,759	20	2,685	1,077,345	53,980	1,718,071	3,803,147	
<i>Class IX.—Musical Instruments</i> .. .. .											
	11	254	11	204	..	14	28,071	652	25,276	70,376	
<i>Class X.—Arms and Explosives</i> .. .. .											
	12	768	2	550	..	478	133,130	11,808	424,646	662,842	
<i>Class XI.—Vehicles and Fittings, Saddlery, Harness, &amp;c.</i>											
Coachbuilding .. .. .	303	666	361	2,002	..	19	234,275	9,588	294,850	664,700	
Bicycle, &c. .. .. .	198	580	207	1,300	..	45	162,870	5,750	149,568	394,839	
Saddle, harness .. .. .	46	38	50	388	..	109	61,175	542	131,399	226,555	
Other .. .. .	14	53	12	152	..	9	19,978	387	37,540	73,723	
Total .. .. .	561	1,337	630	3,842	..	182	478,298	16,267	613,857	1,359,817	
<i>Class XII.—Shipbuilding, Fitting, &amp;c.</i>											
	13	1,282	11	638	..	4	99,178	4,290	99,092	228,451	
<i>Class XIII.—Furniture, Bedding, &amp;c.</i>											
Upholstery, bedding, &c. ..	46	271	28	328	1	187	54,937	1,814	159,571	250,092	
Cabinet, including billiard table ..	197	1,177	247	1,650	..	59	202,871	4,901	294,812	614,586	
Picture frame .. .. .	20	74	18	132	1	34	17,457	503	38,855	67,336	
Other .. .. .	11	132	7	167	..	8	19,668	1,274	49,900	81,057	
Total .. .. .	274	1,654	300	2,277	2	288	294,933	8,492	543,138	1,013,071	

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1917-18—continued.

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Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
<i>Class XIV.—Drugs, Chemicals, and By-products.</i>										
Blacking, blue, &c. .. ..	15	162	10	153	..	167	£ 30,102	£ 1,237	£ 217,779	£ 327,084
Chemicals, drugs, &c. .. ..	37	801	26	518	3	336	96,904	9,476	265,222	494,229
Fertilizers .. .. .	6	1,375	..	616	..	5	95,349	13,985	506,525	780,672
Other .. .. .	45	180	56	303	1	13	32,638	1,777	82,777	148,561
Total .. .. .	103	2,518	92	1,590	4	521	254,993	26,475	1,072,303	1,750,546
<i>Class XV.—Surgical and Scientific Appliances .. .. .</i>										
	30	44	29	109	..	11	12,804	588	12,900	38,248
<i>Class XVI.—Timepieces, Jewellery, and Platedware .. .. .</i>										
	92	241	95	810	1	122	111,985	3,474	208,591	411,228

<i>Class XVII.—Heat, Light, and Energy.</i>											
Electric apparatus .. ..	32	271	31	243	..	8	28,645	917	35,674	88,511	
Electric light .. ..	75	48,526	2	1,120	..	45	183,948	177,957	2,336	760,117	
Gas, coke .. ..	47	1,969	2	2,023	..	64	375,181	5,262	454,549	1,263,030	
Other .. ..	8	1,150	1	174	..	433	52,239	6,181	167,651	319,194	
<b>Total .. ..</b>	<b>162</b>	<b>51,916</b>	<b>36</b>	<b>3,560</b>	<b>..</b>	<b>550</b>	<b>640,013</b>	<b>190,317</b>	<b>660,210</b>	<b>2,430,852</b>	
<i>Class XVIII.—Leatherware (except Saddlery and Harness) ..</i>											
	41	262	44	414	1	291	68,378	2,086	301,560	442,763	
<i>Class XIX.—Wares, not elsewhere included.</i>											
Umbrella .. ..	8	13	6	48	..	127	13,198	288	53,887	81,776	
Rubber goods .. ..	15	6,419	16	1,386	..	500	224,296	34,807	803,900	1,197,260	
Brush, broom .. ..	19	129	18	261	1	96	37,679	843	74,270	136,002	
Basket, wickerware .. ..	20	..	21	122	1	6	12,582	81	12,850	30,079	
<b>Total .. ..</b>	<b>62</b>	<b>6,561</b>	<b>61</b>	<b>1,817</b>	<b>2</b>	<b>729</b>	<b>287,755</b>	<b>36,019</b>	<b>944,907</b>	<b>1,445,117</b>	
<b>Grand Total .. ..</b>	<b>5,627</b>	<b>149,095</b>	<b>4,787</b>	<b>71,867</b>	<b>581</b>	<b>41,006</b>	<b>12,502,601</b>	<b>1,248,186</b>	<b>42,133,636</b>	<b>67,066,715</b>	

Increase in value of output of each industry, 1912 to 1917-18.

Nearly every manufacturing industry in the State has shown a substantial increase in the value of output during the past five years. The output for the years 1912 and 1917-18 is shown in the following table, the industries being arranged in order of increase in value :—

OUTPUT OF INDUSTRIES, 1912 to 1917-18.

Industry.	Value of Output.		Increase in Five Years.	
	1912.	1917-18.	Total.	Per cent.
	£	£	£	
Tanning and fellmongering ..	1,891,816	5,061,236	3,169,420	167·5
Sugar, confectionery ..	1,741,937	3,523,998	1,782,061	102·3
Butter, cheese, and butterine ..	3,682,522	5,180,833	1,498,311	40·7
Boot and shoe ..	1,951,998	3,442,302	1,490,304	76·3
Flour mills.. ..	2,565,014	3,989,510	1,424,496	55·5
Jam, sauce, &c. ..	798,386	1,614,707	816,321	102·2
Underclothing, shirt ..	926,026	1,580,033	654,007	70·6
Clothing, tailoring, &c. ..	2,020,029	2,648,371	628,342	31·1
Printing .. ..	2,029,904	2,650,127	620,223	30·6
Rubber goods .. ..	634,013	1,197,260	563,247	88·8
Woollen mills .. ..	473,880	1,036,081	562,201	118·6
Oil, grease, glue, soap and candle	632,707	1,171,575	538,868	85·2
Hosiery .. ..	227,382	714,053	486,671	214·0
Engineering, iron foundry, &c.	2,640,453	3,096,090	455,637	17·3
Electric supply .. ..	399,155	760,117	450,961	145·9
Bacon-curing .. ..	634,366	1,084,440	450,074	70·9
Chemicals, &c. .. ..	827,075	1,274,901	447,826	54·1
Arms and explosives .. ..	215,516	662,842	447,326	207·6
Dress, millinery .. ..	1,406,273	1,821,898	415,625	29·6
Gas, coke .. ..	873,134	1,263,030	389,896	44·7
Brewing .. ..	980,927	1,334,344	353,417	36·0
Forest saw-mills and moulding mills .. ..	1,992,628	2,335,510	342,882	17·2
Distilling .. ..	33,147	287,579	254,432	767·6
Oatmeal, starch, &c. ..	419,346	672,368	253,022	60·3
Rope, twine, &c. .. ..	307,576	559,919	252,343	82·0
Sheet iron, tin, &c. ..	427,689	657,750	230,061	53·8
Coach, cycle and motor ..	834,981	1,059,539	224,558	26·9
Hat, cap .. ..	413,443	637,482	224,039	54·2
Tobacco, cigars, &c. ..	1,196,151	1,414,934	218,783	18·3
Biscuit .. ..	599,178	800,626	201,448	33·6
Account book, &c. .. ..	283,550	469,855	186,305	65·7
Ship, boat, dock, slip ..	59,667	228,451	168,784	282·9
Leatherware, excepting saddlery	275,118	442,763	167,645	60·9
Fancy-box, &c. .. ..	123,724	275,447	151,723	122·6
Blacking, blue, &c. .. ..	182,059	327,084	145,025	79·7
Glass, including bottles ..	161,719	271,537	109,818	67·9
Condiments, coffee, cocoa, &c.	310,907	405,775	94,868	30·5
Cement, including cement pipes	74,717	159,006	84,289	112·8
Sail, tent, &c. .. ..	63,593	143,580	79,987	125·8
Malt .. ..	458,492	518,140	59,648	13·0
Saddle, harness .. ..	168,201	226,555	58,354	34·7
Brass, copper .. ..	210,618	266,078	55,460	26·3
Others .. ..	9,351,755	9,798,989	447,234	4·8
	45,410,773	67,066,715	21,655,942	47·7

## INDIVIDUAL INDUSTRIES.

The salient features in connexion with the chief industries are set forth in the succeeding pages.

The development of the tanning and fellmongering industry during the past ten years is shown by the particulars contained in the next two tables:—

## TANNERIES, ETC., 1908 to 1917-18.

Year.	Number of Establishments.	Horse-power of Engines.	Value of Machinery and Plant in Use.	Number of Persons Employed	Number of Working Proprietors.	Amount of Wages Paid.
			£			£
1908 .. ..	92	1,379	133,376	2,001	98	160,091
1909 .. ..	93	1,941	142,429	1,999	96	163,853
1910 .. ..	89	1,990	141,702	1,956	99	175,364
1911 .. ..	88	2,005	165,064	2,123	97	183,692
1912 .. ..	90	2,161	176,947	1,996	103	205,050
1913 .. ..	84	2,398	196,848	1,824	86	194,918
1914 .. ..	79	2,434	190,460	1,875	82	210,007
1915 .. ..	82	2,510	193,350	2,165	97	263,884
1916-17 .. ..	74	3,187	214,896	2,362	82	300,796
1917-18 .. ..	76	3,476	271,120	2,485	69	347,753

The quantity of bark used in connexion with tanning operations in 1917-18 was 11,145 tons. The output of tanneries for each of the last ten years was as follows:—

## OUTPUT OF TANNERIES, ETC., 1908 to 1917-18.

Year.	Number Tanned of—			Sheep Skins Stripped.	Wool Washed (weight after washing).	Value of Articles produced or Work done.
	Hides.	Calf Skins.	Sheep and other Skins.			
				No.	lbs.	£
1908 .. ..	498,947	127,798	1,027,460	1,253,875	7,803,992	1,441,651
1909 .. ..	495,964	175,563	1,020,656	1,090,967	8,089,643	1,636,197
1910 .. ..	496,200	186,993	1,007,343	1,241,693	8,242,456	1,739,850
1911 .. ..	523,989	199,257	817,866	1,301,293	9,356,529	1,843,189
1912 .. ..	536,343	194,441	891,971	1,085,196	8,132,610	1,891,816
1913 .. ..	538,117	181,643	863,580	1,128,302	7,424,263	1,961,653
1914 .. ..	554,242	210,894	936,975	1,639,161	7,816,250	2,132,935
1915 .. ..	765,088	166,197	1,150,449	1,463,775	12,224,184	3,201,455
1916-17 .. ..	722,649	230,380	1,027,847	1,538,178	13,843,439	3,962,202
1917-18 .. ..	601,950	217,605	1,418,595	1,641,000	24,560,590	5,061,236

The figures for 1909 and subsequent years do not include skins and wool dealt with in small tanneries. The work done in such tanneries in 1908 was the tanning of 1,540 hides, 1,620 calf skins, and 4,916 sheep and other skins. The value of the leather imported into Victoria from oversea countries during the year ended 30th June, 1918, was £221,878.

Particulars in regard to the soap and candle works in the State for the past ten years are given below:—

SOAP AND CANDLE WORKS, 1908 to 1917-18.

Year.	Number of Establishments.	Value of Machinery and Plant in Use.	Number of Employees.	Amount of Wages Paid.	Products.		Value of Output.
					Soap.*	Candles.	
		£		£	cwt.	cwt.	£
1908 ..	17	109,768	523	43,463	162,757	37,705	402,306
1909 ..	17	111,252	550	56,382	176,162	45,460	485,954
1910 ..	16	113,418	528	51,518	187,433	44,768	516,508
1911 ..	16	113,664	528	53,474	189,048	41,557	572,000
1912 ..	17	117,034	593	61,398	215,629	40,157	562,013
1913 ..	18	117,692	561	60,703	223,598	39,099	610,881
1914 ..	17	120,215	604	65,155	243,558	37,564	641,104
1915 ..	17	121,946	627	71,282	267,426	41,031	721,845
1916-17	18	128,100	670	84,036	214,526	38,746	802,179
1917-18	17	130,795	756	91,604	228,310	37,290	951,114

\*Not including soap made in small soap works not classified as factories, viz., 7,125 cwt. in 1908, 5,458 cwt. in 1909, 5,479 cwt. in 1910, 6,216 cwt. in 1911, 4,732 cwt. in 1912, 3,564 cwt. in 1913, 3,489 cwt. in 1914, 1,664 cwt. in 1915, 927 cwt. in 1916-17, and 1,134 cwt. in 1917-18.

The quantity of tallow used in 1917-18 in the manufacture of soap and candles was 158,810 cwt. in factories, and 407 cwt. in minor works.

The imports from oversea countries in 1917-18 included 223,206 lbs. of soap valued at £10,846, and 21,258 lbs. of candles valued at £1,297.

Particulars relating to brickyards and potteries for the ten years 1908 to 1917-18 are shown in the following statement. The value of the land, plant, buildings, &c., used in connexion with such works in 1917-18 was £509,970.

BRICKS, POTTERY, PIPES, AND TILES, 1908 to 1917-18.

Year.	Number of Establishments.	Number of Employees.	Amount of Wages Paid.	Number of Bricks Made.*	Value of—	
					Pipes and Tiles.	Pottery.
			£		£	£
1908 ..	119	1,711	165,246	124,985,500	72,024	33,029
1909 ..	108	1,588	164,192	129,302,800	77,305	32,624
1910 ..	122	1,730	178,868	145,809,500	83,397	31,897
1911 ..	120	1,856	197,232	153,944,800	97,478	35,522
1912 ..	119	2,047	236,526	180,724,200	123,944	44,788
1913 ..	106	1,974	233,157	175,644,900	132,709	32,839
1914 ..	109	2,117	260,877	188,238,420	124,826	47,948
1915 ..	89	1,839	230,969	142,601,380	134,623	52,732
1916-17	79	1,636	200,781	108,444,400	147,840	57,266
1917-18	78	1,842	231,090	107,139,000	171,836	73,398

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

The estimated value of bricks made in 1917-18 was £199,495, being an increase of £17,281 on the value of those made in the preceding year.

Forest  
Saw-mills.

Particulars in regard to the forest saw-mills in the State for the ten years 1908 to 1917-18 are given in the table which follows :—

FOREST SAW-MILLS, 1908 to 1917-18.

Year.	Number of Mills.	Value of Machinery and Plant in Use.	Number of Employees.	Amount of Wages Paid.	Victorian Timber Sawn.	
					Quantity.	Value
		£		£	Super. ft.	£
1908 ..	120	98,804	1,486	126,409	54,602,200	177,460
1909 ..	133	115,121	1,635	131,108	56,039,200	189,130
1910 ..	139	125,528	1,767	158,733	70,947,200	248,320
1911 ..	142	148,136	1,892	170,579	70,931,500	265,990
1912 ..	150	170,437	1,814	183,169	73,374,900	265,980
1913 ..	167	262,964	2,118	211,454	81,769,800	290,280
1914 ..	167	273,086	2,127	232,305	84,374,300	316,400
1915 ..	138	233,343	1,564	169,027	62,588,760	234,710
1916-17..	151	235,140	1,678	206,709	70,038,400	297,663
1917-18..	162	260,280	1,935	248,940	78,984,000	355,430

In addition to forest saw-mills there were 291 other factories working in wood. The particulars for 1917-18 relating to these are given on page 488.

It is estimated that the approximate value of the production of firewood for consumption in the year is £567,910. In addition, there are supplies of railway sleepers, piles, posts and rails, shingles, and timber for mines obtained from the forests, but it has been found impossible to procure reliable information as to their value.

During the past decade there has been a very marked expansion in engineering works and iron foundries. Since 1904 the number of factories has increased by 67 per cent., the number of persons employed therein by 57 per cent., the amount of wages paid by 158 per cent., the value of machinery and plant by 92 per cent., the value of materials used by 212 per cent., and the value of the output by 183

Firewood,  
&c.

Engineering,  
Iron foundry,  
&c.

per cent. The chief particulars of the industry for the years 1908 to 1917-18 are given in the next table:—

ENGINEERING, IRON FOUNDRY, ETC., 1908 to 1917-18.

Year.	Number of Factories.	Horse-power of Engines.	Value of Machinery and Plant.	Number of Persons Employed	Amount of Wages Paid.	Value of—		
						Materials Used.	Fuel and Light Used.	Output.
			£		£	£	£	£
1908 ..	278	3,130	491,208	5,928	549,868	650,990	58,629	1,535,907
1909 ..	293	3,238	481,562	5,810	547,192	644,273	58,648	1,561,011
1910 ..	290	3,583	496,232	6,366	615,704	757,270	66,693	1,805,199
1911 ..	304	4,746	553,685	7,872	762,824	913,476	77,674	2,194,805
1912 ..	326	5,857	635,481	8,649	988,802	1,154,377	83,841	2,640,453
1913 ..	345	6,670	715,909	8,745	1,029,136	1,206,001	90,005	2,824,692
1914 ..	354	7,899	762,392	8,601	1,033,622	1,298,255	94,284	2,961,187
1915 ..	364	7,999	784,447	8,552	1,056,075	1,349,270	106,483	3,029,713
1916-17	364	7,964	809,940	7,726	1,008,627	1,365,280	104,334	2,936,342
1917-18	388	8,045	844,350	7,351	1,011,930	1,414,060	110,900	3,096,030

The above figures are exclusive of railway workshops, which in 1917-18 numbered 19, and gave employment to 3,619 hands, who were paid £557,829; the value of the materials dealt with was £594,756, and the value of the output was £1,295,640, of which 67 per cent. was from the Newport Workshops.

**Agricultural  
Implement  
works.**

The subjoined statement contains the leading particulars relating to agricultural implement works for the last ten years:—

AGRICULTURAL IMPLEMENT WORKS, 1908 to 1917-18.

Year.	No. of Factories.	No. of Employees.	Wages Paid.	Approximate Value of—		
				Fuel, &c., Used.	Materials Used.	Output.
			£	£	£	£
1908	52	1,381	134,884	9,253	177,488	437,023
1909	52	1,831	181,391	12,697	242,922	611,293
1910	50	2,193	231,919	21,537	300,718	742,326
1911	59	2,661	297,824	19,299	345,665	831,474
1912	67	2,590	309,789	19,388	329,397	799,217
1913	66	2,166	268,880	16,915	324,063	710,832
1914	65	1,895	242,158	16,866	278,283	638,827
1915	64	1,678	206,764	15,337	213,257	526,756
1916-17	63	1,832	250,450	18,666	359,342	743,196
1917-18	62	1,904	261,045	20,911	435,665	830,876

The industry attained its greatest development in 1911, when the employees numbered 2,651, and the value of output was £831,474. From that year to 1915 there was a decrease both in the number of employees and in the value of the output. In 1917-18 the position showed some improvement, but even in that year the number of persons employed was 28 per cent. less than in 1911. The output in these two years was almost the same.

The wages averaged for each employee £89 19s. 5d. in 1904 and £137 2s. 0d. in 1917-18. The stripper-harvester, which is a Victorian invention, is one of the principal implements manufactured.

In the following table particulars of bacon and ham curing establishments are given for the ten years 1908 to 1917-18. The value of the machinery, plant, land and buildings in connexion with these establishments was £59,291 in 1908 and £157,710 in 1917-18.

#### BACON CURING, 1908 to 1917-18.

Year.	Number of Establishments.	Number of Employees.	Amount of Wages Paid.	Pigs Slaughtered for Curing.	Weight of Bacon and Hams Cured.	Value of Output.
1908 ..	26	310	27,862	129,677	11,518,404	446,199
1909 ..	26	310	28,454	123,067	11,245,195	443,277
1910 ..	25	307	30,035	142,429	13,455,397	483,469
1911 ..	26	349	39,041	177,029	15,190,449	549,748
1912 ..	29	399	45,794	179,717	16,044,228	634,366
1913 ..	28	423	49,305	179,710	16,345,955	726,906
1914 ..	26	442	57,965	181,756	16,298,474	772,318
1915 ..	25	362	49,672	129,259	11,451,031	767,778
1916-17 ..	23	405	58,191	167,003	15,376,600	972,477
1917-18 ..	21	433	65,870	197,880	17,908,100	1,024,440

This table does not include pigs slaughtered for curing, nor bacon and hams cured in small curing works; the pigs so slaughtered numbered 2,263 in 1908, 2,691 in 1909, 1,637 in 1910, 695 in 1911, 671 in 1912, 666 in 1913, 974 in 1914, 439 in 1915, 379 in 1916-17, and 140 in 1917-18; the quantity (in pounds) of bacon and hams cured was 194,328 in 1908, 294,088 in 1909, 142,524 in 1910, 70,440 in 1911, 50,500 in 1912, 51,620 in 1913, 87,258 in 1914, 45,030 in 1915, 31,300 in 1916-17, and 12,970 in 1917-18.

In addition, the following quantities of bacon and hams were returned as having been cured on farms:—2,698,669 lbs. in 1908,

2,375,290 lbs. in 1909, 2,983,440 lbs. in 1910, 4,356,323 lbs. in 1911, 3,999,478 lbs. in 1912, 2,943,303 lbs. in 1913, 2,476,023 lbs. in 1914, 2,208,943 lbs. in 1915, 2,738,428 lbs. in 1916-17, and 3,403,776 lbs. in 1917-18. The total quantity of bacon and hams cured in 1917-18 was thus 21,324,846 lbs.—an increase of 3,178,518 lbs. as compared with 1916-17.

The number of butter, cheese, and kindred factories was 181 in 1917-18. Of these factories, 139 made butter, 5 butter and cheese, 2 butter and cheese and casein, 1 butter and casein, 1 butter and condensed and powdered milk, 1 butter and powdered milk, 1 butter and concentrated milk, 2 condensed milk, 1 concentrated and condensed milk, 1 powdered milk, 1 casein, and 1 butter, cheese, concentrated, condensed, and powdered milk, while 25 made cheese only. There were 30 creameries attached to the factories. The number of factories and the value of machinery, plant, land, and buildings, the number of employees and the amount of their wages, and the total value of the output for the ten years 1908 to 1917-18 were as follows:—

#### BUTTER AND CHEESE FACTORIES, 1908 TO 1917-18.

Year.	Number of Factories.	Value of Machinery, Plant, Land, and Buildings.	Number of Employees.	Amount of Wages Paid.	Value of Output.
		£		£	£
1908 .. ..	215	526,700	1,235	108,152	2,327,328
1909 .. ..	211	515,966	1,134	109,412	2,391,893
1910 .. ..	203	513,292	1,209	121,128	2,980,669
1911 .. ..	199	626,331	1,489	147,897	3,964,312
1912 .. ..	197	635,358	1,374	152,922	3,636,174
1913 .. ..	197	649,931	1,311	159,529	3,562,057
1914 .. ..	197	643,677	1,290	161,740	3,228,640
1915 .. ..	190	644,960	1,145	139,543	2,715,784
1916-17 ..	182	647,128	1,398	185,024	4,815,833
1917-18 ..	181	683,140	1,642	226,050	5,086,238

The reduction in the value of the output in 1915, as compared with that in each of the preceding five years, was due to a severe drought which occurred in 1914. Further particulars relating to butter and cheese factories will be found under the heading of Dairying on page 457.

Meat freezing and preserving works numbered eighteen in 1917-18, and gave employment to 1,272 hands and six working proprietors, the wages of the hands amounting to £164,075. The approximate value of machinery, plant, land and buildings in the same year was £778,800. The output for each of the last ten years is given in the following table:—

MEAT FREEZING AND PRESERVING, 1908 TO 1917-18.

Year.	Frozen.			
	Cattle.	Sheep.	Rabbits.	Poultry.
	Qrs.	No.	No.	No.
1908	16,508	773,396	4,057,896	22,826
1909	17,360	941,309	2,832,924	22,440
1910	36,464	1,573,516	2,660,604	60,312
1911	40,184	1,578,133	2,312,928	35,388
1912	29,752	1,409,243	2,101,704	28,824
1913	126,568	2,107,180	4,674,588	25,284
1914	212,520	1,719,152	3,778,164	30,504
1915	...	47,546	3,584,388	8,652
1916-17	28,492	418,418	2,846,904	4,900
1917-18	3,832	196,267	7,394,140	4,620

Year.	Preserved.			
	Beef.	Mutton.	Rabbits.	Other Meats, &c.
	Cwt.	Cwt.	Cwt.	Cwt.
1908	7,557	2,309	1,730	1,391
1909	8,382	2,349	540	1,267
1910	13,589	8,876	1,389	2,534
1911	28,654	14,890	3,422	2,679
1912	37,984	22,387	...	3,056
1913	49,445	8,793	63	3,321
1914	49,103	7,316	2,368	5,936
1915	38,835	2,092	422	3,448
1916-17	15,591	4,484	5,245	2,693
1917-18	17,810	28,530	9,530	15,110

NOTE.—In addition to the above, there were treated at freezing works 11,662 calves, 2,296 pigs, and 29,796 hares in 1908; 3,059 calves, 225 pigs, and 8,724 hares in 1909; 3,893 calves, 1,557 pigs, and 29,532 hares in 1910; 7,308 calves, 1,609 pigs, and 58,008 hares in 1911; 3,355 calves, 3,120 pigs, and 43,224 hares in 1912; 5,050 calves, and 39,420 hares in 1913; 11,708 calves, 1,713 pigs, and 57,576 hares in 1914; 3,072 hares in 1915; 1,120 calves, 156 pigs, and 6,872 hares in 1916-17; and 166 calves, 971 pigs, and 9,180 hares in 1917-18.

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, 1918 :—

MEATS IMPORTED AND EXPORTED OVERSEA, 1917-18.

	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
Meats, Frozen—		£		£
Mutton ... ..	...	...	2,697,239 lbs.	57,985
Lamb ... ..	...	...	5,081,026 „	129,748
Beef ... ..	...	...	135,022 „	5,964
Pork ... ..	...	...	...	...
Rabbits and Hares ... ..	...	...	3,701,662 prs.	280,422
Poultry ... ..	...	...	...	...
Game ... ..	50 lbs.	2	...	...
Other ... ..	...	...	185,744 lbs.	4,802
Meats—Fresh and smoked ...	164 lbs.	6	...	...
„ Potted and concentrated ...	...	2,805	...	18,873
„ Preserved in tins ...	63,325 lbs.	5,519	...	328,297
„ Not elsewhere included ...	27 cwt.	155	...	2,575
Total value ...	...	8,487	...	828,666

**Flour mills.** The value of the machinery, plant, land and buildings used in connexion with flour mills was estimated at £479,411 in 1908, and at £517,510 in 1917-18. Particulars of the industry for the ten years 1908 to 1917-18 are as follows :—

FLOUR MILLS, 1908 to 1917-18.

Year.	Number of Mills.	Number of Employees.	Amount of Wages Paid.	Wheat Ground into Flour.	Flour Made.	Value of Total Output.
			£	bushels.	tons.	£
1908 ..	63	728	78,906	9,564,068	192,687	2,275,024
1909 ..	59	688	79,547	10,644,123	215,547	2,639,519
1910 ..	62	734	84,863	11,218,870	225,282	2,486,741
1911 ..	61	784	93,503	12,266,013	247,434	2,456,533
1912 ..	61	790	95,266	11,185,138	225,376	2,565,014
1913 ..	61	790	102,882	12,459,988	252,763	2,633,604
1914 ..	57	836	109,910	12,173,943	246,136	2,726,878
1915 ..	51	608	70,982	6,574,753	134,401	2,739,730
1916-17 ..	54	857	126,283	12,483,990	233,095	3,458,633
1917-18 ..	55	988	155,330	15,034,990	311,450	3,989,510

In addition to the flour made, the wheat ground in 1917-18 produced 7,048,370 bushels of bran and 6,186,910 bushels of pollard. Other

grain operated on amounted to 123,879 bushels in 1908, 45,487 bushels in 1909, 35,507 bushels in 1910, 84,707 bushels in 1911, 98,243 bushels in 1912, 39,826 bushels in 1913, 38,992 bushels in 1914, 43,618 bushels in 1915, 44,150 bushels in 1916-17, and 31,960 bushels in 1917-18.

**Exports of bread-stuffs.** During the year 1917-18, 2,890,067 lbs. of biscuits valued at £75,164, and 135,180 tons of flour valued at £1,529,789 were exported from Victoria to countries beyond Australia.

**Jam, pickle, and sauce works.** In 1917-18 there were 37 establishments in which the manufacture of jams, pickles, and sauces was carried on, and the number of persons employed therein was 2,644, of whom 26 were working proprietors. The wages paid to the employees amounted to £229,795, and the value of machinery, plant, land and buildings was £228,230. The fruit and sugar used and the output for each of the last ten years were as shown below:—

JAM, PICKLE, AND SAUCE WORKS, 1908 to 1917-18.

Year	Fruit Used.	Sugar Used.	Jams and Jellies Made.	Fruit Preserved.	Fruit Pulped.	Sauce Made.	Pickles Made.
	cwt.	cwt.	cwt.	cwt.	cwt.	pints.	pints.
1908 ...	191,282	133,283	226,481	31,336	18,783	3,014,835	1,187,136
1909 ...	265,353	143,427	268,927	40,746	49,797	3,607,968	1,324,392
1910 ...	311,168	159,439	303,733	49,797	38,017	4,173,936	1,264,728
1911 ...	315,362	156,376	286,543	53,562	52,427	4,348,500	1,617,156
1912 ...	307,458	154,381	258,470	63,133	56,488	5,886,336	1,482,252
1913 ...	400,048	179,243	265,727	102,608	100,690	6,458,748	1,752,396
1914 ...	341,189	175,538	271,755	81,425	75,299	5,648,280	1,840,920
1915 ...	300,861	193,243	305,445	52,939	40,993	5,827,176	1,285,476
1916-17 ...	372,424	257,481	347,152	60,419	132,182	6,433,032	1,803,408
1917-18 ...	497,650	286,860	398,500	115,580	94,810	7,064,520	3,412,320

These works also candied fruit peel amounting to 3,283 cwt. in 1908, 4,802 cwt. in 1909, 3,902 cwt. in 1910, 3,549 cwt. in 1911, 2,763 cwt. in 1912, 5,519 cwt. in 1913, 6,892 cwt. in 1914, 4,628 cwt. in 1915, 3,360 cwt. in 1916-17, and 9,330 cwt. in 1917-18. The value of the output in 1917-18 was £1,614,707.

**Beet sugar industry.**

In 1896 Parliament passed an Act making available £100,000, of which £62,000 was expended in promoting the establishment of the beet sugar industry on the basis of £2 for every £1 of private capital subscribed. A company was formed, and a substantial building, equipped with a modern plant, was erected at Maffra, in Gippsland. The industry, after various vicissitudes, was compelled to cease operations after two seasons, and the building and plant, which fell into the hands of the Government under the terms of its mortgage, remained idle for twelve years.

In 1910 a definite campaign to revive the industry was commenced, numerous experimental beet plots were established throughout Gippsland in order to familiarize land-holders with beet-growing, lectures were given explanatory of the Government proposals and different phases of the industry, a system of field labour was organized, and manufacturing operations were recommenced.

With the view of putting the industry on a sound footing the Government purchased large areas at Boisdale and Kilmany Park. These estates, which are in railway communication with Maffra, were cut up into small holdings under the Closer Settlement Board, and allotted to settlers, subject to the proviso that each must grow a certain area of beet. The compulsory beet-growing conditions were removed in 1914, and the supply of beet became dependent on voluntary growers.

The price of beet is 27s. 6d. per ton. A fine grade of white sugar is manufactured, and after meeting all charges, including interest and depreciation, the factory has been able to show good profits for the last two seasons. In the absence of an irrigation scheme, suitable land adjacent to the factory is limited, so that a number of growers are unable to secure the acreage they desire. It is hoped this will be remedied in due course.

The following particulars summarize the results of the last eight seasons :—

Season.	Area Harvested.	Sugar Beet Harvested.	Sugar Produced.
	acres.	tons.	tons.
1910-11 ...	458	5,969	482
1911-12 ...	752	4,000	519
1912-13 ...	900	6,207	648
1913-14 ...	1,000	7,431	920
1914-15 ...	990	8,843	1,181
1915-16 ...	461	4,928	560
1916-17 ...	1,320	15,159	1,948
1917-18 ...	1,200	14,487	1,650

**Breweries.** Particulars regarding breweries for the ten years 1908 to 1917-18 are set forth in the next table. Machinery and plant were valued at £268,009 in 1908 and at £435,960 in 1917-18, whilst land and buildings were valued at £429,195 in 1908 and at £471,980 in 1917-18. The wages paid in 1917-18 amounted to £177,276.

BREWERIES, 1908 to 1917-18.

Year.	Number of Breweries.	Number of Employees.	Materials Used—			Beer Made.	Value of Output.
			Sugar.	Malt.	Hops.		
			cwt.	bushels.	lbs.	gallons.	£
1908 ...	35	1,107	109,347	556,040	684,879	17,582,833	832,459
1909 ...	32	996	103,146	503,761	632,339	16,552,594	771,779
1910 ...	31	1,016	112,240	540,390	663,394	18,605,737	836,485
1911 ...	33	1,009	111,314	548,341	649,892	19,077,420	912,829
1912 ...	29	984	119,667	566,779	659,323	20,247,337	980,927
1913 ...	26	966	123,073	586,375	653,803	20,925,354	1,024,708
1914 ...	25	1,036	133,707	678,526	738,953	23,865,467	1,196,306
1915 ...	22	893	111,363	600,333	661,299	20,339,924	1,061,196
1916-17 ...	19	857	105,238	616,630	710,470	20,111,704	1,118,288
1917-18 ...	18	866	109,640	650,500	748,840	21,021,070	1,334,344

**Distilleries.** The number of distilleries working in 1917-18 was 10, and the persons employed numbered 205, of whom 2 were working proprietors. The estimated value of the machinery, plant, land, and buildings was £219,750. The materials used in manufacture and the quantity of spirits distilled in each of the last ten years were as follows:—

DISTILLERIES, 1908 to 1917-18.

Year.	Materials Used.				Spirits Distilled.
	Wine.	Malt.	Other Grain.	Sugar and Molasses.	
	Gal.	Bush.	Bush.	lbs.	Proof gal.
1908 ...	591,248	53,761	...	...	220,690
1909 ...	379,979	117,197	...	...	314,370
1910 ...	605,204	25,345	3,560	649,152	223,560
1911 ...	370,119	61,981	752	1,293,152	298,237
1912 ...	580,976	...	...	791,056	152,645
1913 ...	944,277	54,544	...	1,057,280	335,251
1914 ...	1,248,957	39,043	118	1,649,760	409,815
1915 ...	984,817	34,896	118	1,592,640	386,152
1916-17 ...	1,452,048	176,472	170	1,093,120	658,357
1917-18 ...	1,137,640	376,830	...	3,962,560	1,150,091

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:—50,954 gallons in 1908, 30,976 gallons in 1909, 13,427 gallons in 1910, 29,745 gallons in 1911, 23,874 gallons in 1912, 13,357 gallons in 1913, 12,256 gallons in 1914, 9,955 gallons in 1915, 9,937 gallons in 1916-17, and 5,134 gallons in 1917-18.

The number of tobacco, cigar and cigarette factories licensed in 1917-18 was thirty, of which sixteen were too small to be classified as ordinary factories and were consequently not included in the statistical tabulation. In the year mentioned the remaining fourteen employed 1,729 hands, who were paid £216,503 in wages, also eleven working proprietors; and used machinery, plant, land, and buildings valued at £291,360. 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, 1908 to 1917-18.

Year.	Unmanufactured Leaf Operated on.		Quantity Manufactured of—			
	Australian	Imported.	Tobacco.	Snuff.	Cigars.	Cigarettes.
	lbs.	lbs.	lbs.	lbs.	No.	No.
1908...	269,354	5,566,522	5,331,117	605	19,741,355	178,776,650
1909...	202,723	4,759,856	5,162,959	610	19,368,491	141,105,750
1910...	195,279	5,225,078	5,510,099	577	21,310,111	135,108,700
1911...	180,501	4,972,275	5,521,175	603	22,424,806	116,435,800
1912...	165,156	5,137,331	5,641,647	702	23,333,951	97,400,400
1913...	254,561	5,113,935	5,605,566	500	25,019,435	103,382,600
1914...	340,296	4,708,548	5,140,695	746	23,533,572	140,100,500
1915...	515,969	4,414,921	5,022,910	565	22,676,586	138,111,000
1916-17	656,320	5,254,110	6,089,929	446	26,268,733	123,430,200
1917-18	558,278	4,598,364	5,479,191	313	27,920,180	126,883,970

Woollen  
mills.

There were eleven woollen mills working in 1917-18, and the number of persons employed therein was 2,072, of whom nine were working proprietors. The wages paid to employees amounted to £196,942, and the approximate value of the machinery, plant, land, and buildings to £433,160. The value of the raw materials used in mills during the year was £580,069, and that of the goods manufactured in the same period, £1,036,081. The quantities of wool and cotton used and of goods manufactured in each of the last ten years were as follows :—

WOOLLEN MILLS, 1908 TO 1917-18.

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.	No. of Pairs.	No.	£
1908 ..	3,210,925	965,042	922,176	4,396,862	228,621	15,222	388,218
1909 ..	3,093,383	880,934	949,674	4,713,571	225,148	15,189	403,106
1910 ..	3,136,442	955,894	890,281	4,640,401	191,651	18,185	426,336
1911 ..	3,409,105	897,804	901,348	4,691,255	240,961	13,718	473,686
1912 ..	3,265,390	1,061,201	1,013,444	4,604,654	265,637	14,476	473,880
1913 ..	3,489,150	1,068,214	1,017,776	4,965,527	287,814	19,443	513,252
1914 ..	3,607,690	1,075,666	1,036,079	5,546,841	258,859	22,455	577,434
1915 ..	6,521,130	702,653	1,331,137	5,136,258	347,988	6,418	931,774
1916-17	5,114,320	599,288	1,238,363	5,250,093	259,080	3,661	1,006,635
1917-18	4,332,420	832,400	1,429,050	5,411,990	214,410	8,560	1,036,081

During the period 1908 to 1917-18 the value of output of woollen mills increased by 167 per cent. The quantity of tweed and cloth manufactured increased by 55 per cent., and of flannel by 23 per cent. There was a considerable falling off in the output of blankets.

**Boot  
factories.**

The development which has taken place in the boot industry in recent years is exhibited by the following tables:—

**BOOT FACTORIES, 1908 to 1917-18.**

Year.	Number of Factories.	Persons Employed.	Value of Land, Build- ings, and Machinery.	Wages Paid.
			£	£
1908 ...	139	6,348	284,982	371,081
1909 ...	136	6,894	294,167	415,011
1910 ...	144	6,832	324,529	455,997
1911 ...	154	7,001	363,540	542,707
1912 ...	151	6,774	378,501	570,025
1913 ...	162	6,951	426,573	578,503
1914 ...	172	6,924	455,158	603,318
1915 ...	174	6,847	483,683	625,886
1916-17 ...	201	8,494	529,950	843,772
1917-18 ...	231	8,565	577,125	853,874

**OUTPUT OF BOOT FACTORIES, 1908 to 1917-18.**

Year.	Goods Manufactured—		Value of Materials Used.	Value of Output.
	Boots and Shoes.	Slippers.*		
	No. of pairs.	No. of pairs.	£	£
1908 ...	4,164,410	193,949	780,760	1,307,329
1909 ...	4,649,130	231,791	884,329	1,487,789
1910 ...	4,847,368	191,204	963,110	1,620,179
1911 ...	5,198,030	164,313	1,103,653	1,878,308
1912 ...	4,966,768	220,616	1,132,045	1,951,998
1913 ...	5,013,143	254,844	1,230,725	2,094,866
1914 ...	4,913,593	272,966	1,281,352	2,160,500
1915 ...	5,257,415	191,044	1,502,285	2,436,673
1916-17 ...	6,210,866	212,582	2,171,812	3,460,404
1917-18 ...	6,049,510	205,614	2,093,803	3,442,302

\* Includes canvas shoes and house-boots.

During the period 1908 to 1917-18 the wages paid increased by 131 per cent., the value of materials used by 168 per cent., and the value of output by 163 per cent., while the quantity of boots and shoes manufactured increased by only about 45 per cent.

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 £7,674,705 in 1917-18, as compared with £3,112,211 in 1908. During the period 1908 to 1917-18 the persons employed increased by 12 per cent., the wages paid by 85 per cent., the value of materials used by 166 per cent., and the value of the output by 147 per cent. Particulars of the industry for each of the last ten years are as follows:—

#### DRESS (EXCLUSIVE OF BOOT) FACTORIES.

Year.	Number of Factories	Number of Persons employed.			Amount of Wages paid.	Value of Materials used.	Value of Output.
		Males.	Females.	Total.			
					£	£	£
1908 ..	1,064	3,191	22,124	25,315	965,425	1,693,450	3,112,211
1909 ..	1,125	3,387	23,174	26,561	1,057,278	2,033,925	3,743,940
1910 ..	1,160	3,620	24,069	27,689	1,181,534	2,259,826	4,174,402
1911 ..	1,213	3,921	26,114	30,035	1,384,678	2,557,287	4,756,604
1912 ..	1,205	4,067	26,255	30,322	1,532,559	2,760,001	5,184,535
1913 ..	1,296	4,221	25,955	30,176	1,579,957	2,868,302	5,430,240
1914 ..	1,298	4,019	25,660	29,679	1,591,133	3,001,379	5,568,744
1915 ..	1,198	3,833	24,126	27,959	1,554,921	3,295,009	5,901,238
1916-17 ..	1,196	3,744	25,739	29,483	1,747,478	3,919,333	6,765,326
1917-18 ..	1,209	3,730	24,630	28,360	1,788,136	4,512,648	7,674,705

**Electric light and power works.** Particulars relating to the electric light and power works of the State are shown in the next table:—

### ELECTRIC LIGHT AND POWER WORKS, 1908 to 1917-18.

Year.	Number of Stations.	Horse-power of Machinery.	Value of Machinery and Plant.	Persons Employed.	Wages Paid.	Electricity Supplied.	Value of Output.
			£		£	British Units.	£
1908 ..	12	11,702	541,489	441	50,442	14,310,482	191,317
1909 ..	13	13,293	577,403	442	54,621	16,471,368	207,959
1910 ..	16	13,962	645,333	523	62,266	18,832,467	231,604
1911 ..	20	15,819	733,769	590	75,722	23,011,340	270,498
1912 ..	24	20,005	912,712	666	89,435	27,579,734	309,156
1913 ..	51	26,213	1,165,020	860	114,874	35,637,971	400,192
1914 ..	58	28,485	1,418,511	924	131,854	44,890,249	473,918
1915 ..	63	33,127	1,569,553	957	135,045	53,209,990	536,251
1916-17	74	42,144	1,787,477	1,144	178,430	71,622,490	673,769
1917-18	75	48,523	1,889,550	1,167	183,948	79,485,920	760,117

The electricity supplied in 1917-18 represented an increase of 455 per cent. on that supplied in 1908.

**Gasworks.** The approximate value of the machinery and plant, land and buildings connected with gasworks in Victoria was £1,708,472 in 1908, and £1,854,580 in 1917-18. The gas made in the latter year was 110 per cent. in excess of that made in 1908. Particulars in regard to these works are given below.

### GASWORKS, 1908 to 1917-18.

Year.	Number of Works.*	Persons Employed.	Wages Paid.	Coal Used.	Gas Made.	Coke Produced.	Value of Output.
			£	Tons.	Cubic Feet.	Tons.	£
1908 ..	47	1,298	168,077	206,408	2,144,834,000	126,530	618,501
1909 ..	47	1,390	181,965	217,473	2,292,988,400	131,695	676,528
1910 ..	47	1,421	199,308	235,532	2,476,528,100	139,423	738,910
1911 ..	47	1,601	230,626	261,848	2,813,159,700	155,488	810,414
1912 ..	47	1,835	275,755	284,670	3,108,555,700	171,750	873,134
1913 ..	47	1,973	302,354	294,541	3,480,180,200	176,810	935,910
1914 ..	47	2,117	332,971	300,152	3,806,380,100	195,178	979,229
1915 ..	47	2,175	347,434	307,902	4,107,577,600	204,957	1,035,941
1916-17 ..	47	2,093	365,777	317,450	4,449,230,000	200,673	1,181,096
1917-18 ..	47	2,089	375,181	318,560	4,505,847,000	200,660	1,263,030

\* Including one establishment manufacturing coke only.

Oil was used as well as coal in the manufacture of gas, the number of gallons consumed each year being 187,237 in 1908, 196,176 in 1909, 228,034 in 1910, 274,353 in 1911, 306,405 in 1912, 348,385 in 1913, 332,586 in 1914, 328,230 in 1915, 345,272 in 1916-17, and 396,717 in 1917-18.

Number and Location of Factories, 1903 to 1917-18.

The facilities afforded in the metropolitan area have had the effect of bringing within that area the more important of the manufactories. The distribution of factories by classes as between the metropolis and the remainder of the State, for the years 1903, 1911, 1916-17, and 1917-18 is exhibited in the following statement :—

NUMBER AND LOCATION OF FACTORIES.

Class of Industry.	Number of Factories.							
	Metropolis.				Remainder of State.			
	1903.	1911.	1916-17.	1917-18	1903.	1911.	1916-17.	1917-18
Treating raw material, product of pastoral pursuits, &c. ..	97	84	81	85	227	253	223	225
Treating oils and fats, animal, vegetable, &c.	12	12	16	16	12	11	11	10
Processes in stone, clay, glass, &c. ..	79	96	89	95	112	119	81	77
Working in wood ..	107	168	194	205	161	207	230	248
Metal works, machinery, &c. ..	304	440	497	520	241	234	203	197
Connected with food and drink, &c. ..	160	197	217	237	461	454	418	412
Clothing and textile fabrics, &c. ..	827	1,128	1,139	1,188	281	288	302	300
Books, paper, printing, &c. ..	193	255	290	294	104	165	155	157
Musical instruments, &c. ..	2	5	9	11	..	..	..	..
Arms and explosives	2	6	8	8	3	3	4	4
Vehicles, saddlery, harness, &c. ..	164	219	251	256	170	191	282	305
Ship and boat building and repairing ..	6	11	10	11	2	1	1	2
Furniture, upholstery, and bedding ..	169	222	239	249	18	20	29	25
Drugs, chemicals, and by-products ..	45	50	61	64	17	31	33	39
Surgical and other scientific appliances	9	16	27	29	..	1	1	1
Jewellery, time-pieces, and platedware ..	47	74	87	87	5	6	4	5
Heat, light, and power	25	29	52	55	43	54	106	107
Leatherware, n.e.i. ..	20	32	38	41	1	..	..	..
Minor wares, n.e.i. ..	25	44	55	59	..	..	2	3
Totals ..	2,293	3,088	3,360	3,510	1,858	2,038	2,085	2,117

Since 1903 the number of factories has increased by 1,476, the greatest numerical increase in the classes being that of the clothing and textile factories, of which there were 380 more in 1917-18 than in 1903.

**Employment in Factories.** The employment afforded in each class of industry is set forth in the next statement:—

**AVERAGE NUMBER OF PERSONS EMPLOYED IN FACTORIES.**

Class of Industry.	1903.	1914.	1915.	1916-17.	1917-18.
Treating raw materials, product of pastoral pursuits, &c. . .	2,976	3,310	3,345	3,535	3,632
Treating oils and fats, animal, vegetable, &c. . .	528	711	740	796	883
Processes in stone, clay, glass, &c. . .	3,076	4,283	3,822	3,519	3,921
Working in wood . . .	3,713	7,472	6,345	6,336	6,948
Metal works, machinery, &c. . .	10,350	19,694	19,217	17,180	16,183
Connected with food and drink, &c. . .	10,602	15,308	13,778	15,334	17,100
Clothing and textile fabrics, &c. . .	26,301	39,446	38,041	41,233	40,312
Books, paper, printing, &c. . .	6,525	9,153	8,881	8,830	8,940
Musical instruments, &c. . .	25	170	145	198	229
Arms and explosives . . .	342	970	1,324	1,597	1,030
Vehicles, saddlery, harness, &c. . .	2,973	5,086	4,589	4,575	4,654
Ship and boat building and repairing . . .	98	593	1,085	464	653
Furniture, bedding, and upholstery . . .	1,978	2,986	2,689	2,766	2,867
Drugs, chemicals, and by-products . . .	987	1,834	1,860	2,086	2,207
Surgical and other scientific appliances . . .	35	114	115	135	149
Jewellery, time-pieces, and plated ware . . .	594	925	825	948	1,028
Heat, light, and power . . .	988	3,769	4,012	4,164	4,146
Leatherware, n.e.i. . .	283	566	604	711	750
Minor wares, n.e.i. . .	855	2,009	2,417	2,563	2,609
Total . . .	73,229	118,399	113,834	116,970	118,241

The total increase in the number of hands employed during the period covered by the above table is 45,012, and represents an advance of about 61 per cent. The greatest development has taken place in clothing factories, metal works, and industries connected with food, drink, &c., which shew increases of 14,011, 5,833, and 6,498 respectively in the number of persons employed in 1917-18 as compared with the number in 1903.

**Size of Factories.** An examination of the figures relating to different factories in 1908 and 1917-18 reveals the great increase in the number of hands employed which has taken place in factories of the largest size. During the past fourteen years the number of factories employing over 100 hands has increased by 66 per cent., and the number of hands engaged therein by 107 per cent., whilst the factories employing less than 100 and their employees have increased by only 35 and 39 per cent. respectively. Particulars of

factories of different sizes in 1903 and 1917-18 are given in the next two tables:—

### FACTORIES ACCORDING TO NUMBER OF HANDS EMPLOYED.

Size of Factory.	Number of Factories.		Average Number of Hands employed.	
	1903.	1917-18.	1903.	1917-18.
Under 4 hands .. ..	587	1,213	1,714	2,738
4 .. ..	487	615	1,948	2,460
5 to 10 .. ..	1,631	1,810	11,293	12,472
11 to 20 .. ..	722	881	10,509	12,804
21 to 50 .. ..	471	669	14,520	21,166
51 to 100 .. ..	135	243	9,109	16,559
Over 100 .. ..	118	196	24,136	50,042
Total .. ..	4,151	5,627	73,229	118,241

### PROPORTION OF FACTORIES OF DIFFERENT SIZES.

Size of Factory.	Percentage to Total.			
	Factories.		Hands.	
	1903.	1917-18.	1903.	1917-18.
Under 4 hands .. ..	14·14	21·56	2·34	2·32
4 .. ..	11·73	10·93	2·66	2·08
5 to 10 .. ..	39·29	32·17	15·42	10·55
11 to 20 .. ..	17·40	15·65	14·35	10·83
21 to 50 .. ..	11·35	11·89	19·83	17·90
51 to 100 .. ..	3·25	4·32	12·44	14·00
Over 100 .. ..	2·84	3·48	32·96	42·32
Total .. ..	100·00	100·00	100·00	100·00

**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.	1908.	1914.	1915.	1916-17.	1917-18.
Working proprietors ..	4,190	5,707	5,366	5,201	5,368
Managers, overseers ..	2,520	3,283	3,347	3,619	3,716
Accountants, clerks ..	2,213	3,981	4,062	4,345	4,519
Engine-drivers, firemen ..	1,441	1,835	1,685	1,758	1,867
Workers in factory or works	57,721	97,923	94,338	96,706	97,765
Outworkers ..	955	1,737	1,473	1,814	1,406
Carters, messengers ..	2,778	2,835	2,657	2,725	2,763
Others .. ..	1,411	1,098	906	802	837
<b>Total .. ..</b>	<b>73,229</b>	<b>118,399</b>	<b>113,834</b>	<b>116,970</b>	<b>118,241</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 1908 to 1917-18 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.
1908 ..	60,873	965	32,935	518	93,808	741
1909 ..	62,822	984	34,533	537	97,355	760
1910 ..	66,309	1,023	35,867	550	102,176	786
1911 ..	73,573	1,118	38,375	579	111,948	848
1912 ..	77,565	1,145	38,543	567	116,108	856
1913 ..	80,054	1,151	38,690	554	118,744	852
1914 ..	79,772	1,119	38,627	543	118,399	832
1915 ..	75,971	1,097	37,863	522	113,834	798
1916-17 ..	74,924	1,123	42,046	574	116,970	836
1917-18 ..	76,654	1,142	41,587	562	118,241	838

Males formed 64·9 per cent. in 1908 and 64·8 per cent. in 1917-18 of the total persons employed. The increase during the period 1908 to 1917-18 in the number of males employed was 15,781 or 25·9 per cent., and in the number of females employed 8,652, or 26·3 per cent.

Of the total females in factories 71·8 per cent. are engaged in the textile and clothing industries, and 12·4 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, 1917-18.

Industry.	Number employed.		Females per 100 Males.
	Males.	Females.	
Biscuit .. .. .	815	609	74·72
Jam, pickle, and sauce .. .. .	1,353	1,291	95·42
Confectionery .. .. .	1,154	1,580	136·92
Tobacco, &c. .. .. .	1,022	718	70·25
Woollen mills .. .. .	877	1,195	136·26
Clothing, tailoring, &c. .. .. .	2,037	7,116	349·34
Dressmaking, millinery .. .. .	299	8,750	2,926·42
Underclothing .. .. .	295	5,673	1,923·05
Hats, caps, &c. .. .. .	707	1,087	153·75
Hosiery .. .. .	160	1,377	860·63
Waterproof clothing .. .. .	52	164	315·38
Boots and shoes .. .. .	5,115	3,450	67·45
Printing, &c. .. .. .	4,810	1,353	28·13
Bookbinding, stationery, &c. .. .. .	560	568	101·43
Fancy-box, &c. .. .. .	187	712	380·75
Rope, twine .. .. .	527	362	68·69
Sail, tent .. .. .	90	70	77·78
Ammunition .. .. .	310	396	127·74
Match .. .. .	146	432	295·89
Fancy leather .. .. .	342	272	79·53
Rubber goods .. .. .	1,402	500	35·66
All other factories .. .. .	54,394	3,912	7·19
<b>Total .. .. .</b>	<b>76,654</b>	<b>41,587</b>	<b>54·25</b>

A very favorable feature of factory statistics in the past few years has been the small proportion of children, especially girls, engaged in factories. Of the male and female employees, boys and girls under 16 represented only 4·17 and 5·88 per cent. respectively in 1917-18, as against 6·05 and 11·47 per cent. in 1904. The number of children employed in factories and their proportion to the total employees are given in the subjoined table for the years 1908 to 1917-18 :—

## 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.
1908 .. ..	3,049	3,065	6,114	5·01	9·31	6·52
1909 .. ..	2,817	2,496	5,313	4·48	7·23	5·46
1910 .. ..	2,753	2,174	4,927	4·15	6·06	4·82
1911 .. ..	2,623	1,937	4,560	3·57	5·05	4·07
1912 .. ..	2,652	1,740	4,392	3·42	4·51	3·78
1913 .. ..	2,743	1,840	4,583	3·43	4·76	3·86
1914 .. ..	2,898	1,816	4,714	3·63	4·70	3·98
1915 .. ..	3,355	2,197	5,552	4·42	5·80	4·88
1916-17 ..	3,072	2,301	5,373	4·10	5·47	4·59
1917-18 ..	3,195	2,447	5,642	4·17	5·88	4·77

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, 1908 to 1917-18 :—

## MACHINERY IN FACTORIES.

Year.	Number of Factories equipped with Machinery.	Value of Machinery and Plant.	Horse-power of Engines.
		£	
1908 .. ..	2,923	6,957,606	58,945
1909 .. ..	3,069	7,140,304	63,761
1910 .. ..	3,239	7,601,085	69,373
1911 .. ..	3,474	8,336,373	79,515
1912 .. ..	3,653	9,095,134	89,290
1913 .. ..	3,990	10,022,429	105,224
1914 .. ..	4,106	10,727,526	110,055
1915 .. ..	4,039	11,068,949	117,815
1916-17 ..	4,226	11,732,062	136,985
1917-18 ..	4,371	12,612,797	149,095

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.

## POWER USED IN FACTORIES.

Year.	Number of factories using—					Manual Labour.
	Steam.	Gas.	Electricity.	Oil.	Water, Wind, or Horses.	
1908 .. ..	1,220	741	658	195	109	1,685
1909 .. ..	1,192	779	802	186	110	1,686
1910 .. ..	1,169	794	954	215	107	1,634
1911 .. ..	1,147	811	1,164	255	97	1,652
1912 .. ..	1,134	821	1,327	269	102	1,610
1913 .. ..	1,114	883	1,579	335	79	1,623
1914 .. ..	1,040	858	1,782	348	78	1,544
1915 .. ..	961	824	1,915	330	59	1,324
1916-17 ..	931	800	2,142	311	42	1,219
1917-18 ..	896	784	2,365	285	41	1,256

Year.	Actual Horse-power of Engines.				
	Steam.	Gas.	Electricity.	Oil.	Total.
1908 .. ..	47,008	5,740	5,020	1,177	58,945
1909 .. ..	47,403	8,446	6,746	1,166	63,761
1910 .. ..	49,013	9,415	9,629	1,316	69,373
1911 .. ..	54,282	11,862	11,764	1,607	79,515
1912 .. ..	59,262	13,745	14,505	1,778	89,290
1913 .. ..	67,262	16,759	18,732	2,471	105,224
1914 .. ..	67,649	17,432	22,584	2,390	110,055
1915 .. ..	71,223	17,935	26,385	2,272	117,815
1916-17 ..	81,611	18,651	34,348	2,375	136,985
1917-18 ..	89,561	19,045	38,246	2,243	149,095

Although steam is the principal motive power, and was used to supply nearly 60 per cent. of the total mechanical power employed in factories in 1917-18, a remarkable development is shown in the use of electricity, which in 1908 was used by 658, and in 1917-18 by 2,365 factories, the actual horse-power rising from 5,020 to 38,246 in the same interval.

Wages  
in factories.

The total amount and the average amount of salaries and wages paid to male and female employees in factories are shown in the following table:—

### SALARIES AND WAGES PAID IN FACTORIES.

Year.	Salaries paid to Managers and Clerks.		Wages paid to Factory Workers.		Average Salary of Managers and Clerks.		Average Wage of Factory Workers.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	£	£	£	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1910 ..	634,826	43,224	5,639,095	1,283,787	127 3 11	38 4 4	98 18 6	37 13 0
1911 ..	796,957	68,458	6,560,778	1,484,826	148 19 3	55 11 4	103 1 2	40 13 6
1912 ..	917,125	85,793	7,471,488	1,627,838	165 9 1	70 1 10	111 0 8	44 6 6
1913 ..	1,097,574	109,331	7,828,240	1,679,141	183 12 0	86 12 1	113 6 10	45 12 11
1914 ..	1,187,114	125,610	8,065,222	1,721,994	198 9 7	97 18 1	117 6 10	46 18 6
1915 ..	1,232,981	133,362	7,928,871	1,741,131	205 10 7	94 11 8	121 13 9	48 10 0
1916-17	1,364,269	171,675	8,226,582	2,070,991	220 3 0	97 3 1	128 7 8	52 2 7
1917-18	1,462,220	190,707	8,679,530	2,170,144	231 4 4	99 15 11	132 8 6	55 10 1

Owing to the lack of data, a comparison of the wages of males and females is not possible prior to 1910. From that date the particulars shown in the above table reveal a steady and continued increase in the average earnings of males and females, both as regards the salaries of managers, overseers, and clerks, and the wages of factory workers generally.

The amount of wages paid during the year 1917-18, £12,502,601, represents an average payment for all employees of £110 15s. 4d., which is an increase of £4 17s. 10d. on the average wage for 1916-17, of £9 0s. 4d. on that for 1915, of £12 5s. 4d. on that for 1914, of £16 0s. 7d. on that for 1913, of £19 11s. 4d. on that for 1912, of £27 5s. 4d. on that for 1911, and of £32 11s. 4d. on that for 1910. Concurrent with this increase there was a slight change in the relative proportions of male and female workers during the eight years, the percentages of male to total employees being 67 in 1912, 1913, 1914, and 1915, 66 in 1911, 65 in 1909, 1910, and 1917-18, and 64 in 1916-17. The above average wage for 1917-18 (£110 15s. 4d.) is below the average according to the determinations of Wages Boards. This is 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 be entitled if they 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.

Cost and value of production in factories.

The cost of production and the value of the output in each class of manufacturing industry during the year 1917-18 are given in the subjoined statement :—

FACTORY COSTS AND OUTPUT, 1917-18.

Class of Industry.	Cost of—			Value of Output.
	Raw Materials Used.	Fuel, Light, and Power Used.	Salaries and Wages Paid.	
Treating raw material, product of pastoral pursuits, &c ..	£ 4,665,646	£ 60,104	£ 441,965	£ 5,924,913
Treating oils and fats, animal, vegetable, &c.	781,835	29,282	105,223	1,171,575
Processes in stone, clay, glass, &c.	237,453	158,368	494,417	1,131,409
Working in wood .. ..	1,262,067	23,600	836,083	2,616,051
Metal works, machinery, &c. ..	3,358,608	183,272	2,180,711	6,820,180
Connected with food and drink, &c.	17,353,596	336,003	1,989,964	22,651,445
Clothing and textile fabrics, &c.	7,850,380	103,109	2,967,355	13,094,684
Books, paper, printing, &c ..	1,718,071	53,980	1,077,345	3,803,147
Musical instruments, &c. ..	25,276	652	28,071	70,376
Arms and explosives .. ..	424,646	11,808	133,130	662,842
Vehicles, saddlery, harness, &c.	613,357	16,267	478,298	1,359,817
Ship and boat building and repairing .. ..	99,092	4,290	99,178	228,451
Furniture, upholstery, and bedding .. ..	543,138	8,492	204,933	1,013,071
Drugs, chemicals, and by-products .. ..	1,072,303	26,475	254,993	1,750,546
Surgical and other scientific instruments .. ..	12,900	588	12,804	38,248
Jewellery, time-pieces, and plated-ware .. ..	208,591	3,474	111,985	411,228
Heat, light, and power .. ..	660,210	190,317	640,013	2,430,852
Leatherware, n.e.i. .. ..	301,560	2,086	68,378	442,763
Minor wares, n.e.i. .. ..	944,907	36,019	287,755	1,445,117
<b>Total .. ..</b>	<b>42,133,636</b>	<b>1,248,186</b>	<b>12,502,601</b>	<b>67,066,715</b>

The difference between the sum of the first three 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, 1917-18.

Class of Industry.	Percentage of Costs, &c., on Total Value of Production.			
	Materials.	Fuel, Light, &c.	Wages.	All other Expenditure, Interest, and Profit.
Treating raw material, product of pastoral pursuits, &c. ..	78·74	1·01	7·46	12·79
Treating oils and fats, animal, vegetable, &c. ..	66·73	2·50	8·98	21·79
Processes in stone, clay, glass, &c. ..	20·99	14·00	43·70	21·31
Working in wood ..	48·25	0·90	31·96	18·89
Metal works, machinery, &c. ..	49·26	2·69	31·97	16·08
Connected with food and drink, &c. ..	76·61	1·48	8·79	13·12
Clothing and textile fabrics, &c. ..	59·95	0·79	22·66	16·60
Books, paper, printing, &c. ..	45·18	1·42	28·33	25·07
Musical instruments, &c. ..	35·91	0·93	39·89	23·27
Arms and explosives ..	64·06	1·78	20·09	14·07
Vehicles, saddlery, harness, &c. ..	45·11	1·20	35·17	18·52
Ship and boat building and repairing ..	43·37	1·88	43·41	11·34
Furniture, upholstery, and bedding ..	53·61	0·84	29·11	16·44
Drugs, chemicals, and by-products ..	61·25	1·51	14·57	22·67
Surgical and other scientific instruments ..	33·73	1·54	33·47	31·26
Jewellery, time-pieces, and plated-ware ..	50·73	0·84	27·23	21·20
Heat, light, and power ..	27·16	7·83	26·33	38·68
Leatherware, n.e.i. ..	68·11	0·47	15·45	15·97
Minor wares, n.e.i. ..	65·39	2·49	19·91	12·21
Total ..	62·83	1·86	18·64	16·67

There are considerable variations in the proportions which the cost of materials and the expenditure on wages bear to the total 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 brickworks, &c., the cost of wages represents 44 per cent. and that of raw materials 21 per cent. of the value of the finished article, whilst in the industries connected with food and drink the expenditure on wages amounts to less than 9 per cent. and that on raw materials to over 76 per cent. of the value of the output.

Cost of  
Production,  
1908 to 1917-18.

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 1908 to 1917-18 :—

COST OF PRODUCTION AND VALUE OF OUTPUT OF FACTORIES, 1908 TO 1917-18.

Year.	Cost of Production.				Total Value of Output.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	All other Expenditure, Interest, and Profit.	
	£	£	£	£	£
1908 .. ..	18,662,070	538,571	6,380,296	5,206,823	30,787,760
1909 .. ..	19,706,530	566,768	6,807,851	5,817,086	32,898,235
1910 .. ..	21,941,255	639,135	7,600,932	6,479,532	36,660,854
1911 .. ..	25,029,525	637,497	8,911,019	7,169,822	41,747,863
1912 .. ..	27,002,302	683,376	10,102,244	7,622,851	45,410,773
1913 .. ..	28,465,699	739,835	10,714,336	8,016,777	47,936,647
1914 .. ..	28,986,694	804,325	11,099,940	8,549,026	49,439,985
1915 .. ..	30,728,743	834,966	11,036,345	8,866,039	51,466,093
1916-17 ..	37,103,750	1,024,156	11,833,517	10,085,861	60,047,284
1917-18 ..	42,133,636	1,248,186	12,502,601	11,182,292	67,066,715

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

PROPORTION OF OUTLAY TO OUTPUT OF FACTORIES, 1908 TO 1917-18.

Year.	Proportion of Outlay to Output.				Total.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	Other Expenses, Interest, and Profit.	
	%	%	%	%	%
1908 .. ..	60·6	1·8	20·7	16·9	100·0
1909 .. ..	59·9	1·7	20·7	17·7	100·0
1910 .. ..	59·9	1·7	20·7	17·7	100·0
1911 .. ..	60·0	1·5	21·3	17·2	100·0
1912 .. ..	59·5	1·5	22·2	16·8	100·0
1913 .. ..	59·4	1·5	22·4	16·7	100·0
1914 .. ..	58·6	1·6	22·5	17·3	100·0
1915 .. ..	59·7	1·6	21·5	17·2	100·0
1916-17 ..	61·8	1·7	19·7	16·8	100·0
1917-18 ..	62·8	1·9	18·6	16·7	100·0

The ratio of salaries and wages to the value of the output of factories was 20·7 per cent. on the average of the past five years as against 21·2 per cent. for the period 1908-12. The cost of materials was 60·7

per cent. of the value of output in the period 1913 to 1917-18 as compared with 59·9 per cent. in 1908-12. The proportionate outlay on fuel, light, and power has remained fairly uniform during the past ten years. The balance available for miscellaneous expenses, rent, interest, and manufacturers' profit was £16 18s. 6d. in every £100 of the total output value in the period 1913 to 1917-18 as against £17 4s. 6d. in the preceding five-year period.

Capital  
invested in  
manufacturing  
plant and  
premises.

In the following statement the amount of capital invested in machinery, plant, land, and buildings used in connexion with the various classes of manufacturing industries is shown for the year 1917-18 :—

**VALUE OF MACHINERY AND PLANT AND LAND AND BUILDINGS CONNECTED WITH FACTORIES, 1917-18.**

Class of Industry.	Value of Machinery and Plant.	Value of Land and Buildings.
	£	£
Treating raw material, product of pastoral pursuits, &c. . . . .	394,890	466,810
Treating oils and fats, animal, vegetable, &c. . . . .	150,170	140,095
Processes in stone, clay, glass, &c. . . . .	448,380	468,320
Working in wood . . . . .	561,400	442,310
Metal works, machinery, &c. . . . .	1,858,870	1,887,495
Connected with food and drink, &c. . . . .	2,587,980	3,110,415
Clothing and textile fabrics, &c. . . . .	1,016,640	2,204,265
Books, paper, printing, &c. . . . .	1,026,839	1,011,065
Musical instruments, &c. . . . .	7,895	34,765
Arms and explosives . . . . .	180,525	163,690
Vehicles, saddlery, harness, &c. . . . .	145,450	558,215
Ship and boat building and repairing . . . . .	101,155	246,215
Furniture, upholstery, and bedding . . . . .	85,043	335,780
Drugs, chemicals, and by-products . . . . .	331,750	398,970
Surgical and other scientific instruments . . . . .	6,030	26,105
Jewellery, time-pieces, and plated-ware . . . . .	32,800	131,135
Heat, light, and power . . . . .	3,391,180	968,035
Leatherware, n.e.i. . . . .	18,725	66,155
Minor wares, n.e.i. . . . .	269,075	187,645
<b>Total . . . . .</b>	<b>12,612,797</b>	<b>12,847,485</b>

The capital invested in plant, buildings, &c., used in connexion with three classes of industries—heat, light and power; food and drink; and metal works and machinery—amounted to £13,801,975, or slightly more than one-half of the total for all manufacturing industries.

The total value of machinery and plant and that of land and buildings used in connexion with factories are shown in the next table for a series of years :—

**VALUE OF MACHINERY AND PLANT AND LAND AND BUILDINGS CONNECTED WITH FACTORIES, 1903 to 1917-18.**

Year.		Value of Machinery and Plant.	Value of Premises.
		£	£
1903	.. .. .	5,010,896	7,967,945
1905	.. .. .	6,187,919	7,771,238
1907	.. .. .	6,771,458	8,376,642
1909	.. .. .	7,140,304	8,642,344
1910	.. .. .	7,601,085	9,012,263
1911	.. .. .	8,336,373	9,921,516
1912	.. .. .	9,095,134	10,362,661
1913	.. .. .	10,022,429	10,753,309
1914	.. .. .	10,727,526	11,248,120
1915	.. .. .	11,068,949	11,460,123
1916-17	.. .. .	11,732,062	12,052,227
1917-18	.. .. .	12,612,797	12,847,485

It will be seen from these figures that the value of machinery and plant more than doubled between 1903 and 1917-18, whilst that of the land and buildings showed an increase of £4,879,540, or 60 per cent., in the same interval.

In the appended table the number of accidents in factories is given for the past fifteen years. These particulars 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.**

Year.	Number of Employees.	Number of Accidents.	Percentage of Accidents to Number of Employees
1903	57,767	175	·303
1904	60,977	189	·310
1905	63,270	179	·269
1906	67,545	305	·303
1907	71,968	275	·382
1908	76,210	294	·385
1909	79,348	287	·361
1910	83,053	331	·398
1911	88,694	337	·379
1912	104,746	389	·371
1913	110,487	407	·366
1914	110,660	391	·353
1915	91,888	464	·505
1916	92,320	503	·544
1917	97,561	442	·453

**Manufactures—** The foregoing tables do not include particulars relating to  
**Penal** work of various kinds done by the Penal Department at  
**Department.** Pentridge. At this establishment the manufacture of  
 clothing, brushware, boots, mats, blankets, flannel, underclothing,  
 bread, &c., and printing are carried on. The estimated value of the  
 output for 1917-18 was £14,324, and that of the materials used  
 £8,940. The articles produced are used principally by Government  
 Departments.

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

VALUE OF VICTORIAN PRODUCTION, 1913 TO 1917-18.

Produce.	Value in—				
	1913.	1914.	1915.	1916-17.	1917-18.
<i>Cultivation.</i>	£	£	£	£	£
Wheat ... ..	5,352,141	1,391,647	10,972,820	10,232,488	7,547,510
Oats ... ..	777,903	397,078	942,607	828,929	965,973
Barley, malting ...	151,771	105,602	171,966	158,735	207,275
„ other ... ..	85,033	56,297	122,631	140,746	166,104
Maize ... ..	121,234	234,597	191,645	163,638	243,766
Other Cereals ...	46,059	46,676	52,900	49,592	60,961
Grass and Clover	5,177	495	6,022	4,446	7,445
Seed					
Potatoes ... ..	573,227	800,269	1,017,563	550,086	519,605
Onions ... ..	138,257	167,098	105,244	118,423	141,343
Other Root Crops	25,469	17,379	16,505	9,892	10,640
Hay ... ..	2,565,740	4,181,827	4,098,664	2,033,990	2,801,158
Straw ... ..	101,614	152,640	104,495	78,302	52,424
Green Forage* ...	247,408	418,962	181,278	149,001	167,709
Tobacco ... ..	3,266	2,254	1,840	840	943
Grapes, not made into	25,639	30,826	31,715	23,454	11,268
wine, raisins, &c.					
Raisins, ordinary ...	49,375	28,544	66,410	41,832	40,811
„ sultanas ... ..	126,651	152,633	295,469	185,616	150,712
Currants ... ..	71,413	37,085	123,473	91,355	92,803
Wine ... ..	116,822	63,087	138,036	146,549	90,008
Hops ... ..	6,279	5,900	3,990	4,875	4,190
Other Crops ... ..	63,937	64,388	58,293	64,821	62,450
Fruit grown for Sale	769,647	498,151	769,611	602,584	765,405
in Orchards and					
Gardens					
Fruit in Private	8,250	7,820	7,476	7,680	6,620
Orchards and Gar-					
dens					
Market Gardens ...	269,425	323,375	284,475	263,650	284,050
<b>Total</b> ... ..	<b>11,701,737</b>	<b>9,184,630</b>	<b>19,765,128</b>	<b>15,956,524</b>	<b>14,401,173</b>

\* Exclusive of area under sown grasses.

## VALUE OF VICTORIAN PRODUCTION, 1913 TO 1917-18—continued.

Produce.	Value in—				
	1913.	1914.	1915.	1916-17.	1917-18.
	£	£	£	£	£
<i>Dairying and Pastoral.</i>					
Milk consumed in natural state	1,274,590	1,413,980	1,895,160	1,646,520	1,755,620
Butter made	3,341,920	2,998,820	2,528,360	4,224,420	4,229,310
Cheese made	126,670	117,210	129,110	223,040	197,750
Cream made (not for butter)	23,800	25,960	13,760	26,840	25,690
Condensed, Concentrated, and Powdered Milk	396,436	381,640	386,456	777,810	1,005,580
Horses	454,820	...	...	262,020	70,880
Cattle	2,277,170	1,766,473	226,480	4,774,610	5,270,940
Pigs	678,355	735,065	472,050	825,450	1,002,250
Sheep (without wool)	1,572,420	1,134,678	784,575	3,928,860	3,641,630
Wool	4,032,954	3,410,913	4,066,003	5,927,814	6,410,077
Total	14,179,135	11,984,739	10,501,954	22,617,384	23,609,727
<i>Mining.</i>					
Gold	1,847,475	1,755,236	1,397,793	1,090,194	857,500
Coal	274,940	289,099	275,343	216,875	345,830
Stone from Quarries (including limestone)	167,567	183,376	209,539	125,106	171,990
Other Metals and Minerals	54,762	51,298	64,022	104,212	124,910
Total	2,344,744	2,279,009	1,946,697	1,536,387	1,500,230
<i>Forest Produce.</i>					
Timber (Forest Saw-mills only)	290,280	316,400	234,700	297,660	355,430
Firewood (estimated)	494,580	505,350	506,260	521,770	567,910
Bark for Tanning	78,950	91,200	140,400	117,230	116,460
Total	863,810	912,950	881,360	936,660	1,039,800
<i>Miscellaneous.</i>					
Honey and Beeswax	26,077	9,704	18,774	30,504	80,473
Poultry production (estimated)	1,706,700	1,743,860	1,747,000	1,714,770	2,160,650
Rabbits and Hares	349,671	176,104	114,800	110,770	266,490
Fish	100,489	104,007	109,429	121,634	137,423
Total	2,182,937	2,033,675	1,990,003	1,977,678	2,645,036
Total Value of Primary Products	31,272,363	26,395,003	35,085,142	43,024,633	43,195,966
Manufacturing — Added Value*	18,714,999	19,633,098	20,053,552	21,678,039	23,976,732
Grand Total	49,987,362	46,028,101	55,138,694	64,702,672	67,172,698

\* Exclusive of value of output of butter and cheese factories, and forest saw-mills (as regards Victorian timber) included above

The production under the headings "Dairying and Pastoral" and "Manufactures" showed increases in each of the two periods 1915 to 1916-17, and 1916-17 to 1917-18. In the second of these periods the increases were moderate, but in the earlier period there was a large addition to the value of Dairying and Pastoral Production.

The total value of primary production in 1917-18 was £43,195,966, or £171,333 more, and that of manufactures was £23,976,732, or £2,298,693 more than in the preceding year.

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,  
1913 TO 1917-18.**

Produce.	Value of Produce per head in—				
	1913.	1914.	1915.	1916-17.	1917-18.
	£ s d.	£ s d.	£ s d.	£ s d.	£ s d.
Cultivation ... ..	8 8 0	6 9 1	13 17 2	11 8 0	10 4 2
Dairying and Pastoral	10 3 7	8 8 5	7 7 3	16 3 2	16 14 8
Mining ... ..	1 13 8	1 12 0	1 7 5	1 1 11	1 1 3
Forest ... ..	0 12 5	0 12 10	0 12 5	0 13 5	0 14 9
Miscellaneous ... ..	1 11 4	1 8 7	1 7 10	1 8 3	1 17 6
<b>Total Primary Produce</b>	<b>22 9 0</b>	<b>18 10 11</b>	<b>24 12 1</b>	<b>30 14 9</b>	<b>30 12 4</b>
<b>Manufactures ...</b>	<b>13 8 8</b>	<b>13 15 9</b>	<b>14 1 3</b>	<b>15 9 9</b>	<b>16 19 10</b>
<b>Grand Total ...</b>	<b>35 17 8</b>	<b>32 6 8</b>	<b>38 13 4</b>	<b>46 4 6</b>	<b>47 12 2</b>

The figures show the steadily increasing importance of the manufacturing industries. Relatively to population, the amount added in the process of manufacture to the value of the raw materials used was 26 per cent. higher in 1917-18 than in 1913.