

**PRODUCTION.**

**LAND SETTLEMENT, ETC.**

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

	Acres.
Lands alienated in fee simple .. ..	24,903,109
Lands in process of alienation .. ..	8,236,885
Crown lands .. ..	23,105,766
Total .. ..	56,245,760

The Crown lands comprise—

Permanent forests (under Forests Act) ..	3,384,300
Timber reserves (under Forests Act) ..	738,700
State forests and Timber reserves (under Land Act) .. ..	329,600
Water reserves .. ..	316,880
Reserves for Agricultural Colleges, &c. ..	85,590
Reserves in the Mallee .. ..	397,881
Other reserves .. ..	301,400
Roads .. ..	1,762,090
Water frontages, beds of rivers, lakes, &c.; (unsold land in cities, towns, and boroughs)	1,931,094
Land in occupation under—	
Perpetual leases .. ..	136,243
Other leases and licences .. ..	97,982
Temporary grazing licences .. ..	8,330,491
Unoccupied .. ..	5,293,515
Total .. ..	23,105,766

In the following table are shown the area of Crown lands sold absolutely and conditionally, and the area of lands alienated in fee simple in each year since 1911.

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

### ALIENATION OF CROWN LANDS, 1912 to 1921.

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.	£
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
1918 .. ..	1,760	74,514	76,064	78,235
1919 .. ..	1,166	70,729	102,294	114,654
1920 .. ..	3,125	102,534	187,228	192,861
1921 .. ..	1,800	99,750	110,056	100,890

\* Exclusive of Mallee selectors.

From the period of the first settlement of the State to the end of 1921 the amount realized by the sale of Crown lands was £34,052,846, which represents an average of £1 0s. 7d. 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, 1921.

Location.	Classification.					Total.
	Agricultural and Grazing.				Auri-ferous.	
	First.	Second.	Third.	Un-classed.		
County.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bulu Bulu .. .. .	2,149	39,540	95,629	..	..	137,318
Croajingolong .. .. .	2,510	5,416	584,000	837,400	13,850	1,443,176
Dargo .. .. .	..	..	105,748	341,160	72,000	518,848
Tambo .. .. .	..	..	219,397	364,459	900	584,747
Tanjil .. .. .	..	..	110,000	361,650	67,000	538,650
Wonnangatta .. .. .	..	39	150,688	942,100	..	1,092,827
Bogong .. .. .	1,720	14,268	215,485	179,724	107,361	518,558
Benambra .. .. .	..	403	318,748	327,974	85,821	732,946
Delatite .. .. .	610	21,741	222,953	230,050	61,336	536,690
Moirra .. .. .	546	..	12,525	..	..	13,071
Anglesey .. .. .	..	3,947	94,870	..	7,603	106,420
Bourke .. .. .	..	162	..	..	..	162
Dalhousie .. .. .	..	687	2,442	..	5,262	8,391
Evelyn .. .. .	..	20,677	..	..	2,247	22,924
Mornington .. .. .	..	5,701	47,433	..	..	53,134
Bendigo .. .. .	80	398	3,553	..	5,244	9,275
Rodney .. .. .	..	97	..	..	2,420	2,517
Borong .. .. .	423	10	83,402	..	3,689	87,524
Gladstone .. .. .	270	3,198	2,348	..	18,840	24,666
Loway .. .. .	..	681	271,451	11,343	..	283,475
Kara Kara .. .. .	..	..	6,720	..	5,614	12,334
Talbot .. .. .	..	..	217	..	47,140	47,357
Tatchera .. .. .	..	70	..	..	..	70
Heytesbury .. .. .	..	2,429	141,849	..	..	144,278
Polwarth .. .. .	9,220	16,571	32,382	..	..	58,173
Grant .. .. .	..	75	26,687	..	16,510	43,272
Grenville .. .. .	79	533	..	..	14,217	14,829
Ripon .. .. .	18	371	26,656	..	4,372	31,417
Normanby .. .. .	..	267	145,767	11,740	..	157,774
Dundas .. .. .	..	..	104,148	15,754	..	119,902
Villiers .. .. .	..	..	1,895	..	..	1,895
Follett .. .. .	..	1,183	226,184	32,174	..	259,541
Totals .. .. .	17,625	138,464	3,253,177	3,655,459	541,426	7,606,151
Throughout the State .. .. .	Swamp or reclaimed lands .. .. .					2,126
.. .. .	Lands which may be sold by auction .. .. .					8,351
The north-western portion of the State .. .. .	Mallee lands (such as are suitable to be eventually classed 1st, 2nd, or 3rd class for selection) .. .. .					5,591,480
Total area remaining for disposal .. .. .						13,208,108

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

The particulars of Crown lands for which licences had been issued for pastoral occupation on 31st December, 1921, are as follows:—

Number of Licences .. .. .	6,895
Area (acres) .. .. .	8,330,491
Annual Rental .. .. .	£29,313

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

**Concessions to land seekers.** The Lands Inquiry Branch gives information to intending applicants and issues concession warrants for half fares on Victorian Railways to persons travelling to make inspection or take possession of land.

**Area that may be selected.** An applicant may select in the Mallee, under Selection Purchase Lease, 640 acres of first class, 1,000 acres of second class, 1,280 acres of third class, or 1,600 acres of fourth class land, or 4,000 acres of land classed 4A; and, in addition, may acquire privately an area equivalent to that which he selects from the Crown.

**Grazing licences.** Grazing licences are renewable annually, and are only granted for waste lands of the Crown until required under the principal sections of the Act.

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

**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 1921 there were submitted 501 applications to have brought under the Act land amounting to 10,832 acres in extent, and to £732,616 in value; whilst the land actually brought under the Act during the year by application was 46,324 acres valued at £989,790. Up to the end of 1921 there had been brought under the Act 3,057,391 acres valued at £62,118,664.

**Assurance Fund.** When application is made to have land brought under the Transfer of Land Act, a contribution to the assurance fund of  $\frac{1}{2}$ d. in the £1 on the value of the land is levied on the applicant to assure and indemnify the Government in granting a clear title against all the world, as some other person may have a latent interest in the property, and it may be necessary for the Government to recompense such person out of the fund for the loss of his interest. Receipts during 1921-22 comprised contributions £2,640, 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 £141 was paid out of the fund for claims and £2,201 was paid out under the provisions of the Country Roads (Special Loan) Act. The balance at the credit of the assurance fund on 30th June, 1922, was £160,674. The amount paid up to 30th June, 1922, as compensation and for judgments recovered, including costs, was £7,923.

### CLOSER SETTLEMENT.

**Closer  
Settlement.**

Under the provisions of the Closer Settlement Act the Closer Settlement Board is empowered to expend at the rate of £500,000 per annum in the purchase—either by voluntary or compulsory acquisition—of lands (whether privately owned or held under lease from the Crown) 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. If the application be refused, the amount forwarded as a deposit in respect of the purchase money and the lease fee are returned to the unsuccessful applicant, but the registration fee is retained. Only one allotment of the maximum value can be granted to any one person, and the principle of residence for eight months in each year is a condition of the lease.

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 Closer Settlement Board. The value of the land must not exceed the maximum allowed under the Act. 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, 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 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 him. 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. The residence condition is not carried into the Crown Grant.

Lands for farm allotments are subdivided into suitable areas of which none must exceed in value £2,500; and no lease of any of these areas 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

**Farm allotments.**

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. Where special circumstances warrant action, the Minister, upon the recommendation of the Board, may modify the improvement conditions.

**Advances to settlers.** The Closer Settlement Act provides for advances by the Closer Settlement 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 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 on farm allotments must not exceed 10 per cent. of the value of the land, except where the land is valued at less than £500, when the maximum is not to exceed £50.

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.

Where the whole or part of an advance has been repaid the Board has power to make a further advance up to £500 or £1,000 as the case may be.

**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, 1½-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.

The following is a complete statement of all estates purchased. acquired by the Closer Settlement Board for the purpose of closer settlement at 30th June, 1922, 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, 1922.

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.	
	acres.	£	£ s. d.				acres.
Dry Areas—							
Wando Vale ..	10,446	63,985	6 2 6	67	..	..	..
Walmer ..	13,769	44,751	3 5 0	41	..	2	..
Whitfield ..	4,247	36,096	8 10 0	34	..	2	..
Brunswick ..	91	2,793	29 0 0	..	56	..	..
Burack ..	5,109	53,640	10 10 0	44	..	..	..
Footscray ..	31	2,494	80 0 0	..	85	..	..
Dal Campbell ..	45	2,357	47 8 0	..	63	..	..
Springvale ..	3,396	25,895	7 12 6	22	..	..	..
Memsie ..	10,028	57,159	5 14 0	45	..	..	..
Richmond Vale ..	1,790	11,000	8 11 6	10	..	1	..
Overnewton ..	11,336	71,492	6 4 6	67	..	10	15
Wyuna ..	23,016	120,376	5 5 0	113	..	..	..
Restdown ..	17,894	60,391	3 7 6	52	..	..	..
Strathkellar ..	10,227	74,150	7 5 0	55	..	6	..
Bona Vista ..	2,060	28,832	14 0 0	23	..	4	36
Cadman's ..	18	844	50 0 0	..	42	..	..
Lara ..	8,329	45,825	5 10 0	32	..	7	..
Tandarra ..	4,558	21,083	4 12 6	19	..	..	..
Exford ..	8,054	64,039	8 0 0	43	..	6	..
Colbinabbin ..	19,164	110,198	5 17 6	88	..	..	..
Pirron Yaloak ..	1,058	23,796	22 7 6	21	..	..	..
Numurkah ..	2,360	18,901	8 0 0	12	..	1	..
Allambee ..	5,025	31,794	6 6 4	24	..	..	1,083
Pender's Grove ..	233	23,337	100 0 0	..	259	..	..
Phenix ..	23	968	40 0 0	..	47	..	..
Keayang ..	1,494	14,966	10 0 0	12	..	..	..
Werneth ..	6,588	31,043	4 15 0	21	..	..	..
Staughton Vale ..	9,857	66,466	6 15 0	41	..	..	..
Glenhuntly ..	74	7,040	94 0 0	..	158	..	..
The Heart ..	3,793	56,322	14 12 2	38	..	..	..
Mooralla ..	17,199	60,197	3 10 0	26	..	..	..
Maribyrnong ..	1,112	10,842	9 15 0	12	..	2	..
Kenilworth ..	18,440	55,321	3 0 0	29	..	12	..
Doogalook ..	4,640	29,002	6 5 0	16	..	..	..
Werribee ..	15,218	148,802	13 0 0	36	..	..	..
Konongwootung ..	10,181	104,363	10 3 0	63	..	15	..
Cornelia Creek ..	29,567	121,034	4 15 0	77	..	1	..
Koyuga ..	789	3,914	..	2	..	..	..
Meadowbank ..	313	9,085	29 0 0	4	..	..	..
Oaklands ..	8,069	26,309	3 5 0	10	..	..	..
Hurstwood ..	6,493	31,311	4 15 0	14	..	..	..
Eumarella ..	10,034	57,570	5 13 7	34	..	6	..
Morven ..	8,029	39,533	4 17 6	20	..	..	..
Mt. Widderin ..	8,333	48,634	5 15 6	22	..	..	..
Tooronga ..	101	17,675	178 4 4	..	210	..	..
Nerrin Nerrin and Westmere ..	7,743	67,915	..	28	..	1	..
Bellarine ..	204	5,457	26 15 0	7	..	4	..
Daylesford ..	70	2,937	42 5 2	14	..	..	..

\* 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, 1922—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.		
	acres.	£	£ s. d.				acres.	
<b>Dry Areas—continued.</b>								
Mordialloc ..	460	7,850	17 1 6	28	..	..	..	
Thomastown ..	581	11,230	19 5 6	25	..	2	..	
Wangaratta ..	796	9,660	12 3 4	29	..	1	..	
Warragul ..	98	2,060	21 0 0	7	..	3	..	
Belmont ..	113	3,161	28 0 0	..	..	17	..	
Highton ..	425	11,032	26 0 0	18	..	..	..	
Deepdene ..	2,985	35,742	12 0 0	13	..	..	..	
Glenaladale ..	2,109	23,787	13 10 0	16	..	..	..	
Cremona ..	1,292	20,140	Various	1	..	1	..	
Boisdale ..	2,521	72,174	Various	42	..	..	..	
Pannoo ..	15,102	98,455	Various	42	..	..	..	
Marathon and Wil- low Grove ..	14,783	58,752	Various	26	..	..	..	
Dunrobin ..	18,814	119,779	6 6 0	56	..	23	..	
Kilmany ..	8,746	106,080	12 0 0	70	..	..	..	
Waubra ..	47	1,042	22 10 0	10	..	1	..	
Nathalia ..	30	362	12 0 0	..	..	5	..	
Moyhu ..	2,422	19,580	8 0 0	11	..	..	..	
† Condah ..	157	1,725	10 19 8	..	..	..	..	
‡ Mackey ..	1,078	20,626	19 2 10	..	..	..	..	
Ascot Park ..	488	3,671	Various	1	..	..	..	
Nanneella ..	738	7,767	Various	6	..	13	..	
Cohuna ..	223	2,215	Various	2	..	..	..	
Bamawm ..	162	1,391	8 12 0	2	..	..	..	
Thornbury ..	11	5,625	..	..	47	..	..	
Crown Lands	3,124	20,736	Various	18	78	18	..	
Sec. 6-11—Pur- chases ..	53,101	350,061	Various	274	..	12	2,475	
Land purchased for Discharged Sol- diers, but granted to civilians under Closer Settlement Act ..	9,591	73,867	Various	35	..	..	..	
<b>Irrigable Areas—</b>								
Nanneella ..	8,565	78,654	Various	87	..	2	31	
Bamawm ..	13,365	122,944	Various	140	..	11	..	
Shepparton ..	9,243	136,839	Various	191	..	39	..	
Swan Hill ..	7,358	73,637	Various	118	..	1	..	
Cohuna ..	11,531	114,856	Various	103	..	6	81 1/2	
Tongala ..	15,223	172,396	Various	156	..	23	53	
Kyabram ..	3,049	36,091	Various	18	..	7	115	
Koondrook ..	3,423	23,201	Various	32	..	..	..	
Werribee ..	7,996	153,871	..	101	..	21	488	
Koyuga ..	4,173	36,228	..	37	..	14	6	
Behtuca ..	3,235	29,142	Various	26	..	..	..	
Dingee ..	472	4,160	Various	5	..	7	20	
Cornelia Creek ..	2,507	16,501	..	7	..	..	194	
Stanhope (including Lauderdale and Bonshaw) ..	20,890	223,639	Various	62	..	14	1,260	
Sec. 6-11—Pur- chases ..	757	8,291	..	8	..	..	..	
Land purchased for Discharged Sol- diers (as above)	239	4,922	..	6	..	..	..	
<b>Total ..</b>	<b>582,676</b>	<b>4,346,387</b>	<b>..</b>	<b>3,168</b>	<b>§</b>	<b>1,045</b>	<b>321</b>	<b>6,587</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  
 § Includes 542 Discharged Soldiers.

On 30th June, 1922, the Board had 100 properties, with a total area of 582,422 acres, of which 7,922 acres were available for allotment. Portions of estates, amounting in the aggregate to 41,986 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, 1922, 542 allotments, containing 45,112 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 1918 to 1922 is summarized in the next statement.

Extent of  
Closer  
Settlement.

#### CLOSER SETTLEMENT HOLDINGS, 1918 TO 1922.

	At 30th June—				
	1918.	1919.	1920.	1921.	1922.
In occupation—					
Number of Holdings ..	4,492	4,477	4,921	5,019	5,076
Area .. .. acres	506,838	508,463	547,087	560,450	570,531
Resident Population ..	17,620	17,616	19,392	19,973	20,304
Area unallotted .. .. acres	30,618	28,689	21,069	10,979	7,922

The sum of £4,454,582 had been repaid to the Closer Settlement Fund up to 30th June, 1922. Of that amount £2,069,456 had been transferred to revenue to meet interest due to stockholders, £70,000 had been invested to replace amounts written off estates re-valued, £100,000 had been placed in securities under the Discharged Soldiers Settlement Acts, and £2,069,579 had 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, 1922, being £145,547. The balance of unredeemed stock is now £3,917,516, on which the interest payable amounts to £143,783 per annum. Up to the 30th June, 1922, 13,021 applications for advances aggregating £1,091,615 had been approved, and that amount had been advanced to effect improvements, or upon improvements already effected by lessees.

**Small Improved Holdings.**

Under the *Closer Settlement Act 1909* (No. 2) the administration of the *Small Improved Holdings Act 1906* was placed in the hands of the Closer Settlement Board, subject to the Minister. The particulars of estates dealt with under the latter Act are shown in the table on page 432 relating to closer settlement estates at 30th June, 1922.

**Soldiers Settlement Scheme.**

Up to the 30th September, 1922, the Closer Settlement Board and the State Rivers and Water Supply Commission had specially purchased for the settlement of soldiers 1,693,270 acres at a cost of £12,735,757. The number of soldiers settled up to that date was as follows:—

On land specially purchased by the Closer Settlement Board	5,590
On land specially purchased by the State Rivers and Water Supply Commission .. .. .	1,291
On Closer Settlement old estates—Dry areas .. .. .	70
On Closer Settlement old estates—Irrigable areas .. .. .	555
On Crown Lands—Ordinary and Mallee Areas .. .. .	1,155
On Crown Lands—Merbein and Nyah Irrigation Areas .. .. .	186
Soldiers receiving assistance from the Closer Settlement Board, on share farming, leasing agreements and freehold land .. .. .	690
Total .. .. .	9,537

In addition to the above there were available or in process of being made available 662 allotments, of which 100 were on land specially purchased by the Closer Settlement Board, 465 in irrigable areas, and 97 on Crown land.

Up to the end of September, 1922, the amount of assistance rendered by the Board to soldier settlers by way of advances was £4,919,105.

**WATERWORKS.**

All Victorian waterworks are controlled by official bodies, either State or local. The following table summarizes those waterworks on which the Government has expended or advanced moneys and is practically a summary of all waterworks

**Victorian Waterworks.**

in the State, although there are minor works constructed by municipalities out of municipal funds.

**WATERWORKS—CAPITAL EXPENDITURE AND ADVANCES  
BY STATE TO 30TH JUNE, 1921.**

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	10,855,000,000	1,273,622
Broken River Works ..	Stock and Domestic	..	14,853
		Acre feet.	
Goulburn-Waranga ..	Irrigation, &c. ..	330,000	1,631,304
North-west (Kerang) Lakes	Stock and Domestic	88,500	16,355
Kow Swamp Works ..	Irrigation, &c. ..	40,860	187,366
Loddon River Works ..	.. ..	14,000	167,636
Sugarloaf Reservoir (under construction) ..	.. ..	300,000	559,560
Glennaggie Reservoir ..	.. ..	60,000	56,066
		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 ..	.. ..	166,000,000	27,346
Bacchus Marsh and Werribee Scheme ..	Irrigation, &c. ..	Acre feet. 31,850	161,497
Irrigation and Water Supply Districts (20)	.. ..	..	1,955,134
Waterworks Districts (19)	Stock and Domestic	..	1,687,033
First Mildura Irrigation and Water Supply Trust ..	Irrigation .. ..	..	115,062
		Gallons.	
Waterworks Trusts (98) ..	Stock and Domestic	1,180,000,000	1,215,226
Municipal Corporations (29)	.. ..	3,110,000,000	784,465
Abolished Irrigation and Water Supply Trusts (8)	Irrigation .. ..	..	32,724
Miscellaneous Expenditure	.. ..	..	155,303
Melbourne and Metropolitan Board of Works ..	Domestic .. ..	6,460,000,000	5,080,342
Geelong Waterworks and Sewerage Trust ..	.. ..	2,703,967,000	627,700
Total ..	.. ..	..	15,806,206

Of the expenditure given in the case of the Melbourne waterworks, £3,189,934 represents money borrowed by the State, £2,251,752 of which has been redeemed—£800,000 out of consolidated revenue, and £1,451,752 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, 1921, was £938,182. Further particulars relating to this Board will be found on page 189, Part IV., 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., £157,923, and the capital expenditure by the Trust since acquiring the works, viz., £204,777.

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, 1921.
	£	£	£	£	£	£
State Works .. .. .	4,282,270	..	2,798*	..	..	4,282,270
Irrigation and Water Supply Districts (20) .. .. .	1,955,134	..	15,406	575,152	19,046	1,360,936
First Mildura Irrigation and Water Supply Trust .. .. .	115,062	..	..	..	5,462	109,600
Waterworks Districts (22) .. .. .	1,687,033	..	46,439	175,055	39,836	1,472,142
Waterworks Trusts (98) .. .. .	1,177,812	6,871	37,414	125,861	152,980	905,842
Geelong Waterworks and Sewerage Trust .. .. .	455,676	..	..	..	207,753	157,923
Municipal Corporations (20) .. .. .	774,922	43,633	..	165,870	140,499	512,186
(9) .. .. .	9,543	346	..	..	9,889	..
Melbourne and Metropolitan Waterworks System .. .. .	3,189,934	..	..	..	2,251,752	938,182
Abolished Trusts (8) .. .. .	31,710	..	243	31,680	30	..
Flood Protection Districts .. .. .	129,053	..	..	..	..	129,053
Miscellaneous .. .. .	155,303	..	..	..	..	155,303
Total .. .. .	13,963,452	50,850	102,300	1,073,618	2,917,247	10,023,437

\* 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 which has actually been written off the liabilities of the Trusts (Irrigation and Waterworks) and Corporations is £1,653,404. Interest outstanding at 30th June, 1921, amounted to £21,020, viz., £8,548 against the First Mildura Trust, £10,171 against Waterworks Trusts, and £2,301 against Municipal Corporations.

### IRRIGATION.

**Progress of Irrigation.** Prior to 1905 the management of irrigation in Victoria was in the hands of various Irrigation Trusts, which were financed by the State. These Trusts drifted into financial difficulties and the State was compelled to assume control.

In the year mentioned, by the authority of Parliament, the State Rivers and Water Supply Commission was constituted and 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 epitomes have been given in previous issues of this work—and the *Water Acts 1916* and 1918. The chief difficulties under which the Irrigation Trusts laboured were sparse settlement, and the absence of powers to 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 five years :—

PROGRESS OF IRRIGATION IN CLOSER SETTLEMENT  
AREAS.

District (having allotted Water Rights).	Area Irrigated.	
	1909-10.	Average for past Five Years.
	Acres.	Acres.
Supplied from the Goulburn—		
Shepparton .. ..	..	13,337
Rodney .. ..	32,356	43,873
Stanhope (four years) .. ..	..	5,341
Tongala .. ..	2,270	9,328
Rochester .. ..	500	21,967
Dingee .. ..	..	1,968
Tragowel Plains .. ..	20,000	31,443
Supplied from the Murray—		
Cohuna .. ..	12,000	15,736
Gannawarra .. ..	7,825	17,395
Koondrook .. ..	5,029	14,819
Swan Hill .. ..	5,410	9,753
Nyah .. ..	569	2,034
Merbein .. ..	202	6,725
Red Cliffs (one year) .. ..	..	1,630
Supplied from the Werribee—		
Bacchus Marsh .. ..	31	2,676
Werribee .. ..	..	4,051
Total .. ..	86,192	202,076

The area under irrigated culture in the whole State, in 1921-22, for all kinds of crop, was 287,907 acres, being an increase of 5,373 acres on the area irrigated in the previous year, and 10,223 acres above the average of the previous four years.

Total area irrigated.

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

### IRRIGATED AREAS : HOW UTILIZED.

Crop.	1909-10.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	acres.	acres.	acres.	acres.	acres.	acres.
Cereals .. ..	23,715	3,243	44,765	76,810	26,546	25,039
Lucerne .. ..	24,124	50,869	64,131	71,364	72,338	82,226
Sorghum and other annual fodders ..	8,094	10,589	19,083	32,955	25,963	28,112
Pastures .. ..	50,541	54,985	88,986	117,263	100,424	88,195
Vineyards and orchards	17,524	32,785	38,260	43,586	50,281	55,601
Fallow .. ..	4,988	2,323	5,575	8,502	3,465	4,867
Miscellaneous ..	785	3,002	3,559	2,768	3,517	3,867
Details not available (private diversions)	129,771	157,796	264,359	353,248	282,534	277,967
	8,000	17,000	17,800	18,000	—	—
Total .. ..	137,771	174,796	282,159	371,248	282,534	287,907

Of the total area irrigated in 1921-22—287,907 acres—the percentages devoted to different purposes were as follows :—Pastures, 31 ; cereals, 9 ; lucerne, 28 ; vineyards, orchards, and gardens, 19 ; sorghum and other annual fodder crops, 10 ; fallow, 1·7 ; and miscellaneous, 1·3. 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.

**Closer  
Settlement  
in Irrigation  
Districts.**

The Commission has now fairly well met the demand by Discharged Soldier Settlers for irrigable Closer Settlement blocks, and while preference will still in every case be given to a qualified soldier applicant, it is proposed to now consider applications from other suitable intending settlers.

The blocks allotted during the year 1921-22 totalled 344, of which 298 were granted to discharged soldiers, and the balance, under the Closer Settlement Acts, to ordinary settlers.

In view of a demand for land in various districts, the Commission during the year purchased eleven properties having a total area of 8,300 acres. Among the most important of these are the estates known as Tye's, Roberts's, and Anderson's, in the Koondrook Irrigation District, near Gonn Crossing on the River Murray. These estates, aggregating 4,170 acres, which are contiguous to each other and to lands previously acquired and settled under irrigation conditions, will make a compact addition of 125 holdings to the existing settlement. The Swan Hill settlement has been further extended by the purchase of four properties, comprising 1,700 acres, and the Werribee Settlement by the addition of a further area of 1,200 acres of the Werribee Park Estate. About 1,000 acres of the latter estate have been subdivided into 40 farm allotments, 28 of which have already been allotted to soldiers, while the Swan Hill properties together have provided 46 blocks, of which 24 have been similarly settled. The balance (200 acres) of the Werribee Park purchase, being within the Town of Werribee, has been subdivided into small suburban irrigable holdings, and will be sold by auction. The other properties acquired are in process of subdivision and will be gazetted as available when required. Three subdivisions have now been made at the Red Cliffs Settlement, comprising in all 10,000 acres of irrigable land, divided into some 620 blocks averaging a little over 16 acres each, while 2,000 acres of the area unsuitable for irrigation has been advantageously disposed of in large areas.

The Commission has now placed a total of 2,032 soldiers on irrigable farms. Of this number, some 670 settled in the Districts served by the Goulburn Irrigation System, 1,070 on Murray Settlements, and the others principally at Werribee and Maffra. In the Goulburn areas there are now 233 on the Stanhope Estate and 151 at Tongala, on lands mainly devoted to dairying; 111 at Shepparton, principally orchardists; about 60 at Rochester and 116 in the Rodney District, occupied in mixed farming. In the Murray areas there are 74 in the Cohuna, Gannawarra, and Koondrook Irrigation Districts and 140 at Swan Hill engaged in fruit culture and dairying; 226 on fruit blocks at Merbein and Nyah; and 622 at the new Red Cliffs Settlement, all engaged in fruit culture. In the Werribee District there are 100 settled on dairying blocks, and at Maffra 43 are occupied in beet culture and dairying. About 335 of the soldier settlers acquired their farms under the provisions of section 20 of the *Closer Settlement Act* 1915.

The following statement shows the lands purchased and subdivided by the State, and the extent of settlement on each estate. The subdivided portions of these estates are already supporting twenty times as many families as were living on them prior to their subdivision for closer settlement. The statement shows also particulars of settlement effected under section 20 of the *Closer Settlement Act* 1915 outside the large estates subdivided by the Commission :—

Closer Settlement Estates.	Area of Lands purchased by the State in Acres.	Properties Subdivided.						
		Area in Acres.	Number.	Number of Families thereon when Purchased.	Subdivided into—		Number of Closer Settlement Blocks now occupied.	Present Increase in Number of Families.
					Number of Closer Settlement Blocks.	Average Area in Acres.		
Shepparton .. .. .	10,700	10,700	26	24	330	31	330	306
Tatura .. .. .	400	100	1	..	4	24	4	4
Stanhope .. .. .	20,900	20,900	6	12	309	62	302	297
Kyabram .. .. .	3,000	3,000	7	10	56	53	56	46
Tongala .. .. .	16,300	16,300	33	31	263	59	263	232
Koyuga .. .. .	4,200	4,200	..	..	52	77	52	52
Cornelia Creek .. .. .	2,500	2,500	..	..	14	176	13	14
Nanneella .. .. .	9,000	9,000	17	7	105	83	105	98
Echuca .. .. .	3,200	3,200	6	4	27	117	26	23
Bamawm .. .. .	13,400	13,400	28	21	179	71	179	158
Dingee .. .. .	500	500	3	1	15	30	15	14
Calivil .. .. .	700	..	..	..	..	..	..	..
Cohuna .. .. .	12,000	12,000	29	10	134	86	122	124
Koondrook .. .. .	7,600	3,400	5	4	34	96	34	30
Swan Hill .. .. .	11,600	11,200	29	16	257	41	246	241
Nyah .. .. .	3,800	3,800	8	1	208	17	203	207
Merbein .. .. .	8,300	8,300	..	..	384	21	384	384
Red Cliffs .. .. .	33,000	12,700	1	3	622	16	622	619
Bacchus Marsh .. .. .	70	70	1	..	2	34	2	2
Werribee .. .. .	10,000	9,800	Pt. 1	11	238	38	224	227
Maffra .. .. .	4,900	4,900	7	4	107	41	43	103
Properties under Section 20, <i>Closer Settlement Act</i> 1915, outside above Estates	176,070 18,620	149,970 ..	209 ..	159 ..	3,340 ..	42 ..	3,225 208	3,181 ..
	194,690							

**Progress of Irrigated Closer Settled Districts.** The development of Irrigation in all parts of the world is one of slow, but generally sure growth, and it is therefore gratifying to note that progress in practically all the Irrigation Districts has been on the whole most satisfactory and bears most favorable comparison with the records of like districts in other places. The improvement during the year in all cases has been very satisfactory, while in some new districts the transformation from barren dry areas to flourishing growing centres has been most marked.

In Red Cliffs Settlement, for instance, the development that has taken place in less than two years probably constitutes a record

in irrigation development, while almost similar progress can be reported in the other important small-fruit centres of Merebin, Nyah, and Woorinen.

In Cohuna, Rochester, Stanhope, Tongala, and Swan Hill Districts not only has dairying and the growing of lucerne increased, but in many cases settlers are now owning and rearing specially selected herds, the progeny of which are proving prize takers at various agricultural shows. Another gratifying development is the increase in pig raising, which has now become a most important branch of farming operations in the districts named.

At Werribee the increase in dairying still continues; and considerable improvement is shown in the production of fodder crops, principally lucerne. At Maffra, also, settlers are developing their holdings in anticipation of the irrigation supply, which will soon be available. A new and most satisfactory development has also taken place in Koondrook District where, at Gonn's Crossing, on the Murray, a band of soldier settlers trained in such work has practically resuscitated the orange groves which were recently purchased by the Commission for subdivision into Closer Settlement blocks.

At Shepparton, which is one of the most important centres for large fruit growing under irrigation, splendid yields of apricots, peaches and pears have been obtained, and these have been for the most part successfully processed at the local co-operative cannery, which is now producing a pack equal to that produced in any part of the world. The growers at Kyabram centre, who are now becoming large producers of similar fruit, have also resolved to erect by co-operative effort a similar cannery at that centre, and a large subscription of shares has already been secured. While the canned products from such canneries are now above reproach, it is regretted that it seems almost impossible at present to dispose of the goods even at cost price, particularly in London, which, of course, is the main oversea market for such products.

The position has become so serious that it is essential that new markets be discovered if fruit production for which Victoria is peculiarly suited is to be continued on anything like a remunerative basis. Every effort must be made to foster new, and expand old markets if the industry is to be maintained. While this aspect particularly affects the disposal of large fruits, it is believed that there is also grave danger of similar difficulties arising in regard to the sale of such small fruits as raisins and currants, for which new market outlets must, if at all practicable, be found.

The construction of storage works by the State Rivers and Water Supply Commission was continued during the year. Satisfactory progress was made with the construction of Sugarloaf Reservoir on the Upper Goulburn River, and a volume of some 20,000 acre feet of water is already held in store. The enlargement of Waranga Reservoir has been completed

**Water Supply  
Construction  
Works.**

and has increased the full capacity of this storage to 330,000 acre feet. Progress was made with the works for supplementing the domestic and stock supplies to the districts served by the Wimmera-Mallee system.

**Wimmera Storages.** The work of the embankment at Taylor's Lake has now advanced sufficiently to enable the storage to be filled to practically its maximum capacity—30,000 acre-feet. The new main channel connecting the Wimmera River with Taylor's Lake and Pine Lake Storages is completed. Its capacity is 1,200 acre-feet per day. It is intended to proceed with the construction of the embankment at Pine Lake immediately. The storage thus formed will have a capacity of 62,000 acre-feet.

The storage provision for the Wimmera-Mallee Supply Scheme now reaches 148,000 acre-feet as against 69,000 acre-feet a few years ago. Storage works now in course of construction will carry the capacity to no less than 200,000 acre-feet.

**Total Storages in State.** In 1902 the total capacity of storages in the State was 172,000 acre-feet. The present capacity is about 772,000 acre-feet, and, when the Sugarloaf, Wimmera, and Maffra Storages are completed, the total capacity will exceed 1,250,000 acre-feet. The Hume Reservoir, in course of construction, will also contain fully 1,000,000 acre-feet, half of which can, subject to the provisions of the River Murray Agreement, be credited to the State of Victoria.

**Mornington Peninsula Scheme.** The important scheme of reticulated supply to the Naval Base and the bayside towns of Mornington, Frankston, Seaford, Carrum, Chelsea, Edithvale, and Aspendale, is in full working order. The reservoirs at Beaconsfield, Frankston, South Frankston, Mornington, and Bittern were kept fully supplied during the past year. Considerable extensions of the pipe reticulations of these towns have been carried out, and further extensions are in progress to meet the requirements of settlement, which is rapidly increasing in all these centres.

Arrangements have been made to complete the reticulation of the towns of Somerville and Bittern. The reticulation at Cranbourne has been completed, the township being supplied direct from the Cranbourne Main Pipe Line. A reinforced concrete service basin of 250,000 gallons capacity will be constructed on the race-course hill at Cranbourne. The reticulation of the main portion of the town of Berwick is nearing completion. A reinforced concrete service basin, which is to hold 250,000 gallons, has been constructed.

Considerable extensions and enlargements of the main lines of supply and of the existing reticulation at Dandenong have been carried out, and the water supply to all parts of the reticulated area should prove adequate for all summer demands. The new service basin on Heywood's Hill, the capacity of which was increased to 36,000,000 gallons, has been completed and is being filled from the Monbulk watershed. Good progress has been made with the surveys to connect the Dandenong supply with the Beaconsfield Reservoir.

**Maffra  
District  
Irrigation  
Scheme.**

During the year 1921-22 operations had necessarily to be concentrated mainly on the construction of the cyclopean concrete dam on the Macallister River at Bradley's Creek Junction, just below Glenmaggie township. Special attention was given to the preparation of the foundations across the river bed and the placing of concrete therein; and the dam has already been carried up to such a stage by the gangway method that river floods will now cause little or no inconvenience other than a short cessation of work on such occasions. An up-to-date "tower" plant has now been installed for the rapid placing of concrete at any level required, and vigorous measures will be taken during the year 1923 to carry the concrete work to such a height as will enable a valuable quantity of water to be stored in the reservoir basin during the summer of 1923-24.

The design for the dam now being carried out will raise water to a maximum height of 100 feet above foundations. The storage thus created will have a capacity of over 150,000 acre-feet. This, with the large unregulated flow of the river, which can be drawn on during the first portion of an irrigation season, will give ample water for the irrigation of some 80,000 acres of very suitable land in this important district.

**Red Cliffs  
Irrigation  
District.**

The area now cleared is about 13,000 acres, and includes practically the whole of the allocated lands. The erection of the main pumping plant is well in hand and work is also well forward at the three re-lift pumping stations, where motor-driven plants will be installed for raising water from the main channel to channels 23 feet, 35 feet, and 40 feet higher, for the supply of some 7,000 acres of land not commanded by the main plant and channel system. Work on the construction of channels, bridges, and other structures has been continuous throughout the year. The channels now constructed total over 80 miles in length and have involved the excavation of 500,000 cubic yards of earth.

About 1,000 returned soldiers have been employed for the greater part of the year on various works carried out by the Commission at Red Cliffs.

**Kooweerup  
and Cardinia  
Flood  
Protection  
Scheme.**

In addition to works of water supply, the Commission has under construction a comprehensive scheme of works for the reclamation of the extensive swamps in West Gippsland, known as Kooweerup and Cardinia, and for the protection from periodical flooding of the surrounding low-lying lands aggregating in all 100,000 acres. These areas have been constituted Flood Protection Districts under the provisions of the Water Acts. The construction of the huge main drains, feeders and subsidiary works having reached the stage that enables the landholders affected to realize the full benefits of the scheme, flood protection charges have been levied accordingly.

**Artesian Bores.**

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 of Bores.	
State.	Private.	State.	Private.
108	229	Feet. 45,561	Feet. 45,800

**Mildura Irrigation Settlement.**

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

**POPULATION OF MILDURA SHIRE, 1891 to 1921.\***

1891 April (Census) ..	2,321	1916 December ..	8,000
1896 September ..	2,000	1917 „ ..	8,250
1901 March (Census) ..	3,325	1918 „ ..	8,550
1911 April (Census) ..	6,119	1919 „ ..	9,000
1914 December ..	7,250	1920 „ ..	11,500
1915 „ ..	7,618	1921 April (Census) ..	13,183

\*Including the population of the borough of Mildura, which up to 1920 was part of the shire.

The capital value of property in the Shire of Mildura in 1911 was £732,560. In 1921 in the same area it had risen to £3,079,000. The receipts and payments of the Mildura Irrigation Trust during the year ended 30th June, 1921, were as follows :—

**RECEIPTS AND PAYMENTS OF FIRST MILDURA IRRIGATION TRUST, 1920-21.**

<i>Receipts.</i>	£	<i>Payments.</i>	£
Horticultural Rates ..	29,246	Wages and Salaries ..	9,062
Special Waterings, &c. ..	6,467	Firewood ..	19,059
Miscellaneous ..	2,579	Interest, Sinking Fund and Depreciation ..	7,417
		Miscellaneous ..	10,291
<b>Total ..</b>	<b>38,292</b>	<b>Total ..</b>	<b>45,829</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, 29,966 acres in 1916-17, 22,876 acres in 1917-18, 39,895 acres in 1918-19, 41,808 acres in 1919-20, and 35,632 acres in 1920-21.

## 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 1919, 1920, and 1921, and the average yearly amount of rainfall deduced from all available records to December, 1921, in each of the 26 river basins or districts constituting the State of Victoria :—

## RAINFALL.—YEARLY RECORDS AND AVERAGES.

Basin or District.	Rainfall.			
	During the Year—			Yearly Average to December, 1921.
	1919.	1920.	1921.	
	Inches.	Inches.	Inches.	Inches.
Glenelg and Wannon Rivers ..	22.67	25.80	24.77	26.40
Fitzroy, Eumeralla, and Merri Rivers ..	28.12	25.97	28.89	28.27
Hopkins River and Mt. Emu Creek ..	21.85	24.11	23.63	24.52
Mt. Elephant and Lake Corangamite ..	20.87	22.19	24.56	24.89
Cape Otway Forest ..	40.37	45.87	39.56	41.83
Moorabool and Barwon Rivers ..	22.65	20.46	25.61	24.18
Werribee and Saltwater Rivers ..	23.94	24.36	25.21	23.74
Yarra River and Dandenong Creek ..	29.81	37.97	34.77	33.73
Koo-wee-rup Swamp ..	32.74	35.80	34.47	34.50
South Gippsland ..	45.16	36.51	35.97	38.92
Latrobe and Thomson Rivers ..	36.69	35.47	33.18	36.26
Macallister and Avon Rivers ..	31.32	21.80	19.45	23.81
Mitchell River ..	32.97	27.06	22.54	26.95
Tambo and Nicholson Rivers ..	33.68	30.28	23.36	27.86
Snowy River ..	45.24	40.09	27.69	35.07
Murray River ..	14.01	16.43	20.66	16.88
Mitta Mitta and Kiewa Rivers ..	27.68	36.50	39.71	35.56
Ovens River ..	25.73	35.73	42.62	33.97
Goulburn River ..	20.97	27.07	30.69	27.00
Campaspe River ..	19.36	26.21	28.07	23.38
Loddon River ..	21.19	22.24	24.53	20.50
Avoca River ..	13.82	17.51	20.74	17.19
Avon and Richardson Rivers ..	12.79	15.87	18.80	15.95
Eastern Wimmera ..	17.03	23.43	23.47	21.34
Western Wimmera ..	16.66	21.46	19.97	19.91
Mallee ..	10.06	15.03	14.96	12.96
Weighted Averages ..	22.77	25.43	25.35	24.48

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 12.96 inches as compared with an average of 24.48 inches for the State.

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

### DISTRIBUTION OF AVERAGE RAINFALL.

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

The rainfall recorded for each quarter of 1921 and the quarterly averages up to 1921 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.
	points	points	points	points	points	points	points	points
Glensel and Wannoo Rivers ..	355	366	557	789	1,089	900	476	585
Fitzroy, Eumeralla, and Merri Rivers	447	436	765	829	1,148	945	529	617
Hopkins River and Mt. Emu Creek	412	420	539	706	928	764	484	562
Mt. Elephant and Lake Corangamite	348	450	638	706	992	757	478	576
Cape Otway Forest .. .. .	468	659	987	1,258	1,648	1,381	853	885
Moorabool and Barwon Rivers ..	564	472	527	659	895	899	575	588
Werribee and Saltwater Rivers ..	575	524	509	607	792	649	645	594
Yarra River and Dandenong Creek	664	688	646	879	1,200	916	967	890
Koo-wee-rup Swamp .. .. .	587	649	653	982	1,270	965	937	854
South Gippsland .. .. .	472	776	732	1,098	1,341	1,127	1,052	891
Latrobe and Thomson Rivers ..	651	702	608	926	1,199	1,027	880	971
Macallister and Avon Rivers ..	585	622	310	524	509	588	541	647
Mitchell River .. .. .	640	682	392	636	625	688	597	689
Tambo and Nicholson Rivers ..	631	712	474	675	585	673	640	726
Snowy River .. .. .	706	829	603	915	591	904	869	859
Murray River .. .. .	455	318	613	495	691	488	307	387
Mitta Mitta and Kiewa Rivers ..	650	624	987	988	1,584	1,114	750	830
Ovens River .. .. .	728	549	1,147	1,000	1,732	1,108	655	740
Goulburn River .. .. .	560	462	782	797	1,214	846	513	595
Campaspe River .. .. .	693	421	695	686	934	739	485	492
Loddon River .. .. .	575	364	580	605	898	635	400	446
Avoca River .. .. .	444	281	498	524	743	546	389	368
Avon and Richardson Rivers ..	386	253	448	482	693	521	353	339
Eastern Wimmera .. .. .	385	306	501	643	975	720	486	465
Western Wimmera .. .. .	289	253	438	612	805	702	465	424
Mallee .. .. .	418	244	345	357	476	403	257	292
The whole State .. .. .	500	446	582	690	922	747	531	565

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 .. ..	29·973	29·925	30·081	30·078
Monthly range of pressure of air—Inches	0·890	0·768	0·814	0·979
Mean temperature of air in shade—°Fahr.	57·7	66·6	59·4	50·0
Mean daily range of temperature of air in shade—°Fahr. .. ..	18·7	21·2	17·3	13·9
Mean relative humidity. Saturation=100	66	60	70	76
Mean rainfall in inches .. ..	7·33	5·90	6·65	5·78
Mean number of days of rain .. ..	38	23	33	42
Mean amount of spontaneous evaporation in inches .. ..	10·19	17·23	7·77	3·64
Mean daily amount of cloudiness—Scale 0 to 10 .. ..	6·0	5·2	6·0	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 1921 and for the past 66 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 1921.	Average for 66 Years.	Extremes between which the Yearly Average Values have oscillated in 66 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ..	30·042	30·014	30·106	29·945
Highest " " " .. ..	30·559	30·606	30·762	30·488
Lowest " " " .. ..	29·139	29·258	29·495	28·942
Range (inches) .. ..	1·420	1·348	1·719	1·104
Mean temperature of air in shade (°Fahr.) .. ..	59·7	58·4	59·9	57·3
Mean daily maximum .. (°Fahr.)	68·2	67·3	69·0	66·0
Mean daily minimum .. ..	51·1	49·5	51·2	47·2
Absolute maximum .. ..	107·4	105·2	111·2	96·6
Absolute minimum .. ..	33·0	30·7	33·9	27·0
Mean daily range .. ..	17·1	17·8	20·4	15·0
Absolute annual range .. ..	74·4	74·5	82·6	66·0
Solar Radiation (mean maxima) ..	116·2	118·0	127·6	106·0
Terrestrial Radiation (mean minima) .. (°Fahr.)	46·8	43·9	46·8	39·5
Rainfall (in inches) .. ..	29·76	25·66	38·04	15·61
Number of wet days .. ..	154	136	171	102
Year's amount of free evaporation (in inches) .. ..	39·763	38·828	45·657	31·590
Percentage of humidity (saturation =100) .. ..	68	68	76	62
Cloudiness (scale 10 = overcast, 0 = clear) .. ..	5·7	5·9	6·4	4·8
Number of days of fog .. ..	31	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 instructions to those engaged therein. The Department publishes a monthly journal.

**Government Experimental Farm.** 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 is undertaken. The State farms at Rutherglen and Longerenong are used as district experimental stations for the North-East and the Wimmera 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 fee for students in residence at the agricultural colleges is £35 per annum for maintenance, including stationery and medical and other charges. No charge is made for instruction. Accommodation is provided at Dookie for 100 and at Longerenong for 45 students.

This institution is situated in the Burnley Gardens, close to the Hawthorn and Heyington railway stations. The classes are open to male and female students above fourteen years of age. The Course for the Certificate in Horticulture occupies two years, and is intended for those who propose to follow orchard or garden work as a profession. A practical training is obtained in the orchards, gardens, and nursery connected with the school; the course also includes lectures and demonstrations by various expert teachers. Excursions to up-to-date farms, orchards, and nurseries form part of the work of the school. In 1922 the students enrolled numbered 160.

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

GOVERNMENT EXPERIMENTAL FARMS AND AGRICULTURAL COLLEGES, 1921.

Particulars.	Central Research Farm, Werribee.	Rutherglen Farm, &c.	Dookie Agricultural College.	Longerenong Agricultural College.	School of Primary Agriculture, &c.
	No.	No.	No.	No.	No.
Professional Staff .. .. .	1	2	13	5	5
Hands employed .. .. .	48	48	36	14	8
Students .. .. .	10	14	120	60	160
	£	£	£	£	£
Value of plant and machinery .. .. .	3,018	2,148	5,760	2,400	150
Value of produce for year .. .. .	12,000	5,550	6,475	8,500	1,200
Receipts—					
Government Grant .. .. .	11,730	9,050	4,478	..	2,110
Fees .. .. .	..	..	3,850	1,275	93
Sale of produce, &c. .. .. .	7,739	3,570	5,973	6,175	1,191
Other .. .. .	2,459	1,278	..	..	8
Total receipts .. .. .	21,928	13,898	14,301	7,450	3,402
Expenditure—					
Salaries—					
Professional Staff .. .. .	366	560	4,762	1,917	1,086
General Staff .. .. .	6,261	7,971	4,499	1,949	971
Buildings and maintenance .. .. .	2,343	2,093	9,873	5,870	266
Other .. .. .	5,155	3,483	126	49	446
Total expenditure .. .. .	14,125	14,017	19,260	9,785	2,769

GOVERNMENT EXPERIMENTAL FARMS AND AGRICULTURAL  
COLLEGES, 1921—continued.

Particulars.	Central Research Farm, Werribee.	Ruther- glen Farm, &c.	Dookie Agricultural College.	Longer- enong Agricultural College.	School of Primary Agriculture, &c.
	acres.	acres.	acres.	acres.	acres.
Area under—					
Cereals for Grain .. .. .	460	281	434	433	..
Hay .. .. .	260	119	264	188	..
Fruit trees, &c. .. .. .	..	1½	15	20	14
Vines .. .. .	..	85	6	5	½
Green fodder .. .. .	160	½	94	62	..
Other crops .. .. .	250	53	70	..	1
Total area under crop .. .. .	1,130	540	883	708	15½
Area of land in fallow .. .. .	800	221	256	496	..
Area under artificially sown grasses .. .. .	100	48	..	6	9
Area resting .. .. .	34	133	808	403	..
Total area of arable land .. .. .	2,064	947	1,947	1,613	24½
Balance of area .. .. .	145	366	3,966	773	8½
Total area of farm .. .. .	2,209	1,313	5,913	2,386	33
	No.	No.	No.	No.	No.
Live Stock—					
Horses .. .. .	114	35	84	50	1
Dairy cows .. .. .	50	17	48	28	8
All other cattle .. .. .	87	17	117	44	6
Sheep .. .. .	1,600	650	1,678	730	..
Pigs .. .. .	..	40	109	72	..

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.

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 subsequent treatment.

The fear of introducing the fruit-flies *Tephritis tryoni* and *Hallerophora 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 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.

**Forestry.** The State has a wooded area of about 8,000,000 acres, of which some 4,162,000 acres are set aside as timber and climatic reserves. The wooded area consists of:—

1. Three million acres of merchantable forest, mainly situated along the Dividing Range with its spurs and foothills and also including the red gum forests of the northern river basins and of the River Glenelg in the south-western district.

2. Three million acres of forest in the more rugged portions of the mountain region. These forests are not at present accessible for practical working, owing to difficulties of transport; their protection, however, is essential for the maintenance of streams and springs.

3. Two million acres in the north-west of the State, known as Mallee, bearing at intervals a thick growth of stunted eucalypts and interspersed with belts of cypress pine and belar.

The forests of Victoria may be divided into four main classes:—

(a) The coastal region, extending from the shore line some fifty miles northward, carries chiefly messmate and three species of stringybark. In Cape Otway district, however, bluegum, mountain ash, and spotted gum predominate; whilst, in the extreme south-east of the State, silvertop, small-fruited bluegum, bastard mahogany, bloodwood, and Gippsland grey box are found.

(b) The mountain region. In the western half of the State the predominant species in the hill forests are messmate, bluegum, manna gum, brown and red stringybarks, and yellow box. In the eastern half of the State the prevailing species are mountain ash, spotted gum, messmate, peppermint, red ash or wollybutt, and bluegum, with stunted snow gums on the steep granitic slopes near the mountain summits.

(c) The foothills, stretching from the Dividing Range northward down to the plains, bear three valuable species, red ironbark, white ironbark or yellow gum, and grey box.

(d) The river basins of the Murray and the streams flowing over the northern plain, and of the River Glenelg in the south-western district, bear broad belts of river redgum.

The timbers of commercial value in Victoria number some twenty, all species of the eucalyptus family. In addition, there are about forty woods of fine grain, many of them, however, being small trees confined to limited areas.

With careful conservation and management Victoria's forests are capable of yielding considerable amounts of timber for all time, despite the ravages made upon them in the past by bush fires, settlement, and mining.

The State is notably deficient in softwoods or conifers, though over extensive areas the conditions are suitable for their growth once they are introduced. To effect this introduction three large nurseries have been established, at Creswick, Macedon and Broadford, and a number of plantations have been formed, the principal ones being situated at Creswick, Mount Macedon, Frankston, French Island, Port Campbell, Bright, Castlemaine, Harcourt, Scarsdale, and Mount Disappointment. In addition to providing trees for the plantations, the nurseries supply considerable numbers of plants at low rates to State schools, public bodies and private applicants. This branch of their activities has proved of great benefit to the community by fostering an interest in tree growth generally, and especially by encouraging farmers to plant trees with a view to affording protection to their homesteads and to providing shade and shelter for their flocks and herds.

The State forests are controlled by a Commission of three, which was appointed in 1919.

The revenue derived from forest sources during the financial year 1921-22 was £155,160, and the expenditure was £131,076. It is estimated that the quantity of timber produced in the rough in 1921-22 was 112,670,500 super feet. In addition, 419,772 tons measurement of fuel timber was produced.

A small Forest School for training cadets for forest work is maintained at Creswick, and the Commission also controls some Timber Seasoning Works at Newport, from which considerable amounts of seasoned weatherboards, cabinet boards, flooring boards and lining boards are supplied, largely for use in the construction of State schools and other public works.

**Agriculture—  
expenditure  
and revenue  
connected  
with.**

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

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

**EXPENDITURE AND REVENUE CONNECTED WITH  
AGRICULTURE, ETC, 1916-17 to 1920-21**

—	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.
<i>Expenditure.</i>	£	£	£	£	£
Department of Agriculture ..	25,102	24,726	25,365	28,278	33,282
Grants to Agricultural and Horticultural Societies, &c. ..	826	675	675	675	975
Development of Export Trade ..	33,409	39,959	49,550	93,971	58,785
Viticultural Education and Inspection of Vineyards ..	3,996	4,988	4,600	5,000	6,112
Maffra Beet Sugar Factory ..	42,414	45,042	38,870	46,805	42,159
Fruit Cool Stores ..	7,817	1,756	..	..	..
Technical Agricultural Education, &c. ..	21,585	23,008	23,138	23,095	28,518
Publishing Agricultural Reports	2,700	2,700	200	250	249
Rabbit and Vermin Extirpation ..	24,388	30,847	39,460	36,672	36,158
Stock and Dairy Supervision	} 21,190	} 22,038	} 23,327	} 28,396	} 35,731
Scab Prevention and Stock Diseases ..					
Labour Colonies ..	375	375	375	..	..
State Forests and Nurseries ..	67,411	60,193	64,192	86,142	145,790
Miscellaneous ..	2,029	2,079	8,451	3,172	2,999
Total ..	253,242	258,386	278,203	352,456	390,758
<i>Revenue.</i>					
Department of Agriculture ..	54,210	61,063	91,430	181,753	100,715
State Forests ..	55,192	61,945	67,181	96,609	126,804

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

The loan expenditure in 1920-21 was £6,894,557 on account of closer settlement (including £6,893,370 under the Discharged Soldiers Settlement Act), and £36,935 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, and Northern are the principal wheat-growing districts and furnish about 94 per cent. of the total

area under this crop. It is only in comparatively recent years that the Mallee has been devoted to agriculture and that a new, fertile, and important district has been added to the wheat area 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 42 per cent. in 1921-22, as against slightly less than 5 per cent. in 1891-2. The area under cultivation in the Mallee last season was 2,029,054 acres.

The area cultivated in the State in 1921-22 was 6,583,276 acres as against an annual average of 5,961,694 acres for the previous five seasons, 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 £3,066,347 in 1921-22, while the value of oversea exports of meats increased from £94,761 to £1,307,148 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 67 years :—

#### ACREAGE CULTIVATED ANNUALLY, 1855 to 1922.

Period ended March.	Crop, Annual Average.	Fallow, Annual Average.	Total Cultivation, Annual Average.
	Acres.	Acres.	Acres.
1855-65 .. .. .	325,676	12,146	337,822
1865-75 .. .. .	624,377	57,274	681,651
1875-85 .. .. .	1,306,920	137,536	1,444,456
1885-95 .. .. .	2,109,326	364,282	2,473,608
1895-1905 .. .. .	3,022,914	524,197	3,547,111
1905-15 .. .. .	3,756,211	1,276,148	5,032,359
1915-16 .. .. .	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
1918-19 .. .. .	3,942,899	1,548,121	5,491,020
1919-20 .. .. .	4,000,815	1,357,536	5,358,351
1920-21 .. .. .	4,489,503	1,935,747	6,425,250
1921-22 .. .. .	4,530,312	2,052,964	6,583,276

Areas under  
Principal  
Crops.

The principal crops grown in the State are wheat, oats, barley, potatoes and hay. The average annual acreage of these for ten-year periods from 1855 to 1915 and the acreage for each of the last seven seasons are given in the next table :—

ANNUAL ACREAGE OF FIVE PRINCIPAL CROPS, 1855 TO 1922.

Period ended March.	Average Annual Area of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Acres.	Acres.	Acres.	Acres.	Acres.
1855-65 ..	119,001	83,296	4,843	24,123	80,117
1865-75 ..	278,077	129,384	19,262	36,744	117,393
1875-85 ..	776,031	147,343	41,188	39,089	226,775
1885-95 ..	1,236,501	210,901	64,310	48,009	437,087
1895-1905 ..	1,898,280	340,957	52,829	45,243	540,472
1905-15 ..	2,190,336	390,642	60,378	56,272	848,587
1915-16 ..	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
1918-19 ..	2,214,490	342,867	100,198	51,620	984,479
1919-20 ..	1,918,269	559,547	85,323	53,918	1,116,998
1920-21 ..	2,295,865	443,636	93,954	62,687	1,333,397
1921-22 ..	2,611,198	318,681	100,127	63,895	1,159,135

Production of  
Principal  
Crops.

The average annual production of the five principal crops for decennial periods, from 1855 to 1915, and the production for each of the last seven seasons were as follows :—

ANNUAL PRODUCTION OF PRINCIPAL CROPS, 1855 TO 1922.

Period ended March.	Average Annual Production of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Bushels.	Bushels.	Bushels.	Tons.	Tons.
1855-65 ..	2,198,874	2,068,648	103,575	62,723	111,806
1865-75 ..	4,385,814	2,636,747	390,337	111,800	153,852
1875-85 ..	8,593,308	3,297,468	799,938	135,614	276,771
1885-95 ..	12,268,905	4,649,393	1,187,007	170,905	547,092
1895-1905 ..	14,032,145	6,649,453	947,580	134,357	672,982
1905-15 ..	22,906,743	7,342,468	1,243,442	158,445	1,084,726
1915-16 ..	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
1918-19 ..	25,239,871	5,274,984	2,028,635	137,533	1,113,861
1919-20 ..	14,858,380	6,603,067	1,528,654	145,888	1,242,489
1920-21 ..	39,468,625	10,907,191	2,495,762	171,628	1,984,854
1921-22 ..	43,867,596	6,082,258	2,336,246	173,660	1,548,453

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

**PERCENTAGE IN EACH DISTRICT OF TOTAL AREA UNDER EACH PRINCIPAL CROP, 1921-22.**

District.	Percentage in each District of Area under—					
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.
Central .. .. .	0·51	6·75	36·79	49·44	18·66	35·00
North-Central .. .. .	0·60	3·40	4·06	19·50	5·49	2·67
Western .. .. .	3·04	12·12	19·18	15·01	13·73	5·72
Wimmera .. .. .	27·46	25·04	8·81	0·33	17·41	2·19
Mallee .. .. .	42·35	24·89	6·30	0·01	18·37	10·22
Northern .. .. .	24·41	24·11	13·47	0·08	15·91	15·96
North-Eastern .. .. .	1·43	2·63	0·47	2·49	4·62	7·88
Gippsland .. .. .	0·20	1·06	10·92	13·14	5·81	20·36

NOTE.—For counties contained in each District, see table on page 462.

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

**RELATIVE AREAS DEVOTED TO DIFFERENT CROPS IN EACH DISTRICT, 1921-22.**

District.	Percentage of Total Area of all Crops under—					
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.
Central .. .. .	3·20	5·16	8·84	7·58	51·92	23·30
North-Central .. .. .	13·65	9·51	3·57	10·93	55·84	6·50
Western .. .. .	24·69	11·99	5·97	2·98	49·44	4·93
Wimmera .. .. .	70·73	7·87	0·87	0·02	19·91	0·60
Mallee .. .. .	77·18	5·54	0·44	0·01	14·85	1·98
Northern .. .. .	66·64	8·03	1·41	0·61	19·28	4·63
North-Eastern .. .. .	30·30	6·82	0·38	1·29	43·47	17·74
Gippsland .. .. .	3·51	2·21	7·20	5·53	44·36	37·19
Total for Victoria .. .. .	57·64	7·03	2·21	1·41	25·59	6·12

NOTE.—For counties contained in each District, see table on page 462.

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

AREA AND PRODUCTION OF FIVE PRINCIPAL CROPS PER HEAD OF POPULATION, 1912-13 TO 1921-22.

Year ended March (Annual Average).	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Area per Head of Population.				
	Acres.	Acres.	Acres.	Acres.	Acres.
1912-17 .. ..	2·04	·30	·05	·04	·76
1918 .. ..	1·91	·21	·06	·05	·53
1919 .. ..	1·56	·24	·07	·04	·69
1920 .. ..	1·29	·38	·06	·04	·75
1921 .. ..	1·52	·29	·06	·04	·88
1922 .. ..	1·70	·21	·07	·04	·75
Produce per Head of Population.					
	Bushels.	Bushels.	Bushels.	Tons.	Tons.
1912-17 .. ..	24·60	5·20	1·10	·13	1·01
1918 .. ..	26·85	4·37	1·40	·13	·68
1919 .. ..	17·76	3·71	1·43	·10	·78
1920 .. ..	10·02	4·46	1·03	·10	·84
1921 .. ..	26·16	7·23	1·65	·11	1·32
1922 .. ..	28·54	3·96	1·52	·11	1·01

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 value of each of the five principal crops, based upon prices realized upon farms, for the past ten years; also the value of each crop per acre on the average of the five years 1912-13 to 1916-17, and for each of the years 1917-18 to 1921-22:—

## VALUES OF FIVE PRINCIPAL CROPS.

Year.	Annual Average Value of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	£	£	£	£	£
1912-13 to 1916-17	6,458,460	780,053	265,042	723,919	3,378,240
1917-18 .. ..	7,547,510	965,973	373,379	519,605	2,801,158
1918-19 .. ..	5,994,469	1,175,882	461,056	1,079,496	4,622,523
1919-20 .. ..	5,726,667	1,848,903	477,573	1,328,640	8,304,475
1920-21 .. ..	14,307,377	1,295,229	447,352	586,458	5,259,863
1921-22 .. ..	10,509,945	931,346	401,600	555,111	4,413,091
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Value per acre 1912-17	2 5 1	1 17 0	3 11 3	11 7 6	3 3 8
.. .. 1917-18	2 16 1	3 5 11	4 7 11	7 15 2	3 14 10
.. .. 1918-19	2 14 2	3 8 7	4 12 0	20 18 3	4 13 11
.. .. 1919-20	2 19 7	3 6 1	5 11 11	24 12 10	7 8 8
.. .. 1920-21	6 4 8	2 18 5	4 15 3	9 7 1	3 18 11
.. .. 1921-22	4 0 6	2 18 5	4 0 3	8 13 9	3 16 2

The value of the five principal crops was £16,811,093 in 1921-22, as against £21,896,279 in the previous year, £17,686,258 in 1919-20, £13,333,426 in 1918-19, £12,207,625 in 1917-18, and £11,605,714 on the average of the five years 1912-13 to 1916-17.

**Wheat production.**

On the experience of the past five seasons the area under wheat for grain represented 56 per cent. of the total under all crops. The acreage, the total production, and the yield

per acre are given in the next table for decennial periods from 1860 to 1910, for the five-year period 1910-15, and for each of the last seven seasons :—

## WHEAT PRODUCTION, 1860 to 1922.

Season ended March.	Wheat.		
	Acres, Annual Average.	Total Production, Annual Average.	Yield per Acre.
		Bushels.	Bushels.
1860-70 .. .. .	194,714	3,480,765	17·87
1870-80 .. .. .	431,444	5,510,125	12·77
1880-90 .. .. .	1,077,575	10,793,936	10·02
1890-1900 .. .. .	1,563,403	12,610,595	8·07
1900-10 .. .. .	1,983,874	19,242,402	9·70
1910-15 .. .. .	2,415,353	23,761,038	9·84
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
1919 .. .. .	2,214,490	25,239,871	11·40
1920 .. .. .	1,918,269	14,858,380	7·75
1921 .. .. .	2,295,865	39,468,625	17·19
1922 .. .. .	2,611,198	43,867,596	16·80

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 twelve seasons was 12·73 bushels, which is better than the corresponding averages for quinquennial periods of earlier date back to 1875. 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, 130,181 acres of wheat were cut for hay last season, so that the total area sown under wheat in 1921-22 was 2,741,379 acres.

The production of wheat in the other Australian States in 1921-22 was as follows :—New South Wales, 42,650,000 bushels; South Australia, 24,946,525 bushels; Western Australia, 13,904,721 bushels; Queensland, 3,025,786 bushels; and Tasmania, 577,178 bushels. The total production for the Commonwealth was 128,971,806 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 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.		
	1920.	1921.	1922.	1920.	1921.	1922.	1920.	1921.	1922.
Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bush.	Bush.	Bush.	
<b>Central—</b>									
Bourke ..	1,351	3,881	3,212	16,427	82,061	58,403	12·16	21·14	18·18
Grant ..	2,883	8,728	9,759	40,266	162,414	170,429	13·98	18·61	17·46
Mornington ..	99	320	277	1,635	4,500	3,591	16·52	14·06	12·96
Evelyn ..	53	178	68	721	3,033	999	13·69	17·04	14·69
<b>North-Central—</b>									
Anglesey ..	544	908	963	3,122	14,656	12,422	5·74	16·14	12·90
Dalhousie ..	567	2,284	1,936	8,814	36,487	29,305	15·54	15·98	15·14
Talbot ..	5,478	11,123	12,657	69,561	219,375	230,027	12·70	19·72	18·17
<b>Western—</b>									
Grenville ..	4,890	10,218	14,439	78,964	189,796	225,576	16·15	18·57	15·62
Polwarth ..	25	92	48	284	1,409	683	11·36	15·32	14·23
Heytesbury ..	1	8	3	19	206	90	19·00	25·75	30·00
Hampden ..	6,843	8,175	10,262	114,934	182,773	176,714	16·80	22·36	17·22
Ripon ..	21,288	30,883	45,863	346,144	671,503	900,393	18·26	21·74	19·63
Villiers ..	543	1,709	2,075	7,062	30,894	32,066	13·01	18·08	15·45
Normanby ..	369	1,008	1,413	5,976	18,741	20,116	16·20	18·59	14·24
Dundas ..	3,217	4,823	4,889	40,895	54,413	68,023	12·68	11·28	13·91
Follett ..	63	309	503	810	5,269	7,946	12·86	17·05	15·80
<b>Wimmera—</b>									
Lowan ..	112,239	144,897	175,753	1,511,282	3,034,396	3,784,022	13·47	20·94	21·53
Borong ..	269,422	358,865	399,993	4,244,811	8,537,781	11,218,679	15·76	23·79	28·05
Kara Kara ..	91,633	113,783	141,267	1,334,220	2,417,404	3,115,212	14·10	21·25	22·05
<b>Mallee—</b>									
Millewa ..	1,628	2,200	2,980	5,279	30,851	18,849	3·24	14·02	6·33
Weeah ..	197,710	201,682	196,845	678,649	2,880,518	1,749,843	3·43	14·28	8·89
Karkaroc ..	454,691	463,758	558,420	1,496,070	6,223,977	6,077,599	3·29	13·42	10·88
Tatchera ..	265,292	294,080	347,611	1,220,335	4,013,077	4,563,124	4·60	13·65	13·13
<b>Northern—</b>									
Gunbower ..	30,670	28,333	34,585	274,866	433,345	545,183	8·96	15·27	15·76
Gladstone ..	80,283	96,200	118,395	969,476	1,800,765	2,208,515	12·08	18·72	18·65
Bendigo ..	94,884	105,988	128,715	882,069	1,543,657	2,219,737	9·30	14·56	17·25
Rodney ..	66,844	86,521	89,237	458,202	1,366,042	1,407,542	6·85	15·79	15·77
Moir ..	181,532	268,278	263,383	870,342	4,683,835	4,483,925	4·79	17·46	16·83
<b>North-Eastern—</b>									
Delatite ..	2,897	8,007	6,793	32,864	145,092	83,112	12·19	18·12	12·23
Bogong ..	14,665	32,471	30,306	91,558	556,550	341,831	6·24	17·14	11·28
Beuambra ..	266	301	217	4,451	5,933	3,808	16·73	19·71	17·55
Wonnangatta ..	..	..	..	..	..	..	..	..	..
<b>Gippsland—</b>									
Croajingolong ..	12	63	63	293	1,297	1,108	24·42	20·59	17·59
Tambo ..	118	163	95	2,677	2,606	1,174	22·69	15·99	12·36
Dargo ..	25	121	95	406	1,976	1,583	16·24	16·33	16·66
Tanjil ..	2,311	4,797	4,507	42,642	99,378	95,366	18·45	20·72	21·16
Bulu Bulu ..	145	660	571	2,344	12,665	10,601	16·17	19·19	18·56
<b>Total ..</b>	<b>1,918,269</b>	<b>2,295,865</b>	<b>2,611,198</b>	<b>14,858,380</b>	<b>39,468,625</b>	<b>43,867,596</b>	<b>7·75</b>	<b>17·19</b>	<b>16·80</b>

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, 1912-13 TO 1921-22.

District and County.	Average Yield of Wheat per Acre (in Bushels) during Year ended March.									
	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
Western District— Ripon .. ..	19-96	15-50	5-03	21-58	13-33	13-27	10-06	16-26	21-74	19-63
Wimmera District— Lowan .. ..	13-69	16-24	1-84	16-78	17-93	16-52	15-78	13-47	20-94	21-53
Borong .. ..	14-81	18-16	.95	19-27	22-49	22-62	20-01	15-76	23-79	28-05
Kara Kara .. ..	14-70	17-23	1-09	19-36	19-66	17-68	14-39	14-10	21-25	22-05
Mallee District— Weeah .. ..	10-03	4-89	.18	12-26	14-56	10-21	6-38	3-43	14-28	8-89
Karkaroo .. ..	7-58	5-44	.35	10-62	14-78	10-94	7-15	3-29	13-42	10-88
Tatchera .. ..	7-03	8-66	.37	10-09	15-80	12-30	9-44	4-60	13-65	13-13
Northern District— Gunbower .. ..	10-54	12-26	.23	15-33	15-89	14-23	8-74	8-96	15-27	15-76
Gladstone .. ..	13-00	17-38	1-52	17-94	19-10	14-17	11-52	12-08	18-72	18-65
Bendigo .. ..	14-37	15-60	.72	19-18	17-11	13-85	11-33	9-30	14-56	17-25
Rodney .. ..	14-60	14-75	1-05	20-15	14-89	12-67	10-80	6-85	15-79	15-77
Moira .. ..	14-52	16-14	1-74	17-88	14-44	11-38	10-70	4-79	17-46	16-83

The weight of an imperial bushel of wheat is 60 lbs., but the actual weight of a bushel of Victorian wheat of the fair average quality standard annually fixed by the Chamber of Commerce was 61.4 lbs. on the average of the past ten years. The following statement shows the variation in the f.a.q. standard weight of a bushel of Victorian wheat for each season since 1911-12 :—

F.A.Q. WHEAT STANDARD, 1913 TO 1922.

Season ended March.			Weight of Bushel (f.a.q.).	Season ended March.			Weight of Bushel (f.a.q.).
			lbs.				lbs.
1913	..	..	63	1918	..	..	60
1914	..	..	62½	1919	..	..	62½
1915	..	..	62	1920	..	..	62
1916	..	..	61	1921	..	..	60½
1917	..	..	60¼	1922	..	..	60

Stocks of  
wheat and  
flour.

It is estimated that about 10,000,000 bushels of wheat are required locally for food and seed. The stocks of wheat and flour in the State on 30th June, 1922, and at the same date in each of the previous nine years, were as follows:—

WHEAT AND FLOUR ON HAND, 30th JUNE, 1913 TO 1922.

At 30th June.	Quantity in Bushels.		
	Wheat.	Flour (equivalent in Wheat).	Total.
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
1919 .. .. .	53,023,000	3,284,000	56,307,000
1920 .. .. .	11,780,159	4,861,000	16,641,159
1921 .. .. .	14,883,400	800,000	15,683,400
1922 .. .. .	5,065,600	883,150	5,948,750

Oats.

In 1921-22 the area harvested for oats in Victoria was 318,681 acres, from which a yield of 6,082,258 bushels was obtained, giving an average of 19·09 bushels to the acre. The following statement shows the harvest results for this crop for each of the past seven seasons and for ten-year periods prior thereto back to 1865:—

OATS GROWN, 1865 TO 1922.

Period ended March.	Area under Crop (Annual Average).	Produce (Annual Average).	Average per Acre.
	Acres.	Bushels.	Bushels.
1865-75 .. .. .	129,384	2,636,747	20·38
1875-85 .. .. .	147,343	3,297,468	22·38
1885-95 .. .. .	210,901	4,649,393	22·05
1895-1905 .. .. .	340,957	6,649,453	19·50
1905-15 .. .. .	390,643	7,342,468	18·79
1916 .. .. .	353,932	9,328,894	26·36
1917 .. .. .	441,598	8,289,289	18·77
1918 .. .. .	293,214	6,141,287	20·94
1919 .. .. .	342,867	5,274,984	15·38
1920 .. .. .	559,547	6,603,067	11·80
1921 .. .. .	443,636	10,907,191	24·59
1922 .. .. .	318,681	6,082,258	19·09

In addition to the area for grain shown for last season there were 1,001,256 acres of oats cut for hay, so that the total area sown with oats in 1921-22 was 1,319,937 acres. During 1921-22 there were exported from Victoria to oversea countries 239,175 bushels of oats and 94,897 lbs. of oatmeal.

**Barley.** The area under barley in 1921-22 was 100,127 acres, of which 47,686 were under malting, and 52,441 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, 1912-13 TO 1921-22.

Year ended March.	Annual Average.				Average per Acre.		
	Area under Crop.		Produce.		Malting.	Other.	Total.
	Malting.	Other.	Malting.	Other.			
	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1912-17 ..	40,153	34,224	856,955	681,507	21·34	19·91	20·68
1918 ..	41,065	43,866	980,219	990,431	23·87	22·58	23·20
1919 ..	52,222	47,976	1,081,256	947,379	20·70	19·75	20·25
1920 ..	50,049	35,274	917,274	611,380	18·33	17·33	17·92
1921 ..	50,297	43,657	1,306,210	1,189,552	25·97	27·25	26·56
1922 ..	47,686	52,441	1,103,039	1,233,207	23·13	23·52	23·33

During 1921-22, 1,693,674 bushels of barley were used locally in the production of 1,683,900 bushels of malt.

**Potatoes.** The area planted with potatoes in 1921-22 was 63,895 acres, and the production was 173,660 tons, which represented a yield of 2·72 tons per acre, as compared with 2·74 tons in the previous season and 2·71 tons in 1919-20. The following table shows the potato returns for the past thirty-three years :—

## POTATO PRODUCTION, 1890 TO 1922.

Period ended June.			Area under Crop (Annual Average).	Produce (Annual Average).	Average per Acre.
			Acres.	Tons.	Tons.
1890-1900 ..	..	..	47,738	155,432	3·26
1900-10 ..	..	..	48,857	142,307	2·91
1910-15 ..	..	..	59,648	167,869	2·81
1916 ..	..	..	56,910	173,821	3·05
1917 ..	..	..	73,618	187,992	2·55
1918 ..	..	..	66,966	182,195	2·72
1919 ..	..	..	51,620	137,533	2·66
1920 ..	..	..	53,918	145,888	2·71
1921 ..	..	..	62,687	171,628	2·74
1922 ..	..	..	63,895	173,660	2·72

The estimated value of the potatoes produced last season was £555,111, as against £586,458 for the preceding year, and £1,328,640 for the year 1919-20.

**Hay.** In 1921 the production of hay amounted to 1,548,453 tons, as against 1,984,854 tons in the previous year and 1,242,489 tons in 1919. The quantity of straw returned for the season 1921-22 was 48,119 tons as against 54,556 tons for the previous year. The hay returns for the decennial periods from 1890 to 1909, the five-year period 1910-14, and each of the last seven seasons are shown in the following table :—

#### HAY PRODUCTION, 1890 to 1921.

Period.	Area cut for Hay (Annual Average).			Produce (Annual Average).		Average per Acre.
	Acres.	Tons.	Tons.	Tons.		
1890-99 .. .. .	467,668	576,618			1·23	
1900-09 .. .. .	664,387	894,108			1·35	
1910-14 .. .. .	954,008	1,163,392			1·22	
1915 .. .. .	1,330,455	2,342,094			1·76	
1916 .. .. .	897,186	1,232,721			1·37	
1917 .. .. .	748,808	949,545			1·27	
1918 .. .. .	984,479	1,113,861			1·13	
1919 .. .. .	1,116,998	1,242,489			1·11	
1920 .. .. .	1,333,397	1,984,854			1·49	
1921 .. .. .	1,159,135	1,548,453			1·34	

The estimated value of the hay crop was £4,413,091 for 1921, as compared with £5,259,863 for 1920, and £8,304,475 for 1919. Of the total hay produced in 1921, 1,327,065 tons were oaten, 173,834 tons were wheaten, and 47,554 tons were made from lucerne and other crops, and the yields per acre were 1·33, 1·34, and 1·72 tons respectively.

**Prices of  
agricultural  
produce.**

Information is obtained direct from growers, in February or March of each year, in regard to the prices of the leading agricultural products other than the main crop of potatoes, the price of which is ascertained in June or July.

The following table gives the average price of each product for the last ten years :—

PRICES OF PRODUCE, 1913 TO 1922.

Year.	Average Price in February and March.						
	Wheat.	Oats.	Barley.		Hay.	Potatoes.	
			Malting.	Other.		Early Crop.	Main Crop (after March).
	Per bushel. s. d.	Per bushel. s. d.	Per bushel. s. d.	Per bushel. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
1913 ..	3 3 $\frac{3}{4}$	2 3 $\frac{1}{2}$	4 1	3 1	51 0	116 0	66 0
1914 ..	3 3	1 9	3 1 $\frac{1}{2}$	2 0 $\frac{1}{2}$	38 0	81 0	62 0
1915 ..	7 0 $\frac{3}{4}$	4 11 $\frac{1}{4}$	5 8 $\frac{3}{4}$	4 10 $\frac{1}{4}$	147 0	80 0	85 0
1916 ..	3 9	2 0 $\frac{1}{4}$	3 11 $\frac{1}{2}$	2 10	35 0	201 0	106 0
1917 ..	4 0	2 0	3 11 $\frac{1}{4}$	2 10	33 0	114 0	53 0
1918 ..	4 0	3 1 $\frac{3}{4}$	4 2 $\frac{3}{4}$	3 4 $\frac{1}{2}$	59 0	79 0	55 0
1919 ..	4 9	4 5 $\frac{1}{2}$	5 0 $\frac{1}{2}$	3 11 $\frac{3}{4}$	83 0	210 0	149 0
1920 ..	7 8 $\frac{1}{2}$	5 7 $\frac{1}{4}$	6 7 $\frac{3}{4}$	5 8	134 0	219 0	178 0
1921 ..	7 3	2 4 $\frac{1}{2}$	4 0 $\frac{1}{2}$	3 1	53 0	101 0	64 0
1922 ..	4 9 $\frac{1}{2}$	3 0 $\frac{3}{4}$	4 0 $\frac{1}{4}$	2 11	57 0	94 0	60 0

The area under other than principal crops and the production since March, 1919, are shown in the subjoined table:—

OTHER THAN PRINCIPAL CROPS, 1919-20 TO 1921-22.

Crop.	1919-20.		1920-21.		1921-22.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize.. ..	23,474	878,922	24,149	1,065,880	23,227	951,960
Rye .. ..	784	8,547	1,717	21,359	1,320	14,442
Peas .. ..	8,253	120,636	6,654	125,547	8,659	166,474
Mangel-wurzel ..	547	6,388	524	6,742	560	7,768
Beet, Carrots, Parsnips, and Turnips ..	460	2,121	410	2,289	401	2,134
Onions .. ..	6,863	27,032	8,000	42,985	6,158	31,586
Green Forage ..	89,802	..	79,524	..	89,410	..
Grass and Clover Seeds ..	1,235	8,625	1,872	11,555	1,800	12,226
Hops .. ..	72	691	93	1,199	104	1,812
Tobacco .. ..	406	2,669	95	908	604	†
Vines—Grapes	27,441	1,324,437	29,255	1,072,767	33,175	1,314,839
Flax .. ..	1,611	1,053 fibre 4,970 seed 394 tow 1,653 tons of straw	1,350	938 fibre 3,658 seed 99 tow 662 tons of straw	1,640	440 fibre 4,187 seed 20 tons of straw
Gardens and Orchards ..	98,969	..	87,768	..	89,491	..
Minor Crops ..	6,843	..	6,709†	..	7,14	..
Land in Fallow	1,357,536	..	1,935,747	..	2,052,104	..
Artificial Grasses	1,062,244	..	1,051,299	..	1,062,104	..

\* For details see page 477.

† Not avail-<sup>able</sup>.

**Maize.** The area under maize for grain in 1921-22 was 23,227 acres, and the production was 951,960 bushels, which represented a yield of 40·99 bushels per acre, as compared with 44·14 bushels in the preceding season and 37·44 bushels in 1919-20. Of the total production for last season 8f 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 seven seasons and for periods prior thereto back to 1890 :—

#### MAIZE PRODUCTION, 1890 TO 1922.

Period ended June.	Area under Maize for Grain (Annual Average).	Total Production (Annual Average).	Produce per Acre.
	Acres.	Bushels.	Bushels.
1890-1900 .. .. .	8,688	452,907	52·13
1900-10 .. .. .	12,082	716,158	59·27
1910-15 .. .. .	19,151	861,802	45·00
1916 .. .. .	22,258	999,886	44·92
1917 .. .. .	23,076	1,172,330	50·80
1918 .. .. .	20,987	1,152,787	54·93
1919 .. .. .	22,559	711,679	31·55
1920 .. .. .	23,474	873,922	37·44
1921 .. .. .	24,149	1,065,880	44·14
1922 .. .. .	23,227	951,960	40·99

On the average of the past five seasons the yield per acre was 41·6 bushels, as against 45·0 in 1910-15, and 65·4 in 1900-05. The relatively light yield per acre for the latest five-year period was probably due to the cultivation of new areas which are less fertile than the rich river flats upon which this cereal was grown exclusively in earlier periods.

**Rye.** The area under rye in 1921-22 was 1,320 acres, from which 14,442 bushels of grain were obtained. The production was 21,359 bushels in the previous season, and 8,547 bushels in 1919-20. Rye was grown principally in the counties of Dalhousie, Delatite, Normanby, and Talbot last season. The area under this crop in the four counties mentioned was about 56 per cent. of the total for the whole State.

**Peas.** The area under peas in 1921-22 was 8,659 acres, and the return 166,474 bushels, the former being 2,005 acres more and the latter 40,927 bushels more than in the previous year. Last season peas were grown to some extent in all districts with the exception of the Mallee. The counties from which the largest returns were obtained were Grant 51,207 bushels, Bourke 27,346 bushels, Bulnbuln 17,401 bushels, Mornington 13,629 bushels, and Tanjil 8,793 bushels. The production of peas in the five counties mentioned was equal to 8·3 per cent. of the total for the whole State.

**Mangel-wurzel.** In 1921-22 there were 560 acres under mangel-wurzel, as against 524 in the previous season, 547 in 1919-20, 581 in 1918-19, 690 in 1917-18, and 860 in 1916-17. The production last year was 7,768 tons, as compared with an annual average of 8,216 tons for the preceding five-year period. Mangolds are grown principally in the counties of Villiers, Tanjil, Grenville, Grant, and Buln Buln. The production during last season in the counties mentioned represented 74 per cent. of the total for the State.

**Beet, carrots, parsnips, and turnips.** 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 1921-22 the extent of land sown was 401 acres, as against 410 in the preceding year, 460 in 1919-20, 407 in 1918-19, 500 in 1917-18, and 524 in 1916-17. The produce for last year was 2,134 tons, as compared with 2,289 tons in the previous season, and 2,121 tons in 1919-20.

**Onions.** Onions are grown in nearly every county south of the Dividing Range. The returns for last season show that in Grenville the yield was 7,002 tons from 1,373 acres; in Buln Buln, 5,026 tons from 1,095 acres; in Polwarth, 4,193 tons from 775 acres; in Villiers, 4,113 tons from 741 acres; in Bourke, 4,840 tons from 739 acres; in Grant, 2,816 tons from 753 acres; and, in Mornington, 3,287 tons from 588 acres. The following is a statement showing the area and yield for the period 1912-13 to 1916-17 and the last five years:—

ONION CULTIVATION, 1912-13 to 1921-22.

Year.	Annual Average.	
	Area.	Produce.
	Acres.	Tons.
1912-13 to 1916-17 .. .. .	7,131	30,135
1917-18 .. .. .	5,134	21,745
1918-19 .. .. .	5,512	24,211
1919-20 .. .. .	6,863	27,032
1920-21 .. .. .	8,000	42,985
1921-22 .. .. .	6,158	31,586

The value of onions grown was £150,033 in 1921-22, as compared with £131,104 in the previous season and £274,375 in 1919-20.

**Green forage.** The area devoted to green forage in 1921-22 was 89,410 acres, as compared with 79,524 in the previous season, 89,802 in 1919-20, 73,641 in 1918-19, 55,903 in 1917-18, and 49,667 in 1916-17.

**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, 1912-13 to 1921-22.

Year ended March.	Annual Average.		
	Number of Farms on which made.	Number of Silos (Pits and Stacks).	Materials used.
1912-17 .. .. .	233	309	Tons. 14,753
1918 .. .. .	117	158	9,852
1919 .. .. .	95	157	8,249
1920 .. .. .	74	117	6,072
1921 .. .. .	99	175	9,702
1922 .. .. .	107	141	5,873

**Grass and clover seed.** The area harvested for grass and clover seed last season was 1,800 acres, as compared with 1,872 in the previous year, 1,235 in 1919-20, 2,152 in 1918-19, 2,312 in 1917-18, and 1,769 in 1916-17. The production in 1921-22 was 12,226 bushels, as against 11,555 in the previous year, 8,625 in 1919-20, 15,443 in 1918-19, 22,059 in 1917-18, and 13,174 in 1916-17.

**Hops.** The hop-growing industry attained its maximum development in 1883-4, when 1,758 acres yielded 15,717 cwt. In 1921-22 the return from 104 acres was 1,812 cwt. Delatite, Bogong, Bourke, Polwarth, Dargo, and Buln Buln were the only counties in which hops were grown last season.

**Flax.** The area sown to flax in 1921-22 was 1,640 acres, as compared with 1,350 acres in the previous season, and 1,611 acres in 1919-20. The whole of the flax grown last season was purchased by the Commonwealth Flax Committee under a Government guarantee of £5 per ton for unthreshed flax of standard quality delivered at the nearest mill. The value of the fibre, linseed, and tow obtained

from the 1920-21 flax crop is estimated at £10,100. Particulars of the crop for the last ten years are given in the following statement :—

FLAX, 1912-13 to 1921-22.

Year.	Annual Average.				
	Area under Crop.	Seed Produced.	Fibre Produced.	Tow Produced.	Straw awaiting Treatment.
	Acres.	Cwt.	Cwt.	Cwt.	Tons.
1912-13 to 1916-17	634	2,596	1,392	—	258
1917-18 .. ..	419	1,337	462	463	..
1918-19 .. ..	1,420	5,200	1,800	2,000	..
1919-20 .. ..	1,611	4,970	1,053	394	1,653
1920-21 .. ..	1,350	3,658	938	99	662
1921-22 .. ..	1,640	4,187	440	20	960

NOTE.—In addition to the above, 85 acres of New Zealand flax were harvested in 1921-22.

In 1921-22 imports into Victoria from countries outside Australia included linseed to the value of £1,524, linseed oil worth £47,601, and fibre worth £220,106.

**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 become comparatively unimportant. The area devoted to this product last year was 604 acres, of which 277 were in Delatite, and 305 in Bogong. Particulars relating to the cultivation of tobacco for the last ten years are as follows :—

CULTIVATION OF TOBACCO, 1912-13 to 1921-22.

Year.	Annual Average.	
	Area.	Produce.
	Acres.	Cwt. (dry).
1912-13 to 1916-17	170	979
1917-18 .. ..	82	526
1918-19 .. ..	167	1,825
1919-20 .. ..	406	2,669
1920-21 .. ..	95	908
1921-22 .. ..	604	†

† Not available.

Vines, wine, raisins, &c. During the period 1904-15 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, and there are certain districts where the principal industries are connected with vine-growing. The Shire of Mildura produced last season 1,002,666 cwt. of grapes; Rutherglen, 102,134 cwt.; Swan Hill, 82,871 cwt.; Rodney, 19,464 cwt.; Stawell, 13,346 cwt.; Ararat, 5,226 cwt.; Chiltern, 12,121 cwt.; Benalla, 9,770 cwt.; and Shepparton, 11,502 cwt. At Mildura the crop is principally dried for raisins and currants. The results of ten years' operations are given below :--

## VINE PRODUCTION, 1913 TO 1922.

Year ended June.	Annual Average.					
	Number of Growers.	Area.	Produce.			
			Grapes gathered.	Wine made.	Raisins made.	Currants made.
		Acres.	Cwt.	Gallons.	Cwt.	Cwt.
1912-13 to 1916-17	1,755	22,886	857,782	1,123,252	132,812	55,193
1918 ..	1,843	25,236	759,570	800,068	104,911	53,799
1919 ..	1,826	26,072	1,019,379	1,349,309	135,060	68,234
1920 ..	1,919	27,441	1,324,437	1,634,680	211,307	55,661
1921 ..	2,066	29,255	1,072,767	2,222,305	116,887	62,919
1922 ..	2,422	33,175	1,314,839	1,335,066	190,451	75,042

Of the total quantity of grapes gathered in 1922, 212,959 cwt. was used for making wine, 1,040,375 cwt. for raisins and currants, and 61,505 cwt. for table consumption and export. Of the 190,451 cwt. of raisins made, 141,371 cwt. were sultanas, of which all but 13,829 cwt. were 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 170,000 cwt. of the production in 1922 is available for interstate or oversea export. A year's consumption of currants is about 30,000 cwt., which would enable approximately 45,000 cwt. of last season's production to be exported to other States or oversea.

Orchards. The total number of persons in the State growing fruit for sale was 8,286 in 1921-22, as against 7,705 in the previous season, 7,719 in 1919-20, 7,620 in 1918-19, 7,314 in 1917-18, and 7,309 in 1916-17. The area under orchards in each of those years was 86,959, 84,718, 83,574, 82,151, 80,508, and 79,247 acres respectively. The orchards are distributed fairly evenly over the whole State. The

counties having the largest areas last season were as follows:—  
 Mornington, 15,370 acres; Bourke, 14,595 acres; Evelyn, 14,212 acres;  
 Rodney, 10,208 acres; Moira, 6,960 acres; Talbot, 3,844 acres;  
 Bendigo, 3,545 acres; Borung, 2,289 acres; Karkaroc, 2,148 acres;  
 Tatchera, 1,900 acres; Grant, 1,895 acres; Gunbower, 1,551 acres;  
 and Bogong, 1,328 acres.

The following table contains a statement of the number of bearing and non-bearing fruit trees and plants for the seasons 1916-17 and 1919-20:—

RETURN SHOWING THE NUMBER OF FRUIT TREES, PLANTS, ETC., IN ORCHARDS AND GARDENS WHERE FRUIT WAS GROWN FOR SALE, 1916-17 AND 1919-20.

Fruit.	Number of Trees, Plants, &c.					
	1916-17.			1919-20.		
	Not Bearing.	Bearing.	Total.	Not Bearing.	Bearing.	Total.
Apples ..	1,060,675	1,818,520	2,879,195	1,006,728	2,016,972	3,023,700
Pears ..	455,822	580,476	1,036,298	416,608	660,913	1,077,521
Quinces ..	35,073	72,147	107,220	53,639	76,377	130,016
Plums ..	162,335	396,282	558,617	184,909	369,784	554,693
Cherries ..	62,489	230,388	292,877	45,742	196,110	241,852
Peaches ..	446,638	582,402	1,029,040	332,001	750,834	1,082,835
Apricots ..	154,413	278,926	433,339	121,995	331,627	453,622
Nectarines ..	9,636	11,198	20,834	3,023	15,698	18,721
Oranges ..	284,643	101,493	386,136	147,105	240,297	387,402
Lemons ..	84,363	48,421	132,784	72,994	82,472	155,466
Loquats ..	2,031	3,847	5,878	1,778	4,202	5,980
Medlars ..	37	176	213	86	106	192
Figs ..	17,827	28,837	46,664	14,663	29,667	44,330
Passion-fruit ..	9,301	18,514	27,815	19,902	26,969	46,871
Guavas ..	44	251	295	61	134	195
Pomegranates ..	47	116	163	39	89	128
Persimmons ..	185	460	645	319	403	722
<b>Total Large Fruits ..</b>	<b>2,785,559</b>	<b>4,172,454</b>	<b>6,958,013</b>	<b>2,421,592</b>	<b>4,802,654</b>	<b>7,224,246</b>
Raspberries ..	..	636,749	636,749	..	316,498	316,498
Loganberries ..	..	..	..	..	158,431	158,431
Strawberries ..	..	3,894,479	3,894,479	..	2,148,044	2,148,044
Gooseberries ..	..	230,244	230,244	..	323,037	323,037
Mulberries ..	342	1,104	1,446	326	1,133	1,459
Olives ..	3,006	6,351	9,357	310	2,372	2,682
Currants (Red, White, and Black) ..	7,507	34,409	41,916	9,033	27,707	36,740
Almonds ..	11,115	21,348	32,463	9,423	20,378	29,801
Walnuts ..	7,524	5,909	13,433	7,812	4,819	12,631
Filberts ..	835	649	1,484	288	804	1,092
Chestnuts ..	570	427	997	269	380	649
<b>Total Nuts ..</b>	<b>20,044</b>	<b>28,333</b>	<b>48,377</b>	<b>17,792</b>	<b>26,381</b>	<b>44,173</b>

The area of orchards growing fruit for sale in 1921-22—86,959 acres—is the largest recorded. Details of the produce from orchards growing fruit for sale in the past ten years are as follows :—

ORCHARDS GROWING FRUIT FOR SALE, 1912-13  
to 1921-22.

Year ended March.	Annual Average.					
	Number of Fruit-growers.	Area of Gardens and Orchards.	LARGE FRUITS GATHERED.			
			Apples.	Pears.	Quinces.	Plums.
		Acres.	Bushels.	Bushels.	Bushels.	Bushels.
1912-17 ..	6,844	69,640	1,554,277	562,190	74,305	247,458
1918 ..	7,314	80,508	1,864,508	414,721	72,436	242,598
1919 ..	7,620	82,151	807,573	756,688	65,885	220,546
1920 ..	7,719	83,574	2,227,317	723,857	96,115	274,329
1921 ..	7,705	84,718	1,451,069	759,148	63,194	297,055
1922 ..	8,286	86,959	1,768,800	681,024	76,946	207,432

  

Large Fruits Gathered—continued.							
Annual Average.							
Cherries.	Peaches.	Apricots.	Oranges.	Lemons.	Figs.	Others.	
Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	
1912-17 ..	98,067	403,996	206,028	62,844	56,589	22,569	18,674
1918 ..	69,743	430,770	238,420	75,315	76,296	26,885	30,521
1919 ..	109,298	569,639	127,131	100,553	80,521	18,492	23,097
1920 ..	89,604	960,773	301,009	137,184	74,427	19,255	44,225
1921 ..	81,619	728,272	251,996	169,335	87,867	23,386	33,024
1922 ..	66,969	905,477	208,215	237,949	103,127	22,359	43,897

ORCHARDS GROWING FRUIT FOR SALE, 1912-13 TO 1921-22—  
continued.

Year ended March.	Annual Average.								
	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.
1912-17	4,866	3,757	3,594	525	1,475	73,763	19,174	1,805	9,742
1918 ..	7,539	5,175	5,052	443	2,080	47,900	16,673	1,510	14,788
1919 ..	3,272	2,317	3,723	305	3,876	84,313	36,976	1,098	12,164
1920 ...	3,844	2,724	6,958	439	4,010	75,438	51,448	1,610	12,712
1921 ..	3,105	3,024	6,388	399	6,239	32,519	16,557	374	12,947
1922 ..	3,112	2,784	5,543	378	4,940	72,006	33,452	1,504	13,104

The following return shows the average produce per bearing tree for the seasons 1910-11, 1913-14, 1916-17, and 1919-20:—

PRODUCE OF FRUIT TREES, 1910-11, 1913-14, 1916-17, AND 1919-20.

Fruit Trees.	AVERAGE PER BEARING TREE.			
	1910-11.	1913-14.	1916-17.	1919-20.
	Bushels.	Bushels.	Bushels.	Bushels.
Apples ..	1·15	1·03	·34	1·10
Pears ..	1·76	1·07	1·14	1·10
Quinces ..	1·49	1·03	1·11	1·26
Plums ..	·92	·83	·65	·74
Cherries ..	·50	·80	·17	·46
Peaches ..	1·09	1·02	1·35	1·28
Apricots ..	·68	1·21	·78	·91
Nectarines ..	1·11	1·18	1·41	1·53
Oranges ..	1·49	1·16	·59	·57
Lemons ..	1·48	1·49	1·11	·90
Loquats ..	1·19	·24	·29	·52
Medlars ..	·14	·29	·07	·28
Figs ..	·88	·85	·87	·65
Passion Vines	·98	·75	·44	·65
Guavas ..	·14	·02	·42	·24
Pomegranates	1·73	·54	·32	·31
Persimmons ..	1·50	·68	·82	·69
	lbs.	lbs.	lbs.	lbs.
Almonds ..	6·03	4·87	2·51	3·70
Walnuts ..	5·43	5·35	1·34	10·68
Filberts ..	·88	·56	3·60	2·00
Chestnuts ..	6·65	18·94	26·66	33·45

In addition to the fruits shown, large quantities of melons, rhubarb and tomatoes were produced in the orchards, the following being the quantities returned for 1921-22—Melons, 3,938 cwt. ; rhubarb, 11,232 dozen bundles ; and tomatoes, 119,333 bushels. There were also 2,532

acres laid down in gardens growing fruit for private use, the value of the produce from which was estimated at about £12,660.

According to prices received by growers the value of fruit which reaches market was estimated to be £742,100 in 1915-16, £575,264 in 1916-17, £737,025 in 1917-18, £868,000 in 1918-19, £1,248,500 in 1919-20, £1,029,741 in 1920-21, and £1,184,069 in 1921-22. This, of course, does not represent the actual value of all the fruit grown, as large quantities are privately consumed in various ways. No very reliable estimate of the value of such fruit can be prepared, but it may be set down at about £40,000.

The area under market gardens for the year 1921-22 was 14,304 acres. As these gardens are generally situated near large centres of population, the producers are able to dispose of the bulk of their goods with a minimum loss from waste, &c. An average return of £35 per acre is regarded as a fair estimate of their value, and on this basis the total value of the produce may be given as £500,640. 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.

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. The maximum production for one year up to June, 1920, was 811,935 lbs., which was recorded in 1909-10. This was increased by 74 per cent. in 1920-21, when the output was 1,410,080 lbs. The quantity produced in 1921-22 was 948,649 lbs. The details for the last ten seasons are as follows :—

#### DRIED FRUIT, 1912-13 TO 1921-22.

Year ended June.	Annual Average.						
	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Pears.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1912-17 ..	84,587	103,078	132,846	137,517	27,383	46,543	531,954
1918 ..	134,342	221,728	88,241	235,534	47,201	38,257	765,303
1919 ..	3,229	131,684	73,638	45,002	36,866	28,654	319,073
1920 ..	52,759	211,714	226,498	69,125	46,711	139,634	746,441
1921 ..	72,530	388,729	451,525	338,617	30,811	118,857	1,410,080*
1922 ..	10,689	298,068	232,003	221,297	32,578	149,600	948,649†

\* Includes 9,011 lbs. of nectarines.

† Including 4,414 lbs. of nectarines.

A striking feature of the returns for the season 1921-22 was the decrease in all fruits except figs and pears. In that year about 42 per cent. of the dried fruit came from Mildura, where, in addition to fruits mentioned above, 19,344,864 lbs. of raisins were produced.

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. 1920-21 AND 1921-22.

Crop.	1920-21.		1921-22.	
	Area.	Produce.	Area.	Produce.
Beans .. ..	Acres. 1,001	20,603 bushels	Acres. 764	16,105 bushels
Chicory .. ..	392	310 tons (dry)	615	468 tons (dry)
Flowers .. ..	196	..	278	..
Garlic .. ..	26	71 tons	21	51 tons
Herbs .. ..	16	..	9	..
Flax—New Zealand ..	90	80 tons fibre 1 cwt. seed	85	* 1 cwt. seed
Millet—Broom ..	1,429	8,877 cwt. fibre 6,806 cwt. seed	801	3,105 cwt. fibre 2,003 cwt. seed
"   Japanese ..	170	997 cwt. seed	153	680 cwt. seed
Mustard .. ..	33	9 cwt.	..	..
Nursery .. ..	893	..	1,064	..
Pumpkins .. ..	1,061	6,593 tons	1,514	8,445 tons
Seeds—Agricultural and Garden ..	129	..	145	..
Sugar Beet .. ..	1,180	7,147 tons beet	1,600	16,577 tons clean beet, producing 1,872 tons marketable sugar. 503 cwt.
Sunflowers .. ..	93	947 cwt.	96	..
Total .. ..	6,709	..	7,145	..

\* Awaiting treatment.

While the fallowing of land in Victoria commenced in 1858, and increased in popularity in later years, it is only within the past seventeen years that this method of cultivation has become fairly general throughout the State. The area fallowed in 1921-22 was 2,052,964 acres, as compared with 853,829 acres in 1904-5, and 602,870 acres in 1900-01. The acreage so treated in the years 1901, 1906, 1911, and each of the last seven years was as follows:—

LAND IN FALLOW.

Year ended March.	Acres.	Year ended March.	Acres.
1901 .. ..	602,870	1918 .. ..	1,672,729
1906 .. ..	1,049,915	1919 .. ..	1,548,121
1911 .. ..	1,434,177	1920 .. ..	1,357,536
1916 .. ..	1,358,343	1921 .. ..	1,935,747
1917 .. ..	1,899,559	1922 .. ..	2,052,964

Nearly all of the fallowed area is devoted to wheat production. Of the 2,052,964 acres in fallow last season 713,169 were in the Wimmera, 596,287 in the Mallee, and 505,231 in the Northern District. The total for these three districts represented, therefore, 88 per cent. of the land fallowed in 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 37,835, as compared with 26,159 in 1911, 11,439 in 1901, and 7,318 in 1898. The following table shows the number of farmers using manure, and the quantity used in 1901, 1906, and 1911, and each of the last six years:—

#### MANURE USED FOR FERTILIZATION, 1901 TO 1921.

Year.	Farmers using.	Area used on.	Manure used—	
			Natural.	Artificial.
		Acres.	Tons.	Tons.
1901 .. ..	11,439	556,777	153,611	23,535
1906 .. ..	23,072	1,985,148	205,906	60,871
1911 .. ..	26,159	2,676,408	205,739	82,581
1916 .. ..	33,165	3,870,742	181,268	117,812
1917 .. ..	30,109	3,336,418	167,114	106,119
1918 .. ..	32,589	3,222,822	162,165	104,993
1919 .. ..	32,114	3,249,768	164,491	115,627
1920 .. ..	36,073	3,576,940	156,978	135,205
1921 .. ..	37,835	3,848,184	161,683	150,012

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 1921, 85 per cent. During 1921-22 the quantity of fertilizers imported into Victoria from oversea countries was 85,014 tons, valued at £214,986. This included 47,119 tons of rock phosphates, of which 20,204 tons, valued at £45,664, were obtained from Ocean Island, and 26,915 tons, valued at £59,221, from Nauru Island.

Persons employed on Farming, Dairying, and Pastoral Holdings.

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

NUMBER OF PERSONS EMPLOYED UPON FARMING, DAIRYING, AND PASTORAL HOLDINGS. 1912 TO 1921.

Year.	Annual Average.		
	Males.	Females.	Total.
1912-16 .. ..	98,965	50,790	149,695
1917 .. ..	95,890	51,992	147,882
1918 .. ..	95,584	52,548	148,132
1919 .. ..	98,308	54,318	152,626
1920 .. ..	100,236	51,014	151,250
1921 .. ..	106,369	53,059	159,428

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 about 30,000 men employed continuously throughout the year.

Wages—agricultural and pastoral.

In the next return will be found particulars of the rates of wages paid (with rations) upon farms and pastoral holdings during 1921-22. The information has been furnished by the occupiers of holdings.

WAGES, AGRICULTURAL AND PASTORAL, 1921-22.

Occupations.	Range.	Prevailing Rate.
Ploughmen .. ..	30s. to 60s. per week ..	50s. per week
Farm labourers .. ..	30s. to 60s. per week ..	40s. per week
Threshing machine hands .. ..	12d. to 18d. per hour ..	15d. per hour
Harvest hands .. ..	10s. to 15s. per day ..	12s. per day
Milkers .. ..	25s. to 45s. per week ..	37s. 6d. per week
Maize pickers (without rations)	7d. to 12d. per bag ..	8d. per bag
Married couples .. ..	50s. to 70s. per week ..	60s. per week
Female servants .. ..	15s. to 30s. per week ..	22s. 6d. per week
Men cooks .. ..	40s. to 60s. per week ..	50s. per week
Stockmen .. ..	£78 to £156 per annum ..	£104 per annum
Shearers, hand* .. ..	30s. to 40s. per 100 sheep	40s. per 100 sheep
„ machine* .. ..	30s. to 40s. per 100 sheep	40s. per 100 sheep
Gardeners, market .. ..	30s. to 60s. per week ..	40s. per week
„ orchard .. ..	30s. to 60s. per week ..	40s. per week
Vineyard hands .. ..	40s. to 60s. per week ..	40s. per week

\* It is believed that in the case 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 60 years is shown in the next table, which gives the numbers of horses, dairy cows, other cattle, sheep and pigs, and their numbers per head of population and per square mile in each of the last seven census years, also in the year 1922.

## LIVE STOCK IN VICTORIA, 1861 TO 1922.

Year.	Horses (including Foals).	Cattle—		Sheep.	Pigs.
		Dairy Cows.	Other.		
	Number.	Number.	Number.	Number.	Number.
1861 .. ..	76,536	197,332	525,000	5,780,896	61,259
1871 .. ..	209,025	212,193	564,534	10,477,976	180,109
1881 .. ..	275,516	329,198	957,069	10,360,285	241,936
1891 .. ..	436,469	395,192	1,387,689	12,692,843	282,457
1901 .. ..	392,237	521,612	1,080,772	10,841,790	350,370
1911 .. ..	472,080	668,777	878,792	12,882,665	333,281
1921 .. ..	487,503	620,005	955,154	12,171,084	175,275
1922 ... ..	496,124	719,473	1,030,896	12,325,818	230,770
<i>Per Head of Population.</i>					
1861 .. ..	·14	·37	·97	10·70	·11
1871 .. ..	·29	·29	·77	14·32	·25
1881 .. ..	·32	·38	1·11	12·01	·28
1891 .. ..	·38	·35	1·22	11·13	·25
1901 .. ..	·33	·43	·90	9·03	·29
1911 .. ..	·36	·51	·67	9·79	·25
1921 .. ..	·32	·41	·63	7·99	·12
1922 ... ..	·32	·47	·67	8·02	·15
<i>Per Square Mile.</i>					
1861 .. ..	·87	2·25	5·97	65·78	·70
1871 .. ..	2·38	2·41	6·42	119·22	2·05
1881 .. ..	3·14	3·75	10·89	117·88	2·75
1891 .. ..	4·97	4·50	15·79	144·43	3·21
1901 .. ..	4·46	5·94	12·30	123·36	4·00
1911 .. ..	5·37	7·61	10·00	146·59	3·79
1921 .. ..	5·55	7·05	10·87	138·49	1·99
1922 ... ..	5·64	8·19	11·73	140·25	2·63

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 316 sheep in 1922 as against 302 in 1921, 306 in 1911, and 237 in 1881—an increase of 33 per cent. in the carrying capacity of the land in 41 years.

Information relating to land occupied and cultivation and live stock thereon has been collected at various dates, the last collection having been in March, 1919. 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.

Particulars of the size of holdings and cultivation thereon are given in the following table for the years 1913 and 1919:—

SIZE OF HOLDINGS AND CULTIVATION THEREON.

Privately-owned Land.				Crown Land held in conjunction with that privately owned.	Total Area Occupied.	Area under—	
Size of Holdings. (In acres.)	Year.	Number of Holdings.	Area Occupied.			Cultivation.	Pasture, &c.
			Acres.	Acres.	Acres.	Acres.	Acres.
1 and under 100	1913	26,113	915,493	374,511	1,290,004	245,498	1,044,506
	1919	28,902	942,775	347,377	1,290,152	241,794	1,048,358
100 "	1913	18,483	3,819,680	1,216,829	5,036,509	875,525	4,160,984
	1919	19,930	3,967,377	840,116	4,807,493	807,434	4,000,059
321 "	1913	11,212	5,475,942	1,191,890	6,667,832	1,424,020	5,243,812
	1919	11,831	5,790,225	1,480,407	7,270,632	1,490,476	5,780,156
641 "	1913	5,221	4,187,010	1,241,667	5,428,677	1,075,000	4,353,677
	1919	5,709	4,523,331	1,071,162	5,594,493	1,105,867	4,488,626
1,000 "	1913	4,544	6,748,985	1,852,529	8,601,514	1,546,611	7,054,903
	1919	5,010	7,291,675	2,300,465	9,592,140	1,379,247	8,212,893
2,500 "	1913	820	2,803,419	1,085,769	3,889,188	352,258	3,536,930
	1919	855	2,825,855	716,245	3,542,100	270,426	3,271,674
5,000 "	1913	247	1,825,862	342,848	2,168,710	111,910	2,056,800
	1919	290	1,996,606	378,877	2,375,483	83,014	2,292,469
10,000 and upwards	1913	151	2,652,966	404,710	3,057,676	39,606	3,018,070
	1919	152	2,638,307	124,045	2,762,352	35,979	2,726,373
Total	1913	66,811	28,429,357	7,710,753	36,140,110	5,670,428	30,469,682
	1919	72,679	29,976,151	7,258,694	37,234,845	5,414,237	31,820,608

The number of holdings of over 10,000 acres was 152 in 1919, as compared with 151 in 1913, 175 in 1910, and 195 in 1906, and the aggregate areas comprised therein in the years mentioned were 2,638,307 acres, 2,652,966 acres, 3,298,227 acres, and 4,134,067 acres respectively. The reduction in the period of thirteen years between March, 1906, and March, 1919, was equivalent to 22 per cent. in the number and 36 per cent. in the acreage of such estates. In all other holdings of the sizes mentioned in the above table there were increases in both numbers and acreage in the thirteen years referred to.

To illustrate the uses to which the land was applied in 1913 and 1919, 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, 1913 AND 1919.

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 and under	100	1913	3·57	4·33	3·43	7·08	1,766,873	1·69
		1919	3·46	4·47	3·29	6·50	1,909,552	1·82
100 "	321	1913	13·94	15·44	13·66	17·67	4,410,283	1·06
		1919	12·91	14·91	12·57	17·40	5,107,256	1·28
321 "	641	1913	18·45	25·12	17·21	17·14	4,278,079	·82
		1919	19·53	27·53	18·17	17·48	5,132,920	·89
641 "	1,000	1913	15·02	18·95	14·29	12·15	3,031,015	·70
		1919	15·03	20·43	14·11	12·37	3,630,165	·81
1,000 "	2,500	1913	23·80	27·27	23·15	20·34	5,076,868	·72
		1919	25·76	25·47	25·81	22·28	6,539,378	·80
2,500 "	5,000	1913	10·76	6·22	11·61	9·22	2,300,276	·65
		1919	9·51	5·00	10·28	8·84	2,594,808	·79
5,000 "	10,000	1913	6·00	1·98	6·75	6·95	1,735,240	·84
		1919	6·38	1·53	7·20	6·85	2,011,066	·88
10,000 and upwards		1913	8·46	·69	9·90	9·45	2,358,478	·78
		1919	7·42	·66	8·57	8·28	2,431,720	·89
Total ..	..	1913	100·00	100·00	100·00	100·00	24,957,112	·82
		1919	100·00	100·00	100·00	100·00	29,356,865	·92

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. On this basis every 100 acres under pasture was carrying the equivalent of 92 sheep in 1919, as compared with 82 in 1913 and 78 in 1910. The carrying capacity of holdings of all sizes increased during the nine-year period 1910-19.

Particulars of the number of holdings of different sizes and of the cultivation and live stock thereon in March, 1919, are given in greater detail than in the above tables in the *Year-Book* for 1919-20, pages 510 and 511.

Land occupied in different districts.

The following tables show the land in occupation in March, 1922, in districts, and the uses to which the land was applied :—

LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA, MARCH, 1922.

(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 ..	18,577	501,917	180,757	2,008,021	142,385	2,833,080
North-Central ..	5,901	132,390	48,068	1,855,288	48,835	2,084,581
Western ..	12,912	427,502	195,719	5,804,885	297,156	6,725,262
Wimmera ..	6,783	1,726,950	1,734	4,001,904	242,351	5,972,939
Mallee ..	7,497	2,029,054	5,106	2,950,061	572,542	5,556,763
Northern ..	12,872	1,461,543	62,999	3,703,990	65,030	5,293,562
North-Eastern ..	5,673	143,421	3,146	3,949,519	191,951	4,288,037
Gippsland ..	9,440	160,499	534,575	3,775,381	733,543	5,203,998
Total ..	79,655	6,583,276	1,632,104	28,049,049	2,293,793	37,958,222

PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.

Central ..	..	17·72	6·38	70·88	5·02	100·00
North-Central ..	..	6·35	2·31	89·00	2·34	100·00
Western ..	..	6·36	2·91	86·31	4·42	100·00
Wimmera ..	..	23·91	0·03	67·00	4·06	100·00
Mallee ..	..	33·52	0·09	53·09	10·30	100·00
Northern ..	..	27·61	1·19	69·97	1·23	100·00
North-Eastern ..	..	3·34	0·07	92·11	4·48	100·00
Gippsland ..	..	3·08	10·27	72·55	14·10	100·00
Total ..	..	17·34	2·72	73·90	6·04	100·00

PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.

Central ..	23·32	7·63	17·51	7·16	6·21	7·46
North-Central ..	7·41	2·01	4·66	6·61	2·13	5·49
Western ..	16·21	6·49	18·96	20·69	12·95	17·72
Wimmera ..	8·52	26·23	0·17	14·27	10·57	15·73
Mallee ..	9·41	30·82	0·50	10·52	24·96	14·64
Northern ..	16·16	22·20	6·10	13·21	2·83	13·95
North-Eastern ..	7·12	2·18	0·30	14·68	8·37	11·30
Gippsland ..	11·85	2·44	51·80	13·46	31·98	13·71
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 28 per cent. in the Northern, 37 per cent. in the Mallee, and 29 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 is given to the cultivation of grasses, 52 per cent. of all the sown grasses in the State being found in that district.

**Areas occupied and stock thereon, in districts.** The next table contains particulars of the distribution of horses, cattle, and sheep on agricultural and pastoral lands in March, 1922.

#### AREA OCCUPIED AND STOCK THEREON, 1922.

District.	Areas Occupied for—		Number of—		
	Agriculture.	Pasture.	Horses.	Cattle.	Sheep.
Central .. ..	501,917	2,188,778	101,880	277,702	1,019,380
North-Central .. ..	132,390	1,903,356	24,955	110,351	1,134,959
Western .. ..	427,502	6,000,604	65,992	368,620	3,970,070
Wimmera .. ..	1,726,950	4,003,638	70,029	61,447	2,040,213
Mallee .. ..	2,029,054	2,955,167	63,448	50,116	698,085
Northern .. ..	1,461,543	3,766,989	92,490	248,992	1,875,960
North-Eastern .. ..	143,421	3,952,665	33,672	257,834	827,287
Gippsland .. ..	160,499	4,309,956	43,658	375,307	759,864
Total .. ..	6,583,276	29,081,153	493,124	1,750,369	12,325,818

The area occupied does not include 2,293,793 acres which are mostly in an unproductive state. Compared with 1921, sheep increased by 1 per cent., horses by 2 per cent., and cattle by 11 per cent.

**Live stock in Victoria, 1918 to 1922.** 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 and sheep classified in different-sized flocks in March, 1919, are given on page 511 of the *Year-Book* for 1919-20, and page 493 of this volume.

#### LIVE STOCK IN VICTORIA, 1918 TO 1922.

Live Stock.	1918.	1919.	1920.	1921.	1922.
Horses (including foals) .. ..	514,061	523,788	513,500	487,503	496,124
Cattle—					
Dairy Cows .. ..	534,388	592,079	623,652	620,005	719,473
Other (including calves) .. ..	836,661	1,004,465	1,007,468	955,154	1,030,896
Sheep .. ..	14,760,013	15,773,902	14,422,745	12,171,084	12,325,818
Pigs .. ..	323,159	267,819	186,810	175,275	230,770

In the subjoined table will be found a statement of the average and the range of prices ruling in Melbourne during the years 1920-21 and 1921-22 for live stock. The information has been extracted from the *Melbourne Stock and Station Journal* :—

PRICES IN MELBOURNE OF LIVE STOCK, 1920-21 AND 1921-22.

Stock.	Prices in 1920-21.			Prices in 1921-22.		
	Average.	Range.		Average.	Range.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<i>Horses.</i>						
Extra heavy draught	35 10 0	33 10 0	to 38 0 0	31 18 0	30 0 0	to 34 2 6
Medium draught ..	23 5 0	21 0 0	to 26 0 0	23 0 0	20 0 0	to 30 0 0
Delivery cart ..	16 12 6	15 0 0	to 18 0 0	16 7 0	14 0 0	to 24 0 0
Saddle and harness	6 2 6	5 0 0	to 8 0 0	5 6 0	5 0 0	to 6 10 0
Ponies ..	10 10 0	10 0 0	to 11 0 0	8 18 0	8 0 0	to 10 5 0
Order cart ..	11 15 0	10 10 0	to 12 10 0	10 15 0	10 0 0	to 12 5 0
<i>Fat Cattle.</i>						
<i>Bullocks—</i>						
Extra prime ..	31 15 0	19 16 0	to 51 19 0	13 10 0	11 1 0	to 17 7 0
Prime ..	27 2 0	17 4 0	to 42 3 0	11 14 0	9 12 0	to 15 5 0
Good ..	22 7 0	13 19 0	to 33 12 0	9 19 0	8 3 0	to 13 0 0
Good light and handy weights	17 10 0	11 6 0	to 25 12 0	8 2 0	6 5 0	to 10 17 0
Second ..	14 5 0	8 18 0	to 19 4 0	6 5 0	4 14 0	to 8 2 0
<i>Cows—</i>						
Best ..	20 3 0	12 14 0	to 34 7 0	8 7 0	6 14 0	to 11 1 0
Others ..	13 6 0	8 0 0	to 20 2 0	5 2 0	3 17 0	to 7 7 0
<i>Dairy Cattle.</i>						
Best milkers ..	25 12 0	22 3 0	to 31 13 0	19 2 0	16 5 0	to 24 1 0
Springers, best ..	17 9 0	14 10 0	to 20 2 0	11 4 0	8 7 0	to 17 18 0
<i>Fat Sheep.</i>						
<i>Wethers (cross)—</i>						
Extra prime ..	2 2 7	1 6 5	to 3 9 3	1 4 3	0 17 3	to 1 14 4
Prime ..	1 17 1	1 3 9	to 2 17 3	1 1 3	0 15 10	to 1 9 11
Good ..	1 11 11	1 0 2	to 2 7 4	0 18 6	0 14 6	to 1 5 6
<i>Ewes (cross)—</i>						
Extra prime ..	1 17 8	1 3 6	to 3 2 6	0 19 5	0 14 4	to 1 8 0
Prime ..	1 12 0	1 0 1	to 2 11 10	0 16 8	0 11 7	to 1 4 3
Good ..	1 7 4	0 17 8	to 2 2 4	0 14 1	0 9 10	to 0 19 9
<i>Wethers (merino)—</i>						
Extra prime ..	..	..	..	1 2 4	0 15 7	to 1 14 6
Prime ..	1 15 10	1 2 2	to 3 2 7	1 0 4	0 14 6	to 1 11 3
Good ..	1 10 3	0 18 8	to 2 9 8	0 17 2	0 11 9	to 1 5 8
Ewes (merino) best	1 8 1	0 18 6	to 2 7 8	0 16 8	0 11 3	to 1 3 0
<i>Fat Lambs.</i>						
Extra prime ..	1 16 7	1 5 3	to 2 16 6	1 2 6	0 15 9	to 1 10 8
Prime ..	1 11 7	1 2 2	to 2 6 8	0 19 6	0 13 11	to 1 6 6
Good ..	1 6 0	0 18 4	to 1 18 3	0 16 3	0 11 10	to 1 1 0
Second ..	0 19 10	0 13 5	to 1 7 8	0 12 6	0 9 5	to 0 14 7
<i>Pigs.</i>						
<i>Back Fatters—</i>						
Extra heavy prime	15 11 0	9 14 0	to 21 2 0	12 5 0	10 5 0	to 14 6 0
Extra prime and weighty ..	12 1 0	7 11 0	to 16 15 0	9 6 0	6 11 0	to 11 9 0
<i>Baconers—</i>						
Extra prime ..	7 4 0	5 16 0	to 8 19 0	5 18 0	4 9 0	to 7 16 0
Prime ..	6 5 0	4 19 0	to 7 14 0	5 4 0	3 19 0	to 6 18 0
Porkers ..	4 4 0	3 10 0	to 4 17 0	3 4 0	2 10 0	to 4 9 0

The average prices of stock were generally much lower in 1921-22 than in 1920-21.

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

STOCK SLAUGHTERED, 1912 TO 1921.

Year.	Number Slaughtered (Annual Average).		
	Sheep and Lambs.	Cattle.	Pigs.
1912-16 .. ..	3,813,355	370,634	261,709
1917 .. ..	2,499,002	217,480	298,073
1918 .. ..	3,581,460	223,340	377,390
1919 .. ..	6,324,490	362,475	329,190
1920 .. ..	4,244,798	374,545	240,557
1921 .. ..	4,005,587	331,707	239,638

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

PURPOSES FOR WHICH STOCK WERE SLAUGHTERED,  
1912 TO 1921.

Year.	For Butcher and Private Use.* (Annual Average.)			For Export. (Annual Average.)		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1912-16 .. ..	2,451,879	331,701	93,090	1,306,661	24,148	998
1917 .. ..	2,257,785	209,909	99,053	107,064	1,124	971
1918 .. ..	2,773,298	95,328	174,689	248,825	3,520	615
1919 .. ..	3,136,059	281,636	126,509	2,854,059	44,437	1,000
1920 .. ..	1,835,419	353,429	82,315	2,385,966	14,912	5,465
1921 .. ..	2,794,790	310,428	55,521	1,186,704	16,694	7,335

Year.	For Preserving and Salting. (Annual Average.)			For Boiling Down. (Annual Average.)		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1912-16 .. ..	42,067	11,544	167,489	12,748	3,241	132
1917 .. ..	133,140	5,540	197,880	1,013	907	166
1918 .. ..	553,090	23,580	201,900	6,247	912	186
1919 .. ..	283,966	32,580	201,480	50,406	3,822	201
1920 .. ..	2,067	1,133	152,556	21,346	5,071	221
1921 .. ..	20,622	2,740	176,451	3,471	1,845	331

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

Of the 4,005,587 sheep and lambs slaughtered in Victoria in 1921, 1,186,704 or 30 per cent. were frozen, as compared with 651,914, or 23 per cent., in 1906. In 1921 the oversea exports included 43,965,899 lbs. of mutton and lamb, valued at £1,057,276.

**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 exported in 1894, a few years after the inception of the trade, and in each of the past ten years. In the four years 1915-16 to 1918-19 the quantity exported was small in comparison with earlier years. The chief reasons for this were, in 1915-16, the drought of the preceding year, and, in the three following years, the lack of shipping space. In the year 1919-20 the exports were much greater than in any previous year. These represented to a large extent the accumulations which had taken place during the previous three years, but part of the increase was due to the fear of a drought in the early part of 1920, which caused a large number of sheep to be placed on the market.

FROZEN MUTTON AND LAMB EXPORTED.

Year.	Number of Carcasses Exported (Annual Average).		
	Mutton.	Lamb.	Total.
1894 .. ..	250,000	..	250,000
1912-13 to 1916-17 .. ..	444,151	694,357	1,138,508
1917-18 .. ..	66,730	129,537	196,267
1918-19 .. ..	401,382	267,588	668,970
1919-20 .. ..	2,468,090	1,533,410	4,001,500
1920-21 .. ..	288,190	497,896	786,086
1921-22 .. ..	314,564	872,140	1,186,704

**Dairying.** The dairying industry is one of the principal sources of the wealth of the community. The value of dairy produce in 1921 was £9,512,980, as compared with £11,816,670 in the previous year, £9,262,710 in 1919, £8,521,590 in 1918, £7,213,950 in 1917, £6,898,630 in 1916, and £4,952,846 in 1915. The following table shows the numbers of cowkeepers and cows, and the total production of butter and cheese, in the last ten years :—

DAIRYING, 1912 TO 1921-22.

Year ended June.	Annual Average.			
	Number of Cow-keepers.	Number of Dairy Cows at end of Year.	Butter made.	Cheese made.
			lbs.	lbs.
1912-17 .. ..	54,549	572,342	61,074,515	4,559,088
1918 .. ..	54,348	534,388	64,405,711	5,285,003
1919 .. ..	58,766	592,079	66,240,403	6,055,964
1920 .. ..	56,659	623,652	60,218,945	7,735,023
1921 .. ..	58,117	620,005	64,938,458	3,636,571
1922 .. ..	60,882	719,473	82,981,570	5,675,909

Butter and  
cheese made  
on farms.

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

**BUTTER AND CHEESE MADE ON FARMS.**

Year ended June.	Annual Average.	
	Butter.	Cheese.
	lbs.	lbs.
1912-17 .. .. .	5,157,033	1,756,783
1918 .. .. .	4,704,151	1,311,893
1919 .. .. .	5,116,733	1,031,514
1920 .. .. .	4,743,906	937,030
1921 .. .. .	5,086,723	492,952
1922 .. .. .	5,480,421	316,249

Butter and  
cheese made  
in factories.

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

**BUTTER, CHEESE, ETC., MADE IN FACTORIES, 1912 TO 1921-22.**

Year ended June.	Annual Average.			
	Butter made.	Cream sold.	Cheese made.	Concentrated, Condensed, and Powdered Milk made.
	lbs.	gallons.	lbs.	lbs.
1912-17 .. .. .	55,917,482	47,776	2,802,306	21,692,705
1917-18 .. .. .	59,701,560	60,890	3,973,110	37,805,070
1918-19 .. .. .	61,123,670	77,830	5,024,450	45,251,710
1919-20 .. .. .	55,475,039	147,736	6,797,993	44,219,389
1920-21 .. .. .	59,851,735	153,124	3,143,619	42,643,871
1921-22 .. .. .	77,501,149	160,490	5,359,660	48,354,210

NOTE.—In addition, 2,022,192 lbs. of casein were made in 1921-22.

The quantities of milk, in gallons, received at factories and creameries were 151,615,600 in 1917-18, 157,814,940 in 1918-19, 147,455,930 in 1919-20, 154,042,550 in 1920-21, and 193,507,110 in 1921-22.

In 1921-22 there were exported from Victoria to countries outside Australia 45,985,904 lbs. of butter, valued at £3,026,447, all of which, except 59,762 lbs., was Australian produce. The quantity sent to the United Kingdom was 38,901,134 lbs., valued at £2,439,098. The quantity of cheese exported to oversea countries was 1,178,544 lbs., and the value thereof £39,900.

Exports of  
butter and  
cheese.

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 1921-22 and earlier seasons was as follows :—

VICTORIAN WOOL CLIP AND ESTIMATED TOTAL PRODUCTION.

District.	Wool Clip, 1921-22.			
	Sheep.	Lambs.	Total.	
	lbs.	lbs.	lbs.	
Central .. ..	5,440,560	380,082	5,820,642	
North-Central .. ..	6,434,465	541,371	6,975,836	
Western .. ..	24,789,895	1,718,644	26,508,539	
Wimmera .. ..	13,326,008	907,809	14,233,817	
Mallee .. ..	4,105,395	279,972	4,385,367	
Northern .. ..	10,868,093	908,267	11,776,360	
North-Eastern .. ..	4,301,850	403,938	4,705,788	
Gippsland .. ..	3,563,243	225,754	3,788,997	
Total Clip	1921-22	72,829,509	5,365,837	78,195,346
	1920-21	67,617,476	3,532,465	71,149,941
	1919-20	91,282,613	7,096,976	98,379,589
	1918-19	92,094,437	8,891,994	100,986,431
	1917-18	80,379,680	9,426,152	89,805,832
	1916-17	70,647,862	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	
	1918-19.	1919-20.	1920-21.	1921-22.
	lbs.	lbs.	lbs.	lbs.
Wool clip .. ..	100,986,431	98,379,589	71,149,941	78,195,346
Wool stripped from Victorian skins and on Victorian skins exported (estimated) ..	25,660,630	34,467,578	19,100,630	25,317,431
Total production ..	126,647,061	132,847,167	90,250,571	103,512,777
Total value ..	£7,621,413	£7,908,007	£4,729,400	£4,662,750

The wool produced last season was 15 per cent. more than in the previous season. In 1921 there were 10,072,358 sheep and 2,471,431 4771.—28

lambs shorn, as compared with 10,595,458 sheep and 1,725,305 lambs in 1920 and 12,275,005 sheep and 3,141,655 lambs in 1919.

Weight of  
a fleeco.

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

#### WEIGHT OF A FLEECE, 1912-13 to 1921-22.

Year.	Weight of a Fleece (Annual Average).		
	Sheep.	Lambs.	Sheep and Lambs combined.
	lbs.	lbs.	lbs.
1912-17 .. .. .	6·83	2·31	5·95
1917-18 .. .. .	7·57	2·42	6·19
1918-19 .. .. .	7·41	2·31	6·21
1919-20 .. .. .	7·44	2·26	6·38
1920-21 .. .. .	6·38	2·05	5·77
1921-22 .. .. .	7·23	2·17	6·23

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

#### WOOL PRODUCTION : HOME CONSUMPTION AND EXPORTABLE BALANCE, 1912 to 1921-22.

Year.	Production. (Annual Average.)		Used in Manufactures. (Annual Average.)		Available for Export. (Annual Average.)	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1912-17	93,635,678	4,237,753	7,458,611	327,451	86,177,087	3,910,302
1917-18	105,424,682	6,410,077	7,344,030	397,800	98,080,652	6,012,277
1918-19	126,647,061	7,621,413	7,823,050	423,748	118,824,011	7,197,665
1919-20	132,847,167	7,908,007	11,300,400	612,105	121,546,767	7,295,902
1920-21	90,250,571	4,729,400	12,799,590	639,980	77,450,981	4,089,420
1921-22	103,512,777	4,662,750	13,293,010	553,875	90,219,767	4,108,875

Prices of  
wool.

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

PRICES OF WOOL, 1919-20 TO 1921-22.

Class of Wool.	Average Price per lb. in—		
	1919-20.	1920-21.	1921-22.
GREASY MERINO.			
Extra Super (Western District)	28d. to 31½d.	30d. to 36d.	28d. to 36d.
Super .. .. .	24d. to 27d.	24d. to 28d.	22d. to 24d.
Good .. .. .	18d. to 23d.	16d. to 20d.	16d. to 18d.
Average .. .. .	15d. to 17d.	12d. to 14d.	12d. to 14d.
Wasty and Inferior .. .. .	10d. to 12d.	6d. to 8d.	8d. to 10d.
Extra Super Lambs .. .. .	23d. to 26½d.	18d. to 20d.	24d. to 26d.
Super Lambs .. .. .	18d. to 22d.	13d. to 15d.	16d. to 18d.
Good Lambs .. .. .	15d. to 17d.	10d. to 12d.	11d. to 12d.
Average Lambs .. .. .	11d. to 14d.	7d. to 8d.	7d. to 8d.
Inferior Lambs .. .. .	6d. to 9d.	2d. to 4d.	3d. to 5d.
GREASY CROSSBRED.			
Extra Super Comebacks .. .. .	26d. to 29d.	22d. to 24d.	22d. to 24d.
Super Comebacks .. .. .	23d. to 27d.	19d. to 21d.	17d. to 19d.
Fine Crossbred .. .. .	20d. to 24d.	9d. to 11d.	13d. to 15d.
Medium Crossbred .. .. .	15d. to 19d.	5d. to 7d.	8d. to 10d.
Coarse Crossbred and Lincoln	13d. to 15d.	2d. to 3½d.	3d. to 5d.
Super Fine Crossbred Lambs .. .. .	16d. to 20d.	11d. to 14d.	14d. to 16d.
Good Crossbred Lambs .. .. .	12d. to 15d.	6d. to 7d.	8d. to 10d.
Coarse and Lincoln Lambs .. .. .	10d. to 12d.	4d. to 5d.	4d. to 5d.
SCOURED.			
Extra Super Fleece .. .. .	42d. to 48d.	45d. to 51d.	42d. to 46d.
Super Fleece .. .. .	38d. to 41d.	38d. to 41d.	34d. to 38d.
Good Fleece .. .. .	34d. to 37d.	29d. to 32d.	26d. to 30d.
Average Fleece .. .. .	28d. to 33d.	23d. to 27d.	18d. to 22d.
RECORD PRICES FOR THE SEASON.			
Greasy Merino Fleece .. .. .	31½d.	49½d.	42½d.
„ Comeback Fleece .. .. .	29d.	37½d.	31d.
„ Merino Lambs .. .. .	26½d.	26d.	32½d.
„ Comeback Lambs .. .. .	22½d.	27d.	24½d.
Scoured Fleece .. .. .	48d.	64d.	51d.

Flocks of sheep in districts.

Returns which were collected in March, 1919, gave full information in regard to the flocks of sheep in Victoria. The numbers of flocks and of sheep at that time in the different districts were as follows :—

### NUMBERS OF FLOCKS AND OF SHEEP IN DISTRICTS, 1919.

District.	Number of—		Average Number of Sheep to a Flock.	Percentage of—	
	Flocks.	Sheep.		Flocks.	Sheep.
Central .. ..	3,384	1,377,304	407	11·94	8·75
North-Central .. ..	2,434	1,371,189	563	8·59	8·71
Western .. ..	6,080	4,848,391	797	21·46	30·80
Wimmera .. ..	4,282	2,440,595	570	15·11	15·50
Mallee .. ..	1,514	840,734	555	5·34	5·34
Northern .. ..	5,286	2,499,582	473	18·65	15·88
North-Eastern .. ..	2,449	1,038,230	424	8·64	6·60
Gippsland .. ..	2,909	1,325,171	455	10·27	8·42
Total .. ..	28,338	15,741,196	555	100·00	100·00

The figures do not include 32,706 sheep which were travelling on roads or were located in cities and towns. Flocks were more numerous in all districts, and their average size was greater in every district, except the Central, in 1919 than in 1913. In the six years referred to the number of flocks increased by 895 in the Central, 357 in the North-Central, 506 in the Western, 251 in the Wimmera, 156 in the Mallee, 562 in the Northern, 301 in the North-Eastern, and 476 in the Gippsland district, the total increase for the State being 3,504, or 14 per cent. The average number of sheep to a flock showed a very marked increase in the North-Central, Wimmera, Mallee, Northern, and North-Eastern districts, and a slight increase in the Western and Gippsland districts, while there was a small reduction in the Central district. The average number of sheep in a flock was 555 in 1919, as

compared with 477 in 1917, 478 in 1913, 531 in 1910, 642 in 1908, and 706 in 1906. The number of sheep in the State increased from 11,892,224 in 1913 to 15,773,902 in 1919. All divisions of the State showed substantial increases during the six years under review.

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 :—

Sizes of  
Flocks.

### SHEEP ACCORDING TO SIZES OF FLOCKS, 1919.

Size of Flocks.	Number of—		Percentage of—	
	Flocks.	Sheep.	Flocks.	Sheep.
Under 500 .. ..	20,430	3,185,381	72·10	20·24
500 to 1,000 .. ..	4,339	2,972,551	15·31	18·88
1,000 „ 2,000 .. ..	2,233	3,005,850	7·88	19·10
2,000 „ 5,000 .. ..	955	2,733,598	3·37	17·35
5,000 „ 10,000 .. ..	247	1,691,768	·87	10·75
10,000 „ 20,000 .. ..	111	1,516,830	·39	9·64
Over 20,000 .. ..	23	635,218	·08	4·04
Total .. ..	28,338	15,741,196	100·00	100·00

A comparison of the above figures with those for 1913 shows that flocks of less than 500 sheep had increased by 848, and those of from 500 to 1,000 by 1,323, from 1,000 to 2,000 by 931, from 2,000 to 5,000 by 327, from 5,000 to 10,000 by 56, and from 10,000 to 20,000 by 21. Flocks of 20,000 and over had decreased by 2. During the six years under review the number of sheep in flocks of from 1,000 to 2,000 increased from 1,844,901 to 3,005,850, or by 63 per cent. The increase in the number of sheep in the whole State in the same period was 33 per cent. Twenty-one of the 23 largest and 70 of the 111 second largest flocks in 1919 were in the Western District.

Live Stock  
in Australia  
and  
New Zealand.

In the following statement are given the numbers of horses, cattle, sheep and pigs in the various Australian States and New Zealand, according to returns dated March, 1922, for Victoria and Tasmania; December, 1921, for

Queensland and Western Australia; June, 1922, for New South Wales and South Australia; and December, 1920, for the Northern Territory. The returns for New Zealand relate to April, 1922, in the case of sheep, and to January, 1922, in the case of other stock.

## LIVE STOCK IN AUSTRALASIA.

State, &c.	Horses.	Cattle.		Sheep.	Pigs.
		Dairy Cows.	Other.		
Victoria .. ..	493,124	719,473	1,030,896	12,325,818	230,770
New South Wales ..	663,178	941,742	2,433,525	33,851,828	306,253
Queensland .. ..	747,543	554,208	6,493,162	18,402,399	145,083
South Australia ..	267,639	165,866	253,331	6,257,052	87,667
The Northern Territory ..	37,837	70	659,770	6,062	1,416
Western Australia ..	180,334	53,828	839,280	6,506,177	63,001
Tasmania .. ..	38,439	45,165	171,539	1,551,273	49,743
New Zealand .. ..	332,105	1,137,055	2,186,168	22,222,259	384,333

**Bee-keeping.** The returns for 1921-22 show that there were in that year 4,046 bee-keepers, who owned 41,593 frame and 8,554 box hives, producing 2,612,381 lbs. and 100,294 lbs. of honey respectively, and 32,737 lbs. of beeswax. The number of bee-keepers owning 20 hives and upwards was 571, as compared with 473 in the previous season. The quantity of honey produced in the Wimmera, the chief producing district, was 1,172,403 lbs. in 1921-22, as compared with 548,978 lbs. in the previous season, 686,883 lbs. in 1919-20, 806,754 lbs. in 1918-19, 1,631,171 lbs. in 1917-18, and 800,505 lbs. in 1916-17. The more important particulars of the industry for the past ten years are given below:—

## BEE-KEEPING, 1912-13 TO 1921-22.

Season ended May.	Annual Average.			
	Number of Bee-keepers.	Number of Hives.	Honey produced. lbs.	Beeswax produced. lbs.
1912-17 .. ..	4,074	42,227	1,684,193	28,706
1918 .. ..	4,427	58,146	4,974,888	64,980
1919 .. ..	4,374	52,782	1,644,447	25,286
1920 .. ..	3,914	40,970	1,396,704	24,735
1921 .. ..	3,408	37,075	1,724,942	24,222
1922 .. ..	4,046	50,147	2,712,675	32,737

The following table shows the numbers of poultry and poultry-owners as ascertained in each of the four census years 1881 to 1911 :—

Poultry  
Farming.

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

Taking the figures for 1911 as a basis, it is estimated that the gross value of poultry and egg production for the year 1921-22 was £4,406,750.

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, 1921, sums amounting to £878,201 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 :—

State  
expenditure  
on rabbit  
destruction.

EXPENDITURE ON DESTRUCTION OF RABBITS, ETC.

	£		£
1879-80 to 1888-9	.. 142,963	1916-17 .. ..	.. 24,388
1889-90 to 1898-9	.. 208,638	1917-18 .. ..	.. 30,847
1899-1900 to 1908-9	.. 170,050	1918-19 .. ..	.. 39,460
1909-10 to 1913-14	.. 132,530	1919-20 .. ..	.. 36,672
1914-15 .. ..	.. 32,211	1920-21 .. ..	.. 36,158
1915-16 .. ..	.. 24,257		

In addition to the expenditure of £878,201 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 were advanced in later years from loans for the purchase of wire netting for supply to municipalities and land owners. The amounts of these advances in the last five years were as follows :—£3,203 in 1916-17, £9,472 in 1917-18, £3,766 in 1918-19, £20,985 in 1919-20, and £36,935 in 1920-21. 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 at  
Melbourne  
Fish Market.

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

RABBITS, HARES, AND WILD-FOWL SOLD AT THE  
MELBOURNE FISH MARKET, 1912-13 TO 1921-22.

Year.	Annual Average.		
	Rabbits.	Hares.	Wild-fowl.
	pairs.	brace.	brace.
1912-13 to 1916-17 .. .. .	581,410	225	19,431
1917-18 .. .. .	746,160	256	28,062
1918-19 .. .. .	622,896	50	19,224
1919-20 .. .. .	444,456	..	20,022
1920-21 .. .. .	405,564	40	7,158
1921-22 .. .. .	429,372	8	21,708

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. (Annual Average.)		Rabbit and Hare Skins. (Annual Average.)	
	Quantity.	Value.	Quantity.	Value.
	pairs.	£	lbs.	£
1912-13 to 1916-17 .. .. .	1,696,349	98,998	2,321,514	128,308
1917-18 .. .. .	3,701,662	280,422	938,874	108,765
1918-19 .. .. .	1,176,106	87,333	1,932,217	134,900
1919-20 .. .. .	2,725,692	224,737	3,266,621	780,038
1920-21 .. .. .	1,094,689	131,130	1,893,827	326,681
1921-22 .. .. .	454,052	35,385	2,623,228	201,921

The quantity of rabbit and hare skins exported oversea in 1921-22 was larger than in any of the previous seven years with the exception of the year 1919-20.

## 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 1921-22:—

## VICTORIAN FISHERIES—MEN AND BOATS EMPLOYED, 1921-22.

Fishing Stations.	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
Anderson's Inlet .. .. .	4	3	£ 135	£ 130
Barwon Heads and Ocean Grove .. .. .	9	5	900	80
Brighton .. .. .	12	8	328	221
Corner Inlet, Welshpool, Toora, and Port Franklin .. .. .	89	64	7,282	3,841
Dromana .. .. .	29	23	1,249	317
Frankston .. .. .	8	8	431	173
Geelong .. .. .	75	41	3,226	1,210
Gippsland Lakes .. .. .	185	124	11,806	5,821
Kerang .. .. .	6	6	33	39
Lorne .. .. .	6	3	100	210
Mallacoota .. .. .	6	6	500	75
Mentone .. .. .	6	5	84	95
Mordialloc, Chelsea and Carrum .. .. .	43	39	2,792	411
Mornington .. .. .	42	32	1,463	806
Portarlington and St. Leonards .. .. .	109	65	4,016	1,710
Portland .. .. .	48	33	4,202	742
Port Albert .. .. .	39	31	3,033	1,315
Port Fairy .. .. .	64	39	6,930	667
Port Melbourne .. .. .	59	37	3,419	755
Queenscliff .. .. .	126	75	12,230	1,303
Sandringham .. .. .	33	24	1,454	430
Sorrento, Portsea, and Rye .. .. .	63	40	2,641	820
St. Kilda .. .. .	15	8	174	185
Warrnambool .. .. .	18	12	658	231
Werribee .. .. .	14	9	490	158
Western Port (Coves, Hastings, Grantville, Flinders, San Remo, and Tooradin)	139	99	9,918	2,725
Williamstown .. .. .	32	19	882	486
Total .. .. .	1,279	858	80,429	24,956

Melbourne Fish Market.

The quantities and values of fish sold in the Melbourne Fish Market during each of the years 1920-21 and 1921-22 were as shown in the next table.

**FISH SOLD IN THE MELBOURNE FISH MARKET,  
1920-21 AND 1921-22.**

	1920-21.		1921-22.	
	Quantity.	Value.	Quantity.	Value.
Fresh Fish (Victorian) lbs.	10,931,950	£ 136,650	10,481,420	£ 124,900
Crayfish .. .. doz.	35,424	32,324	32,748	24,561
Imported Fish (fresh or frozen) .. lbs.	1,957,134	40,774	2,183,328	45,486
Oysters .. .. bags	8,251	27,269	7,189	26,101
<b>Total .. ..</b>	<b>..</b>	<b>237,017</b>	<b>..</b>	<b>221,048</b>

In addition to the above, 6,429 cwt. of smoked fish, and 421 baskets of prawns were sold in this market in 1921-22.

**Victorian fish sold.** The quantity and value of fish caught in Victorian waters and sold in the Melbourne and Ballarat markets and elsewhere in 1921-22 were as follows:—

**VICTORIAN FISH SOLD IN 1921-22.**

Markets.	Quantity.		Value.	
	Fish.	Crayfish.	Fish.	Crayfish.
	lbs.	doz.	£	£
Melbourne .. ..	10,481,420	14,990	124,900	11,240
Ballarat .. ..	560,352	2,240	7,840	1,120
Other .. ..	192,683	600	2,410	300
<b>Total .. ..</b>	<b>11,234,455</b>	<b>17,830</b>	<b>135,150</b>	<b>12,660</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 1921-22 are appended. Records of Interstate imports are not obtainable for years subsequent to 1909:—

**FISH IMPORTED, 1909 AND 1921-22.**

	1909.—Interstate.		1909.—Oversea.		1921-22.—Oversea,	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
<b>Fish—</b>		£		£		£
Fresh or Frozen lbs.	1,772,999	22,720	758,545	11,076	1,548,863	53,585
Smoked .. ..	127,016	662	99,793	3,322	43,943	2,705
Fresh Oysters cwt.	16,941	8,529	7,935	4,145	2,297	3,675
Potted, &c. .. ..	..	41	..	4,559	..	12,156
Preserved in tins, &c. .. lbs.	117,177	3,266	4,823,366	116,931	6,356,000	290,308
N.E.I. .. cwt.	214	356	5,815	9,434	2,600	9,955
<b>Total .. ..</b>	<b>..</b>	<b>35,574</b>	<b>..</b>	<b>149,467</b>	<b>..</b>	<b>372,384</b>

The most important item in this table is fish preserved in tins and other air-tight vessels, of which 4,335,740 lbs. came from the United Kingdom and Canada in 1921-22.

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, for the five years 1915 to 1919—years representing war conditions—and for the year 1920 :—

**AVERAGE ANNUAL IMPORTS OF CERTAIN ARTICLES INTO UNITED KINGDOM FROM AUSTRALIA, OTHER BRITISH POSSESSIONS, AND FOREIGN COUNTRIES, 1907-13, 1915-19, AND 1920.**

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
	1915-19	4,195,654	4,106,978	12,598,692	20,901,324
	1920	3,282,376	4,384,351	16,852,021	24,518,748
Cheese .. ..	1907-13	13,102	5,704,495	1,256,192	6,974,089
	1915-19	338,104	11,927,861	2,652,381	14,918,346
	1920	14,923	17,976,327	1,783,169	20,274,419
Wheat .. ..	1907-13	4,497,088	14,371,951	23,170,831	42,039,873
	1915-19	5,458,658	18,678,530	42,932,113	67,069,301
	1920	18,63,968	15,626,563	112,490,819	146,753,350
Wheatmeal and Flour .. ..	1907-13	216,477	1,512,672	4,384,282	6,113,431
	1915-19	1,513,771	5,515,112	12,323,258	19,352,141
	1920	2,325,722	4,560,046	14,360,213	21,245,981
Meat .. ..	1907-13	4,108,980	6,651,731	34,457,389	45,218,100
	1915-19	7,421,101	23,659,251	94,699,549	125,679,901
	1920	16,073,668	32,202,453	92,221,984	140,498,105
Fruit—Fresh, Dried, and Preserved .. ..	1907-13	395,110	1,409,440	12,933,186	14,737,736
	1915-19	477,438	2,209,567	19,773,288	22,460,293
	1920	1,537,847	6,868,236	46,973,753	55,379,836
Wine .. ..	1907-13	127,388	29,076	3,848,344	4,004,808
	1915-19	95,789	36,725	6,717,451	6,849,965
	1920	317,365	37,250	12,418,796	12,773,411
Wool .. ..	1907-13	13,621,012	13,085,172	5,697,694	32,403,878
	1915-19	28,390,570	20,702,346	3,371,118	52,464,034
	1920	51,702,095	23,633,162	12,288,705	87,629,962
Skins, Furs, and Hides .. ..	1907-13	1,928,626	4,105,504	7,937,906	13,972,036
	1915-19	2,248,064	7,787,222	9,589,293	19,624,579
	1920	4,101,449	13,954,244	13,911,419	31,967,112
Tallow and Stearine .. ..	1907-13	1,352,280	725,532	1,464,682	3,542,494
	1915-19	1,062,477	1,017,723	1,315,485	3,395,685
	1920	1,596,721	1,662,854	4,351,143	7,610,718
Leather .. ..	1907-13	409,128	3,034,535	6,498,824	9,942,487
	1915-19	920,789	6,471,859	10,313,727	17,706,375
	1920	906,819	5,714,418	13,024,179	19,645,416
Total—Eleven Articles .. ..	1907-13	29,801,002	52,393,030	120,534,289	202,728,321
	1915-19	52,122,415	102,113,174	216,186,355	370,421,944
	1920	100,994,953	126,619,904	340,676,201	568,291,058

The value of the above-mentioned articles imported into the United Kingdom from Australia amounted to £100,994,953 in 1920 as compared with £100,044,244 in 1919, £38,284,712 in 1918, £56,850,293 in

1917, £28,296,038 in 1916, £37,136,787 in 1915, and £29,801,002 on the average of the years 1907 to 1913.

The figures relating to agriculture and live stock in Victoria and Great Britain in 1921 are for comparative purposes placed side by side in the table which follows:—

### AGRICULTURE AND LIVE STOCK IN VICTORIA AND GREAT BRITAIN, 1921.

	Victoria.	Great Britain.
Area .. .. . acres	56,245,760	56,208,959
Wheat .. .. . bushels	43,867,596	72,344,000
Oats .. .. . "	6,082,258	118,608,000
Barley .. .. . "	2,336,246	48,384,000
Peas .. .. . "	166,474	2,504,000
Potatoes .. .. . tons	173,660	3,998,000
Turnips and swedes .. .. . "	2,134*	13,740,000
Mangolds .. .. . "	7,768	6,286,500
Hay .. .. . "	1,548,453	6,125,000
Horses .. .. . No.	496,124	1,339,698
Cattle .. .. . "	1,750,369	6,659,859
Sheep .. .. . "	12,325,818	20,490,024
Pigs .. .. . "	230,770	2,650,964

\* 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 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 1920-21 from miners' rights was £2,204.

Leases for the purpose of mining for gold are granted for a term not exceeding fifteen years at a yearly rental of 2s. 6d. per acre. For mining leases of land to be worked by means of dredging or hydraulic sluicing the yearly rent is 5s. per acre. Other mineral and coal mining leases are also issued at varying rates. The revenue from these sources in 1920-21 was £3,654.

The area of Crown and private lands under occupation for mining purposes on 31st December, 1921, was 52,893 acres. The subjoined table shows the area being worked for different minerals:—

AREA UNDER OCCUPATION FOR MINING PURPOSES,  
31ST DECEMBER, 1921 (CROWN LANDS AND PRIVATE LAND).

Nature of Mineral, &c.	Area.
	acres.
Gold .. .. .	37,173
Coal (ordinary) .. .. .	3,499
Coal (brown) .. .. .	1,180
Aluminium .. .. .	37
Barytes .. .. .	29
Bluestone .. .. .	23
Clay Slum .. .. .	163
Copper .. .. .	243
Copper and Silver .. .. .	71
Dolomite and Clay .. .. .	1
Eurite and Gold .. .. .	9
Felspar .. .. .	25
Granite .. .. .	27
Gypsum .. .. .	893
Hematite and Iron Ores .. .. .	8
Infusorial Earth .. .. .	9
Iron .. .. .	788
Iron Oxides .. .. .	5
Kaolin .. .. .	81
Limestone .. .. .	94
Limestone and Clay .. .. .	27
Magnesite .. .. .	114
Manganese .. .. .	2,168
Manganese and Cobalt .. .. .	19
Marble .. .. .	127
Molybdenite .. .. .	492
Molybdenite, Copper, and Silver .. .. .	29
Ochre .. .. .	3
Oxide .. .. .	11
Pigments and Clay .. .. .	21
Pigments and Limestone .. .. .	65
Porphyry .. .. .	12
Quicksilver .. .. .	55
Shale .. .. .	17
Silicate of Alumina .. .. .	59
Silver, Bismuth, Wolfram, and Phosphates .. .. .	19
Silver and Gold .. .. .	30
Silver and Lead .. .. .	187
Slate .. .. .	53
Sulphates and Oil .. .. .	224
Tin .. .. .	2,675
Wolfram .. .. .	118
Wolfram and Tin .. .. .	454
Wolfram, Molybdenite, and Bismuth .. .. .	45
Brown Coal and Associated Minerals .. .. .	609
Water-right Licences .. .. .	902
<b>Total .. .. .</b>	<b>52,893</b>

**Mining development.** The mining industry has been well fostered by the Government, not only in the way of financial assistance but also by means of geological surveys and boring. Apart from the annual expenditure of the Mines Department from consolidated revenue, of which a statement is appended, loan moneys amounting to £510,638 (including £239,616 expended on the State Coal Mine), and portions of surplus revenues of past years amounting to £85,000, have been expended or advanced for developmental purposes since 1st July, 1899.

## STATE EXPENDITURE ON MINING, 1916-17 TO 1920-21.

	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.
Expenditure from Consolidated Revenue.					
	£	£	£	£	£
Mines Department .. ..	24,154	22,453	22,030	24,423	27,359
State Coal Mine .. ..	238,213	263,730	266,244	367,733	385,105
Coal Mines Regulation—Sinking Fund and Depreciation Fund	2,951	29,068	17,107	56,613	22,419
Victorian Coal—Allowance to Railway Department on carriage of .. ..	6,994	2,368	1,871	2,284	..
Diamond drills for prospecting ..	8,816	8,889	11,728	11,703	10,992
Testing plants .. ..	4,639	3,553	3,813	4,028	4,643
Geological and underground surveys of mines .. ..	2,348	2,010	2,186	2,138	2,443
<b>Mining Development—</b>					
Advances to companies, &c., boring for gold, coal, &c. ..	29,904*	74,173	52,387	115,046	84,192
Miscellaneous .. ..	4,816	3,258	2,190	3,063	1,702
<b>Total .. ..</b>	<b>322,835</b>	<b>409,502</b>	<b>379,556</b>	<b>587,031</b>	<b>538,855</b>

\* Including £36 expended from Surplus Revenue.

Yearly grants are also made to Schools of Mines, particulars of which will be found on page 325 of this work. Since 1st July, 1899, £510,638 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
Purchase of cyanide process patent rights ..	20,000
Equipping Schools of Mines with mining appliances ..	9,975
State Coal Mine ..	239,616
Miscellaneous ..	9,740
Total ..	510,638

The advances from loan moneys and revenue to mining companies to 30th June, 1921, for the development of mining, totalled £239,627, of which sum £28,394 had up to that date been repaid, £40,179 realized, and £120,872 written off, leaving £50,182 outstanding. Interest received during 1920-21 amounted to £158, and interest outstanding on 30th June, 1921, to £4,117.

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 1921.

TOTAL MINERAL PRODUCTION TO 31ST DECEMBER, 1921.

Metals and Minerals.	Recorded prior to 1921.		Recorded during 1921.		Total Recorded to end of 1921.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Fine ozs.	£	Fine ozs.	£	Fine ozs.	£
Gold ..	70,755,747	300,550,535	104,512	443,938	70,860,259	300,994,473
Silver ..	1,436,651	218,444	5,204	862	1,441,855*	219,306
	30,577	7,880	..	..	30,577	7,880
Platinum ..	311	1,671	..	..	311	1,671
	tons.		tons.		tons.	
Coal, black ..	8,655,769	5,011,754	514,859	603,323	9,170,628	5,615,077
"    brown ..	464,317	155,900	79,224	31,074	543,541	186,974
Ore—copper ..	18,730	218,590	..	..	18,730	218,590
"    tin ..	16,515	891,562	80	11,961	16,595	903,523
"    antimony ..	99,157	549,165	1,225	5,890	100,382	555,055
"    silver-lead ..	793	5,760	..	..	793	5,760
"    iron ..	5,434	12,540	..	..	5,434	12,540
"    manganese ..	247	919	10	100	257	1,019
Wolfram ..	118	11,785	..	..	118	11,785
Diamonds ..	..	128	..	..	..	128
Sapphires, &c. ..	..	630	..	..	..	630
Gypsum ..	32,625	24,181	11,139	6,914	43,764	31,095
Magnesite ..	1,256	3,816	128	384	1,384	4,200
Kaolin ..	18,076	25,281	2,142	1,577	20,218	26,858
Diatomaceous earth ..	8,057	33,137	..	..	8,057	33,137
Pigment clays ..	1,312	1,684	335	375	1,647	2,059
Phosphate rock ..	9,531	10,281	1,541	1,541	11,072	11,822
Molybdenite ..	104	4,206	5	70	109	4,366
Fluorspar ..	427	1,263	196	625	623	1,888
Bluestone, freestone, granite, &c.† ..	..	6,014,609	..	434,520	..	6,449,129
Limestone, &c.‡ ..	..	..	..	..	..	..
Total ..	..	313,755,811	..	1,543,154	..	315,298,965

\* 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 1921 was £300,994,473, as shown in the preceding statement. This sum is based on the average value of Victorian gold received at the Melbourne Mint.

Gold raised  
in Victoria.

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

#### GOLD RAISED IN VICTORIA, 1851 TO 1921.

Period.	Quantities (Fine Ozs.).	Period.	Quantities (Fine Ozs.).
1851-60 .. ..	23,334,263*	1916 .. ..	256,643
1861-70 .. ..	16,276,566*	1917 .. ..	201,872
1871-80 .. ..	10,156,297*	1918 .. ..	158,827
1881-90 .. ..	7,103,448*	1919 .. ..	135,427
1891-1900 .. ..	7,476,038*	1920 .. ..	152,792
1901-10 .. ..	7,095,061	1921 .. ..	104,512
1911-15 .. ..	2,161,349		

\* Gross ozs.

The yield has been on the down grade since 1906, the return for 1921 having been the lowest for the State since 1851. The quantities raised in the other principal gold-producing States in 1921 were 553,731 ounces in Western Australia, 40,376 ounces in Queensland, and 51,173 ounces in New South Wales. The total production of gold in the world in 1919 was 18,367,881 ozs.

Mining  
district  
gold yields

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 1920 by 1,522 ounces, and that of 1921 by 251 ounces.

**DISTRICT YIELDS OF GOLD, ALLUVIAL AND QUARTZ,  
1920 AND 1921.**

Mining District.	1920.			1921.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Ararat and Stawell ..	5,619	4,231	9,850	4,722	168	4,890
Ballarat ..	2,622	2,728	5,350	1,557	6,080	7,637
Beechworth ..	14,670	25,753	40,423	11,149	19,331	30,480
Bendigo ..	587	87,274	87,861	988	61,105	62,093
Castlemaine ..	4,627	13,146	17,773	2,820	2,998	5,818
Gippsland ..	2,942	858	3,800	2,285	548	2,833
Maryborough ..	1,319	261	1,580	748	380	1,128
<b>Total ..</b>	<b>32,386</b>	<b>134,251</b>	<b>166,637</b>	<b>24,269</b>	<b>90,610</b>	<b>114,879</b>

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, 1917 TO 1921.**

Mining District.	Amount Distributed.				
	1917.	1918.	1919.	1920.	1921.
	£	£	£	£	£
Ararat and Stawell ..	14,583	..	..	..	..
Ballarat ..	..	..	..	..	13
Beechworth ..	32,874	34,050	19,220	36,690	14,055
Bendigo ..	8,288	..	..	44,226	6,750
Castlemaine ..	28,225	17,100	5,800	11,595	6,480
Gippsland ..	675	525	160	2,668	1,096
Maryborough ..	2,500	1,250	..	..	167
<b>Total ..</b>	<b>87,145</b>	<b>52,925</b>	<b>25,180</b>	<b>95,179</b>	<b>28,561</b>

By comparison with 1920 the amount of the dividends declared in 1921 represents a decrease of 70 per cent.

**Gold miners.** The average number of men employed in gold 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, 1912 TO 1921.

Year.	Annual Average.		
	Alluvial Miners.	Quartz Miners.	Total.
1912-1916 .. .. .	3,493	6,375	9,868
1917 .. .. .	..	..	6,069
1918 .. .. .	..	..	3,547
1919 .. .. .	1,155	1,910	3,065
1920 .. .. .	1,138	2,604	3,742
1921 .. .. .	1,073	1,977	3,050

The number of men employed in each mining district in 1921 was as follows :—Ararat and Stawell, 146 ; Ballarat, 83 ; Bendigo, 1,752 ; Beechworth, 641 ; Castlemaine, 195 ; Gippsland, 94 ; and Maryborough, 139.

**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, 1917 TO 1921.

Year.	Approximate Value of Machinery Employed in—		
	Alluvial Mining.	Quartz Mining.	Total.
	£	£	£
1917 .. .. .	..	..	825,450
1918 .. .. .	..	..	650,600
1919 .. .. .	198,490	425,110	623,600
1920 .. .. .	181,400	703,416	884,816
1921 .. .. .	156,642	508,643	665,285

**Dredging and sluicing.**

A feature of alluvial mining in Victoria for the past twenty 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 1921 the

number of bucket dredges at work was 11, and the number of pump hydraulic sluices 5, in addition to which 20 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, 1917 TO 1921.

Year.			Number of Plants.	Area Worked.	Quantity of Material Treated.	Gold Obtained.	Tin Obtained.
				Acres.	Cub. yds.	Ozs.	Tons.
1917	..	..	73	306	10,038,688	44,756	120
1918	..	..	67	230	7,626,581	33,983	124
1919	..	..	56	161	5,517,159	24,540	107
1920	..	..	43	130	4,179,778	19,855	78
1921	..	..	42	99	3,554,674	15,734	78

These plants employed 354 men in 1921. The yield of gold in that year per cubic yard of material was 2·1 grains, which was a slight decrease as compared with that of the previous year. Since the inception of dredge mining 1,854,141 ounces of gold and 1,349 tons of tin have been won by this system.

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, 1917 TO 1921.

Year.			Number of Plants.	Quantity of Tailings Treated.	Yield of Gold.	Value of Yield.
				Tons.	Ozs.	£
1917	..	..	66	127,012	8,930	34,369
1918	..	..	34	45,600	4,420	18,250
1919	..	..	33	44,581	4,361	16,484
1920	..	..	28	37,596	4,226	16,216
1921	..	..	20	39,937	5,326	17,212

Records show that the total amount of tailings which have been treated by the cyanide and other processes is 15,922,624 tons, and that the gold that has been won thereby amounts to 1,269,444 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, 1917 TO 1921.

Year.					Number of Batteries.	Quantity of Ore Treated.	Yield of Gold.
						tons.	ozs.
1917	..	..	..	..	33	3,278	2,102
1918	..	..	..	..	33	4,092	2,905
1919	..	..	..	..	34	2,941	3,778
1920	..	..	..	..	33	2,664	2,849
1921	..	..	..	..	34	1,748	1,367

Since 1897, the year in which the first battery was erected, 70,904 tons of ore have been crushed for 48,726 ounces of gold.

**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 543,541 tons (valued at £186,974), of which 79,224 tons were obtained in 1921. Of the total output for that year 74,458 tons valued at £28,968 were obtained from the State Brown Coal Mine at Morwell.

**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, 1921, was 451,255 tons, valued at £518,944. The total output up to the end of 1921 was 5,069,835 tons, valued at £3,152,565. The average number of men employed at the mine throughout the year ended 30th June, 1921, was 1,541.

Victorian  
coal  
production  
and value.

The quantity of coal, exclusive of brown coal, raised in Victoria up to the end of 1921 was 9,170,628 tons, valued at £5,615,077. The total production prior to 1892, the average annual production for the periods 1892-1900, 1901-10 and 1911-15, and the annual production for the years 1916 to 1921, together with the value per ton at the pit's mouth, are given in the following table:—

COAL PRODUCTION AND VALUE PER TON.

Period.			Average Annual Production.	Average Annual Value per ton at pit's mouth.
			tons.	s. d.
Prior to 1892	..	..	*77,914	18 8
1892-1900	..	..	184,517	9 11
1901-10	..	..	168,548	11 8
1911-15	..	..	608,512	9 2
1916	..	..	417,183	10 4
1917	..	..	466,220	14 5
1918	..	..	439,575	15 11
1919	..	..	423,946	17 7
1920	..	..	442,241	21 0
1921	..	..	514,859	23 5

\* Total production up to date mentioned.

The quantities of coal produced in the other States in 1921 were as follows:—New South Wales, 10,793,387 tons; Queensland, 954,763 tons; Western Australia, 468,817 tons; and Tasmania, 66,476 tons.

The numbers of fatal and non-fatal accidents in gold and coal mines during the last ten years are shown below. **Mining accidents.** 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, 1912 TO 1921.

Year.	Gold Mines. (Annual Average.)			Coal Mines. (Annual Average.)		
	Miners Employed.	Persons Killed.	Persons Injured.	Miners Employed.	Persons Killed.	Persons Injured.
1912-1916 .. ..	9,868	11	47	1,372	2	20
1917 .. ..	6,069	5	17	1,885	3	24
1918 .. ..	3,547	5	12	1,584	4	6
1919 .. ..	3,065	4	9	2,192	5	13
1920 .. ..	3,724	3	13	2,011	1	5
1921 .. ..	3,050	5	2	1,994	5	11

As a result of gold mining accidents during the past ten years 78 persons were killed and 288 were injured and rendered unfit for work for a period of at least fourteen days. These numbers were equivalent to annual rates of 1·13 and 4·18 respectively per 1,000 employed. Coal mining accidents during the same period accounted for 29 deaths and 161 injuries resulting in disablement for at least fourteen days, these being equal to yearly rates of 1·75 and 9·68 respectively per 1,000 employees.

The record of boring operations conducted by the **Boring for gold and coal.** Mines Department during the past five years is as follows:—

## GOVERNMENT BORING OPERATIONS, 1917 TO 1921.

Year.	Drills worked by—		Bores put down for—			Total Depth Bored.
	Steam.	Other Power.	Gold.	Coal.	Total.	
1917 .. ..	1	14	21	115	136	25,400
1918 .. ..	2	10	..	214	214	41,080
1919 .. ..	2	10	6	216	222	38,340
1920 .. ..	2	13	5	358	363	37,957
1921 .. ..	1	14	20	400	420	40,000

**Antimony.** Up to the end of 1921 the quantity of antimony ore produced in Victoria was 100,382 tons valued at £555,055. Nearly the whole of it was obtained at Costerfield. The production for 1921 yielded 347 tons of concentrates valued at £5,890. For the previous year the production was 4,678 tons of ore, which yielded 961 tons of concentrates of the value of £14,238.

**Tin.** The production of tin ore in the State up to the end of 1921 was 16,595 tons, valued at £903,523. In the year 1921 the quantity produced was 80 tons, as against 85 tons in the preceding year, and 113 tons in 1919. Of the tin won during the past five years nearly the whole was obtained in the Beechworth district.

**Gypsum.** The quantity of gypsum produced in the State in 1921 was 11,139 tons, nearly all of which was obtained at Boort, Lake Boga, and Lascelles. The output for the previous year was 3,393 tons, which was obtained almost entirely at Lake Boga and Boort. Up to the end of 1921, the quantity raised in Victoria was 43,764 tons, valued at £31,095.

**Kaolin.** The quantity of kaolin produced in 1921 was 2,142 tons, and in the previous year 2,130 tons. Up to the end of last year the total output was 20,218 tons, valued at £26,858.

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

QUARRIES, 1917-18 to 1921-22.

Year.	Number of Quarries.	Quantity of Stone Operated on				Approximate Value of Stone Raised.
		Bluestone.	Free-stone.	Granite.	Limestone.	
		c. yds.	c. yds.	c. yds.	c. yds.	£
1917-18 ..	103	744,630	24,190	2,250	44,450	171,992
1918-19 ..	99	837,080	1,282	1,760	47,854	189,770
1919-20 ..	91	785,847	2,824	1,490	56,446	219,413
1920-21 ..	105	1,068,131	417	1,485	56,031	340,450
1921-22 ..	112	1,212,637	4,437	1,515	58,073	369,030

In 1921-22 the number of persons employed in quarries was 1,633, and the wages paid amounted to £296,700. 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 of 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 1912 the number of factories has increased by 28 per cent., the number of persons employed by 25 per cent., the amount of salaries and wages paid by 136 per cent., the value of output by 134 per cent., the value of machinery and plant and premises by 111 per cent., and the engine power of factories by 115 per cent. The difference between the cost of materials used and the value of the output was equivalent to an added value of £317 4s. 10d. per person employed in 1921-22, as compared with £159 in 1912. This favorable economic result coincides with a larger proportion of establishments using mechanical power in 1921-22, when 81 per cent. were so equipped, as against 69 per cent. in 1912, 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 are indications of increasing industrial efficiency. The proportion of child labour in factories has shown very slight variation during the past ten years.

Since 1912 the number of factories employing over 100 hands has increased by 15 per cent., and the number of hands employed by them has increased by 25 per cent. While factories of this size formed only 3.3 per cent. of the total number in the State in 1921-22, they employed 41.9 per cent. of the the total number of hands. The figures relating to distinct industries show that steady progress has been maintained in almost every class of factory 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 1921-22 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
1912 ..	5,263	116,108	10,102,244	19,457,795	45,410,773
1913 ..	5,613	118,744	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
1918-19 ..	5,720	122,349	14,080,403	27,318,735	80,195,677
1919-20 ..	6,038	136,522	17,702,173	30,804,520	101,475,363
1920-21 ..	6,532	140,743	21,377,216	35,492,735	106,008,294
1921-22 ...	6,753	144,876	23,846,495	40,992,280	106,243,181

\* Particulars not available.

† 1880.

‡ 1890.

\$ 1900.

#### Factories and Wages Board Legislation.

The first Factories Act in Victoria was passed in 1873, and since that year many other Acts dealing with the subject have been placed upon the statute-book. The *Factories and Shops Act* 1915 (No. 2650) consolidated all Acts passed prior to that date. The general provisions of factory legislation, including "Wages Boards," are fully dealt with in Part "Social Condition" of this work.

#### Production of different industries, 1921-22.

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 1921-22 the number of factories in each industry, the power used, the number of persons employed, the wages paid, the values of materials and fuel and light used, and the value of articles produced or work done:—

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1921-22.

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 I.—Treating Raw Material the product of Pastoral Pursuits, or Vegetable Products, not otherwise classed.</i>										
Boiling down .. .. .	13	256	9	144	..	3	£ 32,655	£ 10,545	£ 178,382	£ 230,703
Bone milling .. .. .	14	1,039	18	92	..	2	20,083	14,132	49,262	109,696
Tanning .. .. .	48	3,568	63	2,304	1	16	501,604	41,298	1,779,168	2,740,429
Fellmongering .. .. .	30	1,773	29	580	..	2	123,839	31,827	967,034	1,212,620
Chaffcutting and grain crushing ..	180	2,500	171	702	..	5	49,506	12,141	719,719	862,805
Other .. .. .	8	50	4	183	..	1	42,516	351	89,498	163,617
Total .. .. .	293	9,186	294	4,065	1	29	770,203	110,294	3,783,063	5,319,870
<i>Class II.—Oils and Fats, Animal and Vegetable.</i>										
Oil, grease, glue .. .. .	11	161	5	119	..	14	29,801	8,436	199,267	275,523
Soap and candle .. .. .	17	493	16	591	..	135	139,519	37,878	625,335	1,096,955
Total .. .. .	28	654	21	710	..	149	169,320	46,314	824,602	1,372,478

*Class III.—Processes relating to  
Stone, Clay, Glass, &c.*

Brick, pottery, &c. . . . .	93	5,401	72	2,457	..	126	495,288	180,920	87,573	999,383
Cement, including cement pipes ..	13	1,749	7	718	..	2	158,558	63,349	81,998	458,474
Glass, including bottles ..	9	445	10	856	..	11	170,875	55,298	70,430	399,287
Glass bevelling ..	23	84	18	197	..	6	40,919	1,193	84,601	146,820
Marble and stone dressing ..	43	394	57	345	..	6	81,240	2,645	65,280	215,112
Modelling ..	16	254	17	239	..	5	47,969	1,547	53,007	136,633
Other ..	18	216	15	226	..	1	45,198	20,404	19,547	107,131
<b>Total ..</b>	<b>215</b>	<b>8,543</b>	<b>196</b>	<b>5,038</b>	<b>..</b>	<b>157</b>	<b>1,040,047</b>	<b>325,356</b>	<b>462,436</b>	<b>2,462,840</b>

*Class IV.—Working in Wood.*

Cooperage ..	7	212	5	151	..	..	37,552	1,236	36,403	88,522
Saw-milling (forest) ..	239	3,852	342	3,061	..	13	627,432	799	39,442	1,122,102
Saw-milling, moulding, &c. ..	299	10,254	267	4,926	2	80	1,017,241	33,905	2,052,027	3,649,316
Mantelpiece ..	9	68	11	191	..	3	35,538	444	40,094	88,730
Wood carving, turning ..	24	480	25	256	..	8	58,167	2,499	60,305	156,480
Other ..	9	165	11	176	..	69	43,815	1,759	56,292	128,561
<b>Total ..</b>	<b>587</b>	<b>15,031</b>	<b>661</b>	<b>8,701</b>	<b>2</b>	<b>173</b>	<b>1,819,745</b>	<b>40,642</b>	<b>2,284,663</b>	<b>5,233,711</b>

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

Agricultural implement ..	58	1,601	64	2,810	1	41	643,874	43,794	806,066	1,767,843
Engineering, iron foundry, &c. ..	517	11,872	600	9,462	2	170	2,067,009	196,239	2,511,800	5,897,158
Railway workshop ..	18	2,658	..	5,407	..	8	1,282,617	35,853	1,574,766	3,182,559
Nail ..	10	388	7	137	..	3	27,557	2,285	121,562	184,987
Sheet-iron, tin, &c. ..	96	633	88	1,621	1	200	297,808	13,904	811,330	1,298,503
Brass, copper smithing ..	91	827	116	1,694	..	50	235,050	13,347	282,609	665,649
Wireworking ..	20	303	23	240	..	11	48,258	2,494	181,453	281,452
Metallurgical, &c., cyanide ..	12	101	21	89	..	..	18,996	3,799	125,361	172,948
Oven, range ..	16	94	18	131	..	..	29,213	1,266	37,030	93,129
Other ..	46	595	49	391	2	11	82,938	7,549	132,514	290,819
<b>Total ..</b>	<b>884</b>	<b>19,072</b>	<b>986</b>	<b>21,382</b>	<b>6</b>	<b>494</b>	<b>4,733,320</b>	<b>320,530</b>	<b>6,583,891</b>	<b>13,835,047</b>

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1921-22—continued.

Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
<i>Class VI.—Connected with Food and Drink or the preparation thereof.</i>										
Bacon curing .. .. .	22	1,424	32	429	..	16	£ 103,783	£ 17,785	£ 1,089,984	£ 1,366,832
Butter, cheese, butterine .. .. .	196	4,547	38	2,133	..	238	508,203	131,787	6,074,632	7,277,811
Meat freezing, preserving .. .. .	14	6,307	7	877	..	23	217,046	38,727	1,186,047	1,564,475
Biscuit .. .. .	8	465	7	784	..	520	181,386	21,335	588,563	942,440
Flourmilling .. .. .	45	5,017	34	946	..	17	228,195	49,459	4,951,120	5,759,281
Jam, sauce, &c. .. .. .	50	1,045	35	1,299	2	936	299,072	22,185	943,821	1,538,230
Oatmeal, starch, &c. .. .. .	37	1,166	19	380	..	297	105,495	18,062	717,950	993,149
Sugar, confectionery, &c. .. .. .	97	5,452	90	1,964	15	1,633	567,344	114,995	4,084,065	6,197,404
Aerated water, cordial, &c. .. .. .	122	355	115	783	5	86	166,915	5,149	304,718	659,806
Malt .. .. .	23	472	10	257	1	8	65,241	16,632	374,693	614,364
Brewing .. .. .	15	4,494	6	1,043	..	4	278,319	67,391	982,425	2,200,882
Distilling .. .. .	10	369	1	113	..	4	21,672	8,803	59,310	113,645
Condiments, coffee, cocoa, &c. .. .. .	16	997	6	277	1	173	76,625	9,718	531,703	715,933
Tobacco, &c. .. .. .	15	495	18	1,210	1	766	344,398	6,221	1,568,891	2,351,720
Other .. .. .	38	1,950	32	318	1	24	74,011	24,886	75,658	235,200
Total .. .. .	708	34,655	450	12,813	26	4,685	3,237,705	553,135	23,533,580	32,511,172

*Class VII.—Clothing and Textile  
Fabrics, and Fibrous Material.*

Woollen mill .. ..	19	7,390	18	1,684	..	2,054	526,009	76,409	1,150,361	2,482,761
Clothing, tailoring, &c. ..	497	502	470	1,661	44	7,246	1,076,033	19,225	2,148,957	3,905,486
Dressmaking and millinery ..	501	448	118	290	308	8,627	848,249	11,988	1,731,707	3,142,365
Underclothing, shirt .. ..	176	1,122	98	314	91	5,668	574,297	13,329	1,612,889	2,613,300
Hat, cap .. ..	51	777	56	656	7	900	258,623	14,520	474,492	918,959
Hosiery .. ..	143	1,188	89	574	77	3,684	443,669	18,759	1,440,734	2,297,739
Oilskin, waterproof clothing ..	4	110	2	50	1	117	26,442	938	64,763	107,827
Boot, shoe .. ..	334	2,664	406	6,443	14	4,851	1,760,589	30,375	3,109,863	6,043,172
Fur .. ..	34	57	31	112	10	230	42,517	1,215	166,616	285,796
Rope, twine, &c. .. ..	8	1,551	7	556	..	361	132,126	11,874	307,246	609,210
Sail, tent, &c. .. ..	17	35	19	80	1	72	22,672	334	142,034	195,622
Other .. ..	34	203	36	246	5	460	87,288	5,498	234,929	386,132

Total .. ..

1,818 16,047 1,350 12,666 558 34,270 5,797,914 204,464 12,584,591 22,988,369

*Class VIII.—Books, Paper, Printing,  
Engraving, &c.*

Printing .. ..	398	3,666	469	5,187	6	1,457	1,408,481	43,359	1,998,380	4,694,295
Account-book, stationery, &c. ..	30	579	34	636	1	628	183,440	4,851	380,572	702,992
Fancy box .. ..	30	285	23	230	7	700	113,769	2,907	244,854	469,054
Die sinking, engraving, &c. ..	18	100	22	192	..	7	35,644	966	18,162	84,877
Other .. ..	31	3,248	29	711	..	126	157,983	54,353	244,068	590,206

Total .. ..

507 7,878 577 6,956 14 2,918 1,899,317 106,436 2,886,036 6,541,424

*Class IX.—Musical Instruments* ..

15 241 11 359 .. 20 78,742 1,444 98,883 209,955

*Class X.—Arms and Explosives* ..

11 912 5 407 .. 344 129,785 16,443 309,887 519,760

Production.

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1921-22—continued.

Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
<i>Class XI.—Vehicles and Fittings, Saddlery, Harness, &amp;c.</i>							£	£	£	£
Coachbuilding .. ..	298	905	353	2,201	..	25	414,348	14,012	484,889	1,123,548
Bicycle, &c. .. ..	366	1,112	420	2,346	3	103	457,297	15,016	403,125	1,127,608
Saddle, harness .. ..	44	50	49	385	..	79	82,746	671	137,818	261,236
Other .. ..	18	32	26	172	..	11	31,201	714	50,394	107,178
Total .. ..	726	2,099	848	5,104	3	218	985,592	30,413	1,076,226	2,619,570
<i>Class XII.—Shipbuilding, Fitting, &amp;c.</i>	11	1,703	8	670	..	6	164,957	6,675	213,566	429,637
<i>Class XIII.—Furniture, Bedding, &amp;c.</i>										
Upholstery, bedding, &c. ..	57	508	38	415	2	267	103,576	3,420	299,314	483,326
Cabinet, including billiard table ..	282	2,018	368	2,243	2	106	422,900	11,075	585,007	1,247,508
Picture frame .. ..	19	39	20	70	..	15	14,833	321	27,742	56,341
Other .. ..	8	103	5	141	..	17	31,851	2,110	69,409	115,754
Total .. ..	366	2,668	431	2,869	4	405	573,160	16,926	981,472	1,902,929

*Class XIV.—Drugs, Chemicals, and By-products.*

Blacking, blue, &c. .. ..	23	245	17	164	..	199	50,853	2,528	297,552	441,387
Chemicals, drugs, &c. .. ..	42	1,161	35	538	1	434	170,168	14,635	410,127	791,125
Fertilizers .. ..	8	2,090	1	758	..	15	180,922	37,856	768,626	1,302,288
Other .. ..	42	418	40	237	2	24	38,724	2,813	129,645	220,474
<b>Total .. ..</b>	<b>115</b>	<b>3,914</b>	<b>93</b>	<b>1,697</b>	<b>3</b>	<b>672</b>	<b>440,667</b>	<b>57,832</b>	<b>1,605,950</b>	<b>2,755,274</b>

*Class XV.—Surgical and Scientific Appliances .. ..*

37	56	32	155	..	16	27,811	1,065	26,572	73,548
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*Class XVI.—Timepieces, Jewellery, and Platedware.. ..*

109	428	119	942	2	120	181,633	6,059	253,976	554,278
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*Class XVII.—Heat, Light, and Energy.*

Electric apparatus .. ..	61	493	54	615	..	35	118,441	3,722	160,634	364,411
Electric light .. ..	84	57,481	4	1,288	..	58	334,805	388,722	2,874	1,407,268
Gas, coke .. ..	45	1,903	5	2,228	..	76	609,600	6,730	760,894	1,953,936
Other .. ..	7	1,447	1	237	..	489	99,566	8,996	367,166	549,360
<b>Total .. ..</b>	<b>197</b>	<b>61,324</b>	<b>64</b>	<b>4,368</b>	<b>..</b>	<b>658</b>	<b>1,162,412</b>	<b>406,170</b>	<b>1,291,568</b>	<b>4,274,975</b>

Production.

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1921-22—*continued.*

Nature of Industry.	Number of Manufactories.	Actual Horse-power of Engines used.	Average Number of Persons Employed.				Value of—			
			Males.		Females.		Wages paid exclusive of Amounts drawn by Working Proprietors.	Fuel and Light used.	Materials Used.	Articles Produced or Work Done.
			Working Proprietors.	Employees.	Working Proprietors.	Employees.				
<i>Class XVIII.—Leatherware (except Saddlery and Harness) .. ..</i>	60	418	71	588	3	403	£ 149,677	£ 4,899	£ 396,368	£ 710,903
<i>Class XIX.—Wires, not elsewhere included.</i>										
Umbrella .. .. .	7	13	5	43	..	117	20,344	253	74,200	114,424
Rubber goods .. .. .	15	6,890	13	1,569	..	516	379,538	73,032	963,429	1,556,224
Brush, broom .. .. .	19	149	19	298	1	92	59,780	1,269	95,066	137,452
Basket, wickerware .. .. .	25	..	27	163	..	2	24,826	109	22,536	59,341
Total .. .. .	66	7,052	64	2,078	1	727	484,488	74,663	1,155,231	1,927,441
Grand Total .. .. .	6,753	191,881	6,281	91,508	623	46,464	23,846,495	2,329,760	60,352,561	106,243,181

Increase in value of output of each industry, 1916-17 and 1921-22.

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 1916-17 and 1921-22 is shown in the following table, the industries being arranged in order of increase in value :—

OUTPUT OF INDUSTRIES, 1916-17 AND 1921-22.

Industry.	Value of Output.		Increase in Five Years.	
	1916-17.	1921-22.	Value.	Per cent.
	£	£	£	
Engineering, iron foundries, &c.	2,936,342	5,897,158	2,960,816	100.8
Sugar, confectionery, &c. ..	3,435,831	6,197,404	2,761,573	80.3
Boot, shoe .. ..	3,460,404	6,043,172	2,582,768	74.6
Butter, cheese, and butterine	4,908,160	7,277,811	2,369,651	48.3
Flour mills .. ..	3,458,633	5,759,281	2,300,648	66.5
Printing .. ..	2,424,873	4,694,295	2,269,422	93.6
Sawmills, moulding, &c. ..	1,686,319	3,649,316	1,962,997	116.4
Railway workshops .. ..	1,409,770	3,182,559	1,772,789	125.8
Hosiery .. ..	643,450	2,297,739	1,654,289	257.1
Dressmaking and millinery ..	1,629,543	3,142,365	1,512,822	92.8
Woollen mills .. ..	1,006,635	2,482,761	1,476,126	146.6
Clothing, tailoring, &c. ..	2,448,673	3,905,486	1,456,813	59.5
Underclothing, shirt .. ..	1,273,032	2,613,300	1,340,268	105.3
Brewing .. ..	1,118,288	2,200,882	1,082,594	96.8
Agricultural implements ..	743,196	1,767,843	1,024,647	137.9
Tobacco, &c. .. ..	1,470,715	2,351,720	881,005	59.9
Bicycle, &c. .. ..	347,776	1,127,608	779,832	224.2
Gas, coke .. ..	1,181,096	1,953,936	772,840	65.4
Sawmills, forest .. ..	361,954	1,122,102	760,148	210.0
Electric light .. ..	673,769	1,407,268	733,499	108.9
Cabinet, including billiard table	524,611	1,247,508	722,897	137.8
Sheet iron, tin, &c. .. ..	673,927	1,298,503	624,576	92.7
Brick, pottery, &c. .. ..	387,317	999,383	612,066	158.0
Meat preserving, freezing ..	980,371	1,564,475	584,104	59.6
Rubber goods .. ..	987,893	1,556,224	568,331	57.5
Fertilizers .. ..	749,437	1,302,288	552,851	73.8
Coachbuilding .. ..	575,791	1,123,548	547,757	95.1
Oatmeal, starch, &c. .. ..	541,161	993,149	451,988	83.5
Brass, copper .. ..	248,418	665,649	417,231	168.0
Chemicals, drugs, &c. .. ..	380,104	791,125	411,021	108.1
Bacon curing .. ..	972,477	1,366,832	394,335	40.5
Hat, cap .. ..	539,335	918,959	379,624	70.4
Chaffcutting and graincrushing	485,203	862,805	377,602	77.8
Condiments, coffee, cocoa, &c.	355,281	715,933	360,652	101.5
Leatherware (except saddlery and harness) .. ..	370,474	710,903	340,429	91.9
Account book, stationery, &c. ..	384,884	702,992	318,108	82.7
Jam, sauce, &c. .. ..	1,225,856	1,538,230	312,374	25.5
Cement, including cement pipes	154,856	458,474	303,618	196.1
Soap, and candle .. ..	802,179	1,096,955	294,776	36.7

## OUTPUT OF INDUSTRIES, 1916-17 AND 1921-22--continued.

Industry.	Value of Output.		Increase in Five Years.	
	1916-17.	1921-22.	Value.	Per cent.
	£	£	£	
Electric apparatus .. ..	77,818	364,411	286,593	368·3
Fancy box .. ..	193,329	469,054	275,725	142·6
Tanning .. ..	2,464,798	2,740,429	275,631	11·2
Upholstery, bedding, &c. ..	222,267	483,326	261,059	117·5
Aerated water, cordial, &c. ..	400,101	639,806	239,705	59·9
Biscuit .. ..	735,158	942,440	207,282	28·2
Blacking, blue, &c. .. ..	280,041	483,326	203,285	72·6
Timepiece, jewellery and plate- ware .. ..	352,611	554,278	201,667	57·2
Fur .. ..	85,259	285,796	200,537	235·2
Other .. ..	7,277,868	10,292,374	3,014,506	41·4
Total .. ..	60,047,284	106,243,181	46,195,897	76·9

## 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,  
&c.

## TANNERIES, ETC., 1912 TO 1921-22.

Year.	Number of Establishments.	Horse-power of Engines.	Value of Machinery and Plant in Use.	Number of Employees.	Number of Working Proprietors	Amount of Wages Paid.
			£			£
1912 .. ..	90	2,161	176,947	1,996	103	205,050
1913 .. ..	84	2,398	196,848	1,824	86	194,948
1914 .. ..	79	2,434	190,460	1,875	82	210,007
1915 .. ..	82	2,510	193,350	2,165	97	268,884
1916-17 .. ..	74	3,187	214,896	2,362	82	300,796
1917-18 .. ..	76	3,476	271,120	2,485	69	347,753
1918-19 .. ..	81	4,035	370,765	2,984	74	455,548
1919-20 .. ..	86	4,631	400,110	3,299	85	631,920
1920-21 .. ..	80	4,707	436,395	2,764	87	575,132
1921-22 .. ..	78	5,341	504,355	2,902	93	625,443

The quantity of bark used in connexion with tanning operations in 1921-22 was 13,852 tons. The output of tanneries for each of the last ten years was as follows :—

OUTPUT OF TANNERIES, ETC., 1912 TO 1921-22.

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.	£
1912 ..	536,343	194,441	891,971	1,085,196	8,182,610	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
1918-19 ..	670,956	234,548	1,742,388	2,354,487	34,483,316	6,918,270
1919-20 ..	738,907	251,973	2,780,017	5,030,438	38,191,912	8,896,091
1920-21 ..	694,322	308,542	1,406,472	2,604,413	14,619,943	4,200,077
1921-22 ..	792,974	512,515	2,042,817	2,214,980	17,453,847	3,953,049

The value of the leather, &c., imported into Victoria from oversea countries during the year ended 30th June, 1922, was £218,053.

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

SOAP AND CANDLE WORKS, 1912 TO 1921-22.

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.	£
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
1918-19 ..	15	140,600	669	92,663	206,429	39,680	957,295
1919-20 ..	16	143,310	725	103,333	243,156	40,908	1,321,112
1920-21 ..	16	164,110	696	115,749	225,748	32,662	1,134,820
1921-22 ..	17	174,460	726	139,519	267,858	31,613	1,096,955

\* Not including soap made in small soap works not classified as factories, viz., 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, 1,134 cwt. in 1917-18, 1,054 cwt. in 1918-19, 907 cwt. in 1919-20, 996 cwt. in 1920-21, and 859 cwt. in 1921-22.

The quantity of tallow used in 1921-22 in the manufacture of soap and candles was 182,484 cwt. in factories, and 409 cwt. in minor works.

The imports from oversea countries in 1921-22 included 267,799 lbs. of soap valued at £14,656, and 15,281 lbs. of candles valued at £1,425.

Particulars relating to brickyards and potteries for the ten years 1912 to 1921-22 are shown in the following statement. The value of the land, plant, buildings, &c., used in connexion with such works in 1921-22 was £734,785 :—

## BRICKS, POTTERY, PIPES, AND TILES, 1912 TO 1921-22.

Year.	Number of Establishments.	Number of Employees.	Amount of Wages Paid	Number of Bricks Made.*	Value of—	
					Pipes and Tiles.	Pottery.
			£		£	£
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
1918-19 ..	84	2,296	314,452	133,176,000	246,763	121,286
1919-20 ..	93	2,504	336,295	119,142,000	255,562	97,844
1920-21 ..	92	2,729	481,352	203,424,600	362,495	177,410
1921-22 ..	93	2,583	495,288	169,715,000	355,784	185,293

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

The estimated value of bricks made in 1921-22 was £458,306, being a decrease of £26,894 as compared with the value of those made in the preceding year.

Detailed information in regard to the forest saw-mills of the State for the ten years 1912 to 1921-22 is given in the table which follows :—

Forest saw-mills.

## FOREST SAW-MILLS, 1912 TO 1921-22.

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.	£
		£		£		
1912 ..	150	176,437	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
1918-19 ..	187	315,670	2,278	319,547	91,540,000	503,470
1919-20 ..	203	366,355	2,627	405,335	99,142,130	693,995
1920-21 ..	246	473,275	3,181	563,627	113,215,040	905,720
1921-22 ..	239	517,725	3,014	627,432	112,008,430	896,070

In addition to the forest saw-mills there were 348 other factories working in wood. Particulars relating to these for the year 1921-22 are given on page 561.

It is estimated that the approximate value of the production of firewood for consumption in the year 1921-22 was £918,550. In addition, there were 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 1912 the number of factories has increased by 58 per cent., the number of persons employed therein by 11 per cent., the amount of wages paid by 109 per cent., the value of machinery and plant by 109 per cent., the value of materials used by 118 per cent., and the value of the output by 123 per cent. The chief particulars of the industry for the years 1912 to 1921-22 are given in the next table:—

ENGINEERING, IRON FOUNDRY, ETC., 1912 TO 1921-22.

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.
			£		£	£	£	£
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	2,824,892
1914..	354	7,899	762,392	8,601	1,038,622	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	3,096,090
1918-19	402	8,694	903,110	7,537	1,077,720	1,578,990	134,440	3,359,580
1919-20	441	10,795	1,023,395	9,042	1,395,379	1,917,877	123,435	4,221,094
1920-21	510	11,567	1,207,630	10,235	1,984,834	2,882,847	206,806	6,206,289
1921-22	517	11,872	1,325,500	9,632	2,037,009	2,511,800	196,239	5,897,158

The above figures are exclusive of railway workshops, which in 1921-22 numbered 18, and gave employment to 5,415 hands who were paid £1,282,617; the value of the materials dealt with by such workshops in that year was £1,574,766, and the value of the output was £3,182,559, 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, 1912 to 1921-22.

Year.	No. of Factories.	No. of Employees.	Wages Paid.	Approximate Value of—		
				Fuel, &c., Used.	Materials Used.	Output.
			£	£	£	£
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
1918-19 ..	60	1,628	249,360	18,100	337,730	702,870
1919-20 ..	61	1,701	272,262	20,001	349,555	757,062
1920-21 ..	60	2,641	512,363	42,193	756,204	1,550,704
1921-22 ..	58	2,851	643,874	43,794	806,066	1,767,843

The year under review, 1921-22, constitutes a record in so far as values are concerned, the sum paid in wages and the value of the output having in each case been more than double the amount for the year 1912, which was the most successful year in the history of the industry. The number of employees in 1921-22 was greater by 261 than in 1912.

The wages averaged for each employee £119 12s. 2d. in 1912 and £225 16s. 10d. in 1921-22. 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 1912 to 1921-22. The value of the machinery, plant, land and buildings in connexion with these establishments was £117,210 in 1912 and £289,840 in 1921-22.

## BACON CURING, 1912 to 1921-22.

Year.	Number of Establishments.	Number of Employees.	Amount of Wages Paid.	Pigs Slaughtered for Curing.	Weight of Bacon and Hams Cured.	Value of Output.
			£	No.	lbs.	£
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	1,084,440
1918-19 ..	21	482	76,308	201,770	18,343,400	1,107,910
1919-20 ..	21	529	99,736	182,320	16,675,090	1,384,351
1920-21 ..	22	421	90,394	139,881	13,369,107	1,335,186
1921-22 ..	22	445	103,783	163,917	15,583,960	1,366,832

This table does not include particulars relating to pigs slaughtered for curing, or to bacon and hams cured in small curing works; the pigs so slaughtered numbered 671 in 1912, 666 in 1913, 974 in 1914, 439 in 1915, 379 in 1916-17, 140 in 1917-18, 130 in 1918-19, 145 in 1919-20, 150 in 1920-21, and 164 in 1921-22; the quantity (in pounds) of bacon and hams cured was 50,500 in 1912, 51,620 in 1913, 87,258 in 1914, 45,030 in 1915, 31,300 in 1916-17, 12,970 in 1917-18, 9,790 in 1918-19, 11,500 in 1919-20, 14,000 in 1920-21, and 12,010 in 1921-22.

In addition, the following quantities of bacon and hams were returned as having been cured on farms:—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, 3,403,776 lbs. in 1917-18, 3,859,205 lbs. in

1918-19, 2,698,919 lbs. in 1919-20, 1,755,993 lbs. in 1920-21, and 1,812,838 lbs. in 1921-22. The total quantity of bacon and hams cured in 1921-22 was thus 17,498,808 lbs.—an increase of 2,269,708 lbs. as compared with 1920-21.

The number of butter, cheese, and kindred factories in 1921-22 was 188. Of these 151 were making butter, 27 cheese, 3 concentrated milk, 5 condensed milk, 14 powdered milk, 16 casein and 2 milk sugar. There were also 24 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 1912 to 1921-22 were as follows:—

#### BUTTER AND CHEESE FACTORIES, 1912 to 1921-22.

Year.	Number of Factories.	Value of Machinery, Plant, Land, and Buildings.	Number of Employees.	Amount of Wages Paid.	Value of Output.
		£		£	£
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
1918-19 .. ..	180	786,275	1,885	273,335	6,056,342
1919-20 .. ..	181	1,025,325	2,026	338,507	6,365,927
1920-21 .. ..	184	1,238,745	2,093	414,420	9,194,654
921-22 .. ..	188	1,395,425	2,293	492,446	7,115,642

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 487

Meat freezing and preserving works numbered fourteen in 1921-22, and gave employment to 900 hands and 7 working proprietors, the wages of the hands amounting to £217,046. The approximate value of machinery, plant, land and buildings in that year was £1,333,490. The output for each of the last ten years is given in the following table:—

## MEAT FREEZING AND PRESERVING, 1912 TO 1921-22.

Year.	Frozen.			
	Cattle.	Sheep.	Rabbits.	Poultry.
	Qrs.	No.	No.	No.
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	1,710,152	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
1918-19 .. ..	8,640	668,970	2,335,990	2,700
1919-20 .. ..	177,230	4,001,500	5,385,854	2,736
1920-21 .. ..	49,372	786,086	2,189,378	9,468
1921-22 .. ..	55,355	1,186,704	903,400	8,856

  

Year.	Preserved.			
	Beef.	Mutton.	Rabbits.	Other Meats, &c.
	Cwt.	Cwt.	Cwt.	Cwt.
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
1918-19 .. ..	75,790	118,520	9,625	9,850
1919-20 .. ..	104,725	60,850	7,580	1,860
1920-21 .. ..	3,641	443	1	764
1921-22 .. ..	8,808	4,419	29	30

NOTE.—In addition to the above, there were treated at freezing works 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 57,578 hares in 1914; 3,072 hares in 1915; 1,120 calves, 156 pigs, and 6,872 hares in 1916-17; 166 calves, 971 pigs, and 9,150 hares in 1917-18; 1,360 calves, 615 pigs, and 16,220 hares in 1918-19; 130 calves, 1,000 pigs and 65,530 hares in 1919-20; 2,569 calves and 5,465 pigs in 1920-21; and 2,855 calves, and 7,335 pigs in 1921-22.

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, 1922 :—

### MEATS IMPORTED AND EXPORTED OVERSEA, 1921-22.

	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Meats, Frozen—				
Mutton .. ..	..	..	15,538,580 lbs.	306,199
Lamb .. ..	..	..	28,427,319 „	751,077
Beef .. ..	..	..	2,033,517 „	33,046
Rabbits and Hares .. ..	..	..	454,052 prs.	35,385
Game .. ..	491 lbs.	56	..	..
Other .. ..	..	..	..	6,523
Meats— Potted and Concentrated .. ..	..	20,033	..	1,300
„ Preserved in tins .. ..	..	5,444	764,418 lbs.	16,331
„ Sausage Casings .. ..	..	65,202	..	120,001
„ Not elsewhere included .. ..	..	105	..	1,218
Total value .. ..	..	90,840	..	1,271,080

The value of the machinery, plant, land and buildings used in connexion with flour mills was estimated at £484,107 in 1912, and at £609,835 in 1921-22. Particulars of the industry for the ten years 1912 to 1921-22 are as follows :—

### FLOUR MILLS, 1912 to 1921-22.

Year.	Number of Mills.	Number of Employees.	Amount of Wages Paid.	Wheat Ground into Flour.	Flour Made.	Value of Total Output.
			£	hushels.	tons.	£
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	126,280	12,483,990	263,095	3,458,633
1917-18 ..	55	988	155,330	15,034,990	311,450	3,989,510
1918-19 ..	53	1,029	169,233	16,621,290	347,840	4,656,403
1919-20 ..	51	1,028	189,224	16,920,890	353,683	6,082,741
1920-21 ..	51	911	191,688	12,387,960	260,032	5,745,507
1921-22 ..	45	963	228,195	14,697,290	308,532	5,759,281

In addition to the flour made, the wheat ground in 1921-22 produced 7,029,420 bushels of bran and 5,777,180 bushels of pollard. Other grain operated on amounted to 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, 31,960 bushels in 1917-18, 40,113 bushels in 1918-19, 39,235 bushels in 1919-20, 40,094 bushels in 1920-21, and 65,788 bushels in 1921-22.

**Exports of bread-stuffs.**

During the year 1921-22, 1,706,223 lbs. of biscuits, valued at £62,243, and 145,127 tons of flour, valued at £2,157,754, were exported from Victoria to countries beyond Australia.

**Jam, pickle, and sauce works.**

In 1921-22 there were 50 establishments in which the manufacture of jams, pickles, and sauces was carried on, and the number of persons employed therein was 2,272, of whom 35 were working proprietors. The wages paid to the employees amounted to £299,072, and the value of machinery, plant, land and buildings was £398,130. The quantities of fruit and sugar used and the output for each of the last ten years were as shown below :—

**JAM, PICKLE, AND SAUCE WORKS, 1912 to 1921-22.**

Year.	Fruit Used.	Sugar Used.	Jams and Jellies Made.	Fruit Preserved.	Fruit Pulped.	Sauce Made.	Pickles Made.
	cwt.	cwt.	cwt.	cwt.	cwt.	pints.	pints.
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	1,972,320
1918-19..	495,690	314,645	495,575	133,230	91,550	4,913,050	2,137,730
1919-20..	628,721	262,585	323,452	181,562	225,522	6,546,610	1,874,240
1920-21..	465,349	171,706	231,297	61,542	178,786	6,601,330	1,239,250
1921-22..	384,214	148,886	157,712	239,656	100,317	6,600,530	1,056,430

Some of these establishments also candied fruit peel, the quantities being 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, 9,330 cwt. in 1917-18, 8,449 cwt. in 1918-19, 10,466 cwt. in 1919-20, 13,306 cwt. in 1920-21, and 10,743 cwt. in 1921-22. The value of the output in 1921-22 of the whole of the establishments whose produce is shown in the above table was £1,538,230.

In 1896 Parliament made available £62,000 to assist in the establishment of the beet sugar industry at Maffra, in Gippsland. On receiving a guarantee that 1,500 acres of beet would be sown by local land-holders, a company erected a large building and plant, and operated for two seasons. Although a

**Beet Sugar Industry.**

good quality of sugar was produced, various climatic, financial, and other difficulties compelled the company to close down the works, and the Government, as chief creditor, took control.

In 1910, a definite campaign to revive the industry was commenced, and the mill was re-opened; since that time it has operated from year to year. Estates were purchased by the Government at Boisdale and Kilmany, and land was allotted to settlers, subject to the proviso that each would grow a certain quantity of beet. The compulsory system of securing acreage was not found satisfactory, and all crops are now grown voluntarily. Recently the financial results have been sufficiently favorable to more than compensate for all losses; the by-products have been found to be of great value to the dairying industry, and the sugar has become a most important item of Gippsland's food supply.

The State Rivers and Water Supply Commission is well advanced with an irrigation scheme on the Macallister River, which will provide water for the whole district. In view of this and of the large prospective increase in the area to be brought under beet cultivation the Government is seriously considering the advisability of an extension of the factory plant to cope with the increased tonnage.

The following particulars summarize the results for the last ten seasons :—

Season.	Area Harvested.	Sugar Beet Harvested.	Sugar Produced.
	acres.	tons.	tons.
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
1918-19 .. .. .	1,009	12,289	1,263
1919-20 .. .. .	1,080	13,084	1,551
1920-21 .. .. .	1,180	7,147	833
1921-22 .. .. .	1,602	16,578	1,872

The last season was a fair one, and the factory realized a profit of £9,920.

**Breweries.** Particulars regarding breweries for the ten years 1912 to 1921-22 are set forth in the next table. Machinery and plant were valued at £325,658 in 1912 and at £514,760 in 1921-22, whilst land and buildings were valued at £384,207 in 1912 and at £402,445 in 1921-22. The wages paid in 1921-22 amounted to £278,319.

BREWERIES, 1912 to 1921-22.

Year.	Number of Breweries.	Number of Employees.	Materials Used—			Beer Made.	Value of Output.
			Sugar.	Malt.	Hops.		
			cwt.	bushels.	lbs.	gallons.	£
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
1918-19	17	932	112,080	625,770	722,590	20,962,740	1,476,335
1919-20	17	1,008	110,020	720,515	769,765	22,610,200	1,830,548
1920-21	16	1,048	104,140	753,260	736,580	22,257,390	2,098,720
1921-22	15	1,047	107,160	688,090	717,950	22,387,670	2,200,882

**Distilleries.** The number of distilleries working in 1921-22 was 10, and the persons employed numbered 118, of whom one was a working proprietor. The estimated value of the machinery, plant, land and buildings was £282,910. The quantities of materials used in manufacture and of spirits distilled in each of the last ten years were as follows:—

DISTILLERIES, 1912 to 1921-22.

Year.	Materials Used.				Spirits Distilled.
	Wine.	Malt.	Other Grain.	Molasses.	
	gallons.	bushels.	bushels.	lbs.	proof gal.
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
1918-19	1,206,530	385,690	397	5,604,480	1,185,629
1919-20	1,524,860	180,306	..	3,230,080	702,586
1920-21	1,130,880	125,414	1,422	2,682,960	572,671
1921-22	803,660	58,848	..	1,167,600	390,840

Spirits made by vine-growers for fortifying wine are not included in the foregoing table. The following quantities were distilled in vineyards for that purpose during the last ten years:—23,874 gallons in 1912, 13,357 gallons in 1913, 12,256 gallons in 1914, 9,955 gallons in 1915, 9,937 gallons in 1916-17, 5,134 gallons in 1917-18, 2,232 gallons in 1918-19, 5,141 gallons in 1919-20, 15,486 gallons in 1920-21, and 23,020 gallons in 1921-22.

The number of tobacco, cigar, and cigarette factories licensed in 1921-22 was twenty-eight, of which thirteen were too small to be classified as ordinary factories and were consequently not included in the statistical tabulation on page 516. In the year mentioned the remaining fifteen employed 1,916 hands, who were paid £344,398 in wages; also 19 working proprietors; and used machinery, plant, land and buildings valued at £337,260. 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, 1912 to 1921-22.

Year.	Unmanufactured Leaf Operated on.		Quantity Manufactured of—			
	Australian.	Imported.	Tobacco.	Snuff.	Cigars.	Cigarettes.
	lbs.	lbs.	lbs.	lbs.	No.	No.
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	123,480,200
1917-18 ..	558,278	4,598,364	5,479,191	313	27,920,180	126,883,970
1918-19 ..	405,625	5,096,176	5,842,142	1,049	27,973,908	125,372,900
1919-20 ..	573,932	5,189,098	6,164,126	426	35,232,399	143,374,400
1920-21 ..	751,137	5,290,854	6,443,480	228	35,549,722	109,686,950
1921-22 ..	535,590	5,250,641	6,345,508	232	33,893,695	152,908,600

There were nineteen woollen mills working in 1921-22, and the number of persons employed therein was 3,756, of whom eighteen were working proprietors. The wages paid to employees amounted to £526,009, and the approximate value of the machinery, plant, land and buildings was £1,864,940. The value of the raw materials used in mills during the year was £1,150,361, and that of the goods manufactured in the same period was £2,482,761. The

quantities of wool and cotton used and of goods manufactured in each of the last ten years were as follows:—

WOOLLEN MILLS, 1912 to 1921-22.

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.	£
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
1918-19	4,614,585	513,800	1,429,200	5,047,490	191,130	19,430	1,126,119
1919-20	7,285,570	578,542	2,212,202	3,667,816	165,794	51,637	1,976,428
1920-21	7,702,055	553,282	2,509,198	4,035,298	224,745	47,179	2,397,610
1921-22	8,015,650	586,836	1,872,512	5,759,987	297,700	51,598	2,482,761

During the period 1912 to 1921-22 the value of the output of woollen mills increased by 424 per cent. The articles manufactured showed a considerable increase in quantity, although the amount of tweed and cloth was less than in the preceding year.

**Beet factories.** The development which has taken place in the boot industry in recent years is exhibited in the following tables:—

BOOT FACTORIES, 1912 to 1921-22.

Year.	Number of Factories.	Persons Employed.	Value of Land, Buildings, and Machinery.	Wages Paid.
			£	£
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	858,874
1918-19	238	8,961	627,770	987,203
1919-20	264	10,357	716,305	1,252,004
1920-21	304	9,212	927,310	1,208,760
1921-22	334	11,714	1,130,425	1,760,589

## OUTPUT OF BOOT FACTORIES, 1912 TO 1921-22.

Year.	Goods Manufactured—		Value of Materials Used.	Value of Output.
	Boots and Shoes.	Slippers.*		
	No. of pairs.	No. of pairs.	£	£
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	272,866	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
1918-19 .. ..	6,073,117	243,383	2,563,423	4,040,550
1919-20 .. ..	6,774,267	552,652	3,909,570	5,996,639
1920-21 .. ..	5,447,504	559,213	2,911,852	4,964,462
1921-22 .. ..	7,571,231	903,992	3,109,863	6,043,172

\* Includes canvas shoes and house-boots.

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 £13,429,230 in 1921-22, as compared with £5,184,535 in 1912. During the period 1912 to 1921-22 the persons employed increased by 6 per cent., the wages paid by 117 per cent., the value of materials used by 179 per cent., and the value of the output by 159 per cent. Particulars of the industry for each of the last ten years are as follows:—

## DRESS (EXCLUSIVE OF BOOT) FACTORIES, 1912 TO 1921-22.

Year.	Number of Factories.	Number of Persons Employed.			Amount of Wages Paid.	Value of Materials Used.	Value of Output.
		Males.	Females.	Total.			
					£	£	£
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
1918-19	1,210	3,776	23,505	27,281	1,915,096	5,205,460	8,599,603
1919-20	1,252	4,123	25,490	29,613	2,490,549	6,628,276	11,407,324
1920-21	1,346	4,383	25,980	30,363	2,872,171	7,804,264	12,994,011
1921-22	1,424	4,674	27,370	32,044	3,328,326	7,689,101	13,429,230

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

Electric light and power works.

## ELECTRIC LIGHT AND POWER WORKS, 1912 to 1921-22.

Year.	Number of Stations.	Horse-power of Machinery.	Value of Machinery and Plant.	Persons Employed.	Wages Paid.	Electricity Supplied.	Value of Output.
			£		£	British Units.	£
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	48,526	1,889,550	1,167	183,948	79,485,920	760,117
1918-19	77	48,777	2,135,310	1,149	190,280	83,778,000	835,190
1919-20	78	49,241	2,632,665	1,215	217,995	100,838,000	953,039
1920-21	79	54,189	2,660,945	1,242	283,309	115,105,000	1,131,331
1921-22	84	57,481	3,166,750	1,350	334,805	136,021,000	1,407,268

The electricity supplied in 1921-22 represented an increase of 393 per cent. on that supplied in 1912.

## STATE ELECTRICITY COMMISSION ACTS 1918 AND 1920.

When it was first appointed in 1919, the operations of the State Electricity Commission of Victoria were carried on under the provisions of the *Electricity Commissioners' Act* 1918, which provided for the appointment by the Governor in Council of three Commissioners to administer that Act. By an amending Act of the 24th December, 1920, the name of the Act was changed to the *State Electricity Commission Act* 1918, and provision was made, *inter alia*, for the appointment of four Commissioners for a period of seven years, one of whom would devote the whole of his time to the Commission's works as permanent chairman. In addition to the Acts mentioned above, the Commission administers the *Electric Light and Power Act* 1915, the provisions of which give it control over all electrical undertakings in the State.

The duties of the Commission include the following:—

- (1) To inquire into and report to the Government as to the steps which should be taken to co-ordinate and concentrate all electrical undertakings in Victoria, and to secure the efficient inter-connexion of such undertakings by the adoption of the necessary standards of plant, pressure, &c.
- (2) To encourage and promote the use of electricity for industrial and manufacturing purposes, and to report to the Government on the prospects of establishing new industries in Victoria requiring large quantities of electrical energy.
- (3) To carry out investigations of coal deposits or of water power in connexion with the generation of electricity.

The Commission is vested with the following powers in relation to electrical undertakings:—

- (1) To erect and operate electrical undertakings.
- (2) To supply electricity in bulk to any corporation.
- (3) To supply electricity to any person outside any area in which there is an existing undertaking.

- (4) To carry on any business associated with an electric undertaking.
- (5) To make regulations as to precautions to be adopted in the use of electricity and to arrange for the licensing of electric wiremen.

Authority is also given to the Commission to establish and operate State Coal Mines.

The Commission has complete control over all officers and employees required for the carrying out of the provisions of the Act.

In accordance with the instructions contained in the Act, the Commission prepared a scheme for a coal winning and electrical undertaking to be carried out by it in the neighbourhood of Morwell, for the purpose of utilizing the practically unlimited supplies of brown coal in that area. The scheme provides for the winning of coal on the open cut system by means of mechanical appliances, and for the erection of a power station close to the site of the open cut, having an initial capacity of 50,000 kilowatts.

In addition, a plant is to be installed, which will be capable, in its first stages, of supplying annually 96,000 tons of brown coal briquettes.

In order to relieve the insistent demands for electrical power until the Morwell station is in operation, the Commission has been authorized to install at Newport (close to Melbourne) a station with an initial capacity of 14,000 kilowatts. It is intended that this station shall take the "peak" loads only when the Morwell station comes into operation.

The erection of the plant and buildings necessary to give effect to the above proposals is being rapidly pushed forward.

The approximate value of the machinery, plant, land and buildings connected with gasworks in Victoria was £1,751,819 in 1912, and £1,955,560 in 1921-22. The gas made in the latter year was 66 per cent. in excess of that made in 1912. Particulars in regard to these works are given below.

#### GASWORKS, 1912 to 1921-22.

Year.	Number of Works.*	Persons Employed.	Wages Paid.	Coal Used.	Gas Made.	Coke Produced.	Value of Output.
			£	tons.	cubic feet.	tons.	£
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
1918-19 ..	46	2,270	420,597	353,584	4,904,351,000	220,287	1,373,603
1919-20 ..	45	2,267	472,855	331,149	4,592,305,000	206,245	1,395,320
1920-21 ..	45	2,213	576,515	339,250	4,499,088,000	216,771	1,608,999
1921-22 ..	45	2,309	609,600	383,092	5,151,380,000	239,755	1,953,936

\* Including one establishment manufacturing coke only, which has not worked since 1919-20.

Oil was used as well as coal in the manufacture of gas, the number of gallons consumed each year being 306,405 in 1912, 348,385 in 1913,

332,586 in 1914, 328,230 in 1915, 345,272 in 1916-17, 396,717 in 1917-18, 355,933 in 1918-19, 343,764 in 1919-20, 360,876 in 1920-21, and 300,188 in 1921-22.

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 1912, 1920-21, and 1921-22, is exhibited in the following statement:—

NUMBER AND LOCATION OF FACTORIES.

Class of Industry.	Number of Factories.					
	Metropolis.			Remainder of State.		
	1912.	1920-21.	1921-22.	1912.	1920-21.	1921-22.
Treating raw material, product of pastoral pursuits, &c. . .	85	95	89	250	207	204
Treating oils and fats, animal, vegetable, &c. . .	12	18	19	12	9	9
Processes in stone, clay, glass, &c. . .	100	126	130	122	82	85
Working in wood . . .	188	250	265	225	330	322
Metal works, machinery, &c. . .	471	654	671	243	209	213
Connected with food and drink, &c. . .	195	271	277	457	429	431
Clothing and textile fabrics, &c.	1,102	1,361	1,460	305	348	358
Books, paper, printing, &c. . .	264	328	345	163	155	162
Musical instruments, &c. . .	5	15	14	..	1	1
Arms and explosives . . .	6	11	10	3	..	1
Vehicles, saddlery, harness, &c.	228	329	365	206	345	361
Ship and boat building and repairing . . .	12	10	10	1	2	1
Furniture, upholstery, and bedding . . .	233	353	337	22	33	29
Drugs, chemicals, and by-products . . .	53	83	88	35	39	27
Surgical and other scientific appliances . . .	17	32	35	1	2	2
Jewellery, time-pieces, and platedware . . .	79	100	101	6	7	8
Heat, light, and power . . .	32	69	80	58	111	117
Leatherware, n.e.i. . .	32	53	58	..	..	2
Minor wares, n.e.i. . .	40	62	63	..	3	3
Totals . . .	3,154	4,220	4,417	2,109	2,312	2,336

Since 1912 the number of factories in the State has increased by 1,490, the greatest numerical increase in the classes being that

of the clothing and textile factories, of which there were 411 more in 1921-22 than in 1912.

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.	1912.	1918-19.	1919-20.	1920-21.	1921-22.
Treating raw materials, product of pastoral pursuits, &c. ..	3,379	4,204	4,759	4,045	4,329
Treating oils and fats, animal, vegetable, &c. ..	663	807	878	835	880
Processes in stone, clay, glass, &c. ..	4,207	4,436	4,828	5,486	5,391
Working in wood ..	7,191	7,669	8,802	9,529	9,537
Metal works, machinery, &c. ..	20,126	16,261	19,079	23,276	22,868
Connected with food and drink, &c. ..	14,335	19,185	20,545	17,673	17,974
Clothing and textile fabrics, &c. ..	39,984	39,739	44,245	44,341	48,844
Books, paper, printing, &c. ..	8,901	9,051	9,487	10,281	10,465
Musical instruments, &c. ..	189	255	285	384	390
Arms and explosives ..	707	864	839	650	756
Vehicles, saddlery, harness, &c. ..	4,748	4,974	5,707	6,087	6,173
Ship and boat building and repairing ..	240	692	938	900	684
Furniture, bedding, and upholstery ..	3,263	3,023	3,657	3,917	3,709
Drugs, chemicals, and by-products ..	1,804	2,268	2,447	2,564	2,465
Surgical and other scientific appliances..	90	159	174	199	203
Jewellery, time-pieces, and plated ware ..	1,037	1,199	1,347	1,397	1,183
Heat, light, and power ..	3,052	4,289	4,466	4,738	5,090
Leatherware, n.e.i. ..	605	762	1,045	1,057	1,065
Minor wares, n.e.i. ..	1,587	2,512	2,994	3,384	2,870
Total ..	116,108	122,349	136,522	140,743	144,876

The total increase in the number of hands employed during the period covered by the above table was 28,768, and represented an advance of about 25 per cent. The greatest development had taken place in clothing factories, industries connected with food, drink, &c., and metal works, which showed increases of 8,860, 3,639, and 2,742 respectively in the number of persons employed in 1921-22 as compared with the number in 1912.

An examination of the figures relating to different factories in 1912 and 1921-22 shows that there has been a great increase in the last ten years in the number of hands employed in factories of the largest size. During the period mentioned the number of factories employing over 100 hands has increased by 15 per cent., and the number of hands engaged therein by 25 per cent., whilst the factories employing less than 100 and their employees have increased by 29 and 25 per cent. respectively. Particulars of factories of different sizes in 1912 and 1921-22 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.	
	1912.	1921-22.	1912.	1921-22.
Under 4 hands .. ..	800	1,349	1,912	3,060
4 .. ..	588	675	2,352	2,700
5 to 10 .. ..	1,844	2,246	12,831	15,542
11 to 20 .. ..	939	1,098	13,805	16,035
21 to 50 .. ..	674	887	21,298	28,071
51 to 100 .. ..	223	273	15,368	18,744
Over 100 .. ..	195	225	48,542	60,724
Total .. ..	5,263	6,753	116,108	144,876

#### PROPORTION OF FACTORIES OF DIFFERENT SIZES.

Size of Factory.	Percentage to Total.			
	Factories.		Hands.	
	1912.	1921-22.	1912.	1921-22.
Under 4 hands .. ..	15·2	20·0	1·7	2·1
4 .. ..	11·1	10·0	2·0	1·9
5 to 10 .. ..	35·0	33·3	11·1	10·7
11 to 20 .. ..	17·8	16·3	11·9	11·1
21 to 50 .. ..	12·8	13·1	18·3	19·4
51 to 100 .. ..	4·4	4·0	13·2	12·9
Over 100 .. ..	3·7	3·3	41·8	41·9
Total .. ..	100·0	100·0	100·0	100·0

**Occupations  
in factories.**

In the following table the persons employed in factories<sup>s</sup> are grouped according to their occupational status :—

**OCCUPATIONS OF PERSONS EMPLOYED IN FACTORIES.**

Occupations.	1903.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
Working proprietors ..	4,190	5,368	5,471	5,898	6,645	6,904
Managers, overseers ..	2,520	3,716	3,793	4,130	4,354	4,454
Accountants, clerks ..	2,213	4,519	4,919	5,602	6,106	6,307
Engine-drivers, firemen	1,441	1,867	1,914	2,144	2,108	2,156
Workers in factory or works .. .. .	57,721	97,765	101,608	113,276	116,650	119,598
Outworkers .. .. .	955	1,406	1,022	1,492	1,151	1,476
Carters, messengers ..	2,778	2,763	2,816	3,056	2,964	3,115
Others .. .. .	1,411	837	806	924	765	866
Total .. .. .	73,229	118,241	122,349	136,522	140,743	144,876

**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 distribu-  
tion in  
factories.**

The average numbers of males and females employed in factories, and their proportions to the male and female populations for the years 1912 to 1921-22 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.
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
1918-19 ..	81,357	1,188	40,992	550	122,349	855
1919-20 ..	92,101	1,243	44,421	588	136,522	913
1920-21 ..	96,379	1,277	44,364	580	140,743	926
1921-22 ..	97,789	1,279	47,087	599	144,876	934

Males formed 66·8 per cent. in 1912 and 67·5 per cent. in 1921-22 of the total persons employed. The increase during the period 1912 to 1921-22 in the number of males employed was 20,224, or 23·1 per cent., and in the number of females employed 8,544, or 22·2 per cent.

Of the total females in factories 74·0 per cent. are engaged in the textile and clothing industries, and 10·0 per cent. in the preparation of food and drink. The extent of female employment in certain industries is shown in the next table.

## FEMALE EMPLOYMENT IN FACTORIES, 1921-22.

Industry.	Number Employed.		Females per 100 Males.
	Males.	Females.	
Biscuit .. .. .	791	520	65·74
Jam, pickle, and sauce .. .. .	1,334	938	70·31
Confectionery .. .. .	1,547	1,602	103·56
Tobacco, &c. .. .. .	1,228	707	57·82
Woollen mills .. .. .	1,702	2,054	120·68
Clothing, tailoring, &c. .. .. .	2,131	7,290	342·09
Dressmaking, millinery .. .. .	408	8,935	2,189·95
Underclothing .. .. .	412	5,759	1,397·81
Hats, caps, &c. .. .. .	712	907	127·46
Hosiery .. .. .	663	3,761	567·27
Waterproof clothing .. .. .	52	118	226·92
Boots and shoes .. .. .	6,849	4,865	71·03
Printing, &c. .. .. .	5,656	1,463	25·87
Bookbinding, stationery, &c. .. .. .	670	629	93·88
Fancy-box, &c. .. .. .	253	707	279·44
Rope, twine .. .. .	563	361	64·12
Sail, tent. . . . .	99	73	73·74
Ammunition .. .. .	208	248	119·23
Match .. .. .	208	487	234·13
Fancy leather .. .. .	518	380	73·36
Rubber goods .. .. .	1,582	516	32·62
All other factories .. .. .	70,203	4,767	6·79
Total .. .. .	97,789	47,087	48·15

A very favorable feature of factory statistics has been the small proportion of children engaged in factories. Of the male and female employees, boys and girls under 16 represented only 4·13 and 6·71 per cent. respectively in 1921-22, as against 3·64 and 4·59 per cent. in 1912. The number of children

Child labour in factories.

employed in factories and their proportions to the total employees are given in the subjoined table for the years 1912 to 1921-22 :—

### 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.
1912 ..	2,652	1,740	4,392	3·64	4·59	3·96
1913 ..	2,743	1,840	4,583	3·66	4·84	4·05
1914 ..	2,898	1,816	4,714	3·88	4·78	4·18
1915 ..	3,355	2,197	5,552	4·71	5·89	5·12
1916-17 ..	3,072	2,301	5,373	4·37	5·55	4·81
1917-18 ..	3,195	2,447	5,642	4·45	5·97	5·00
1918-19 ..	3,137	2,389	5,526	4·15	5·90	4·73
1919-20 ..	3,721	2,872	6,593	4·04	6·47	4·83
1920-21 ..	3,715	2,798	6,513	4·11	6·39	4·86
1921-22 ..	3,780	3,120	6,900	4·13	6·71	5·00

**Machinery in factories.** In the following table are shown the number of factories using mechanical power, the total horse-power of the engines used, and the value of the machinery and plant for the ten years 1912 to 1921-22 :—

### MACHINERY IN FACTORIES.

Year.	Number of Factories equipped with Machinery.	Value of Machinery and Plant.	Horse-power of Engines.
		£	
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 ..	4,089	11,068,949	117,815
1916-17 ..	4,226	11,732,062	136,985
1917-18 ..	4,371	12,612,797	149,095
1918-19 ..	4,470	13,645,220	153,408
1919-20 ..	4,737	15,846,935	166,803
1920-21 ..	5,161	18,179,385	182,143
1921-22 ..	5,473	21,182,110	191,881

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

## POWER USED IN FACTORIES, 1912 to 1921-22.

Year.	Number of Factories using—					
	Steam.	Gas.	Electricity.	Oil.	Water, Wind, or Horses.	Manual Labour.
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
1918-19 .. ..	875	782	2,481	297	35	1,250
1919-20 .. ..	910	761	2,712	315	39	1,301
1920-21 .. ..	941	705	3,128	360	27	1,371
1921-22 .. ..	935	666	3,474	364	34	1,280

  

Year.	Actual Horse-power of Engines.				
	Steam.	Gas.	Electricity.	Oil.	Total.
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
19 7-18 .. ..	89,561	19,045	38,246	2,243	149,095
1918-19 .. ..	91,245	18,929	40,791	2,443	153,408
1919-20 .. ..	95,747	19,183	48,814	3,059	166,803
1920-21 .. ..	103,048	19,331	56,602	3,162	182,143
1921-22 .. ..	106,882	19,327	62,663	3,009	191,881

Although steam is the principal motive power, and was used to supply 56 per cent. of the total mechanical power employed in factories in 1921-22, a remarkable development is shown in the use of electricity, which in 1912 was used by 1,327, and in 1921-22 by 3,474 factories, the actual horse-power increasing from 14,505 to 62,663 in the same period.

Wages in  
factories.

The total amount and the average amount of salaries and wages paid to male and female employees in factories are given 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.
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	109,381	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
1918-19	1,625,584	208,524	9,906,082	2,340,213	244 5 4	101 7 5	141 19 8	60 19 0
1919-20	1,937,959	270,875	12,515,207	2,948,132	264 8 1	118 6 9	157 16 8	70 17 5
1920-21	2,384,372	310,024	15,284,545	3,398,276	298 19 7	124 15 2	185 12 4	82 5 11
1921-22	2,563,467	357,691	16,933,984	3,991,353	316 18 11	133 16 4	202 19 11	91 2 11

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 1921-22, £23,846,495, represents an average payment for all employees of £172 16s. 9d., which is an increase of £13 8s. 5d. on the average wage for 1920-21, of £37 6s. 4d. on that for 1919-20, of £52 7s. 4d. on that for 1918-19, of £62 1s. 5d. on that for 1917-18, of £66 19s. 3d. on that for 1916-17, of £71 1s. 9d. on that for 1915, of £74 6s. 9d. on that for 1914, of £78 2s. on that for 1913, and of £81 12s. 9d. on that for 1912. Concurrent with this increase there was a slight change in the relative proportions of male and female workers during the ten years, the percentages of male to total employees being 67 in 1920-21, 66 in 1912, 1913, 1914, 1915, 1919-20, and 1921-22, 65 in 1911 and 1918-19, 64 in 1910 and 1917-18, and 63 in 1916-17. The above average wage for 1921-22 (£172 16s. 9d.) is probably 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.

The cost of production and the value of the output in each class of manufacturing industry during the year 1921-22 are given in the subjoined statement:—

## FACTORY COSTS AND OUTPUT, 1921-22.

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. ..	3,783,063	110,294	770,203	5,319,870
Treating oils and fats, animal, vegetable, &c. ..	824,602	46,314	169,320	1,372,478
Processes in stone, clay, glass, &c. ..	462,436	325,356	1,040,047	2,462,840
Working in wood ..	2,284,663	40,642	1,819,745	5,233,711
Metal works, machinery, &c. Connected with food and drink, &c. ..	6,583,891	320,530	4,733,320	13,835,047
Clothing and textile fabrics, &c. ..	23,533,580	553,135	3,237,705	32,511,172
Books, paper, printing, &c. ..	12,584,591	204,464	5,797,914	22,988,369
Musical instruments, &c. ..	2,886,036	106,436	1,899,317	6,541,424
Arms and explosives ..	98,883	1,444	78,742	209,955
Vehicles, saddlery, harness, &c. ..	309,887	16,443	129,785	519,760
Ship and boat building and repairing ..	1,076,226	30,413	985,592	2,619,570
Furniture, upholstery, and bedding ..	213,566	6,675	164,957	429,637
Drugs, chemicals, and by-products ..	981,472	16,926	573,160	1,902,929
Surgical and other scientific instruments ..	1,605,950	57,832	440,667	2,755,274
Jewellery, time-pieces, and plated-ware ..	26,572	1,065	27,811	73,548
Heat, light, and power ..	253,976	6,059	181,633	554,278
Leatherware, n.e.i. ..	1,291,568	406,170	1,162,412	4,274,975
Minor wares, n.e.i. ..	396,368	4,899	149,677	710,903
Total ..	1,155,231	74,663	484,488	1,927,441
	60,352,561	2,329,760	23,846,495	106,243,181

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, 1921-22.

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. . . . .	71·1	2·1	14·5	12·3
Treating oils and fats, animal, vegetable, &c. . . . .	60·1	3·4	12·3	24·2
Processes in stone, clay, glass, &c. . . . .	18·8	13·2	42·2	25·8
Working in wood . . . . .	43·7	0·8	34·8	20·7
Metal works, machinery, &c. . . . .	47·6	2·3	34·2	15·9
Connected with food and drink, &c. . . . .	72·4	1·7	10·0	15·9
Clothing and textile fabrics, &c. . . . .	54·7	0·9	25·2	19·2
Books, paper, printing, &c. . . . .	44·1	1·6	29·0	25·3
Musical instruments, &c. . . . .	47·1	0·7	37·5	14·7
Arms and explosives . . . . .	59·6	3·2	25·0	12·2
Vehicles, saddlery, harness, &c. . . . .	41·1	1·2	37·6	20·1
Ship and boat building and repairing . . . . .	49·7	1·6	38·4	10·13
Furniture, upholstery, and bedding . . . . .	51·6	0·9	30·2	17·3
Drugs, chemicals, and by-products . . . . .	58·3	2·1	16·0	23·6
Surgical and other scientific instruments . . . . .	36·1	1·4	37·8	24·7
Jewellery, time-pieces, and plated-ware . . . . .	45·8	1·1	32·8	20·3
Heat, light, and power . . . . .	30·2	9·5	27·2	33·1
Leatherware, n.e.i. . . . .	55·8	0·7	21·1	22·4
Minor wares, n.e.i. . . . .	59·9	3·9	25·1	11·1
Total . . . . .	56·9	2·2	22·4	18·5

There are considerable variations in the proportions which the cost of materials and the expenditure on wages bear to the value of the output in the different classes of industries. These are, of course, due to the difference in the treatment required to present the raw material in its manufactured form. Thus in brickworks, &c., the cost of wages represents 42 per cent. and that of raw materials 19 per cent. of the value of the finished article, whilst in the industries connected with food and drink the expenditure on wages amounts to 10 per cent. and that on raw materials to over 72 per cent. of the value of the output.

**Cost of production, 1912 to 1921-22** 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 1912 to 1921-22 :—

**COST OF PRODUCTION AND VALUE OF OUTPUT OF FACTORIES, 1912 TO 1921-22.**

Year.	Cost of Production.				Total Value of Output.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	All other Expenditure, Interest, and Profit.	
	£	£	£	£	£
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
1918-19 ..	52,098,737	1,457,124	14,080,403	12,559,413	81,195,677
1919-20 ..	65,563,104	1,723,220	17,702,173	16,486,866	101,475,363
1920-21 ..	65,401,425	2,184,096	21,377,216	17,045,557	106,008,294
1921-22 ..	60,352,561	2,329,760	23,846,495	19,714,365	106,243,181

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

**PROPORTION OF OUTLAY TO OUTPUT OF FACTORIES, 1912 TO 1921-22.**

Year.	Proportion of Outlay to Output.				Total.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	Other Expenditure, Interest, and Profit.	
	%	%	%	%	%
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
1918-19 ..	65·0	1·8	17·5	15·7	100·0
1919-20 ..	64·6	1·7	17·4	16·3	100·0
1920-21 ..	61·7	2·0	20·2	16·1	100·0
1921-22 ..	56·8	2·2	22·4	18·6	100·0

The ratio of salaries and wages to the value of the output of factories was 19·4 per cent. on the average of the past five years, as against 21·5

per cent. in the period 1912 to 1916-17. The cost of materials was 61·9 per cent. of the value of output in the period 1917-18 to 1921-22 as compared with 59·9 per cent. in the years 1912 to 1916-17. 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 14s. 0d. in every £100 of the total output value in the period 1917-18 to 1921-22, as against £16 19s. 3d. in the preceding five-year period.

**Capital  
invested in  
manufacturing  
plant and  
premises.**

In the following statement the amount of capital invested in machinery and plant and land and buildings used in connexion with the various classes of manufacturing industries is shown for the year 1921-22 :—

### VALUE OF MACHINERY AND PLANT AND LAND AND BUILDINGS CONNECTED WITH FACTORIES, 1921-22.

Class of Industry.	Value of Machinery and Plant.	Value of Land and Buildings.
	£	£
Treating raw material, product of pastoral pursuits, &c. . . . .	665,655	748,030
Treating oils and fats, animal, vegetable, &c. . . . .	206,595	182,285
Processes in stone, clay, glass, &c. . . . .	814,015	693,555
Working in wood . . . . .	985,165	671,435
Metal works, machinery, &c. . . . .	2,735,030	2,534,840
Connected with food and drink, &c. . . . .	4,373,595	4,264,535
Clothing and textile fabrics, &c. . . . .	2,870,235	4,298,955
Books, paper, printing, &c. . . . .	1,739,145	1,480,840
Musical instruments, &c. . . . .	22,275	84,010
Arms and explosives . . . . .	216,460	197,940
Vehicles, saddlery, harness, &c. . . . .	298,480	1,002,880
Ship and boat building and repairing . . . . .	115,755	249,180
Furniture, upholstery, and bedding . . . . .	144,215	586,625
Drugs, chemicals, and by-products . . . . .	423,150	553,460
Surgical and other scientific instruments . . . . .	10,930	35,940
Jewellery, time-pieces, and plated-ware . . . . .	59,390	210,890
Heat, light, and power . . . . .	4,820,200	1,326,455
Leatherware, n.e.i. . . . .	39,600	134,665
Minor wares, n.e.i. . . . .	642,220	553,650
<b>Total . . . . .</b>	<b>21,182,110</b>	<b>19,810,170</b>

The capital invested in plant, buildings, &c., used in connexion with three classes of industries—food and drink; clothing and textile fabrics; and heat, light and power—amounted to £21,953,975, or slightly more than one-half of the total for all manufacturing industries.

The total values of machinery and plant and of land and buildings used in connexion with factories are shown in the next table for the past ten years:—

VALUES OF MACHINERY AND PLANT AND LAND AND BUILDINGS CONNECTED WITH FACTORIES, 1912 to 1921-22.

Year.					Value of Machinery and Plant.	Value of Land and Buildings.
					£	£
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
1918-19	..	..	..	..	13,645,220	13,673,515
1919-20	..	..	..	..	15,846,935	14,957,585
1920-21	..	..	..	..	18,179,385	17,313,350
1921-22	..	..	..	..	21,182,110	19,810,170

It will be seen from these figures that the value of machinery and plant more than doubled between 1912 and 1921-22, whilst that of the land and buildings showed an increase of £9,447,509, or 91 per cent., in the same interval.

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

The large increase shown in the number of accidents in 1920 and 1921 was mainly attributable to an amendment of the law, which made compulsory the reporting of accidents. Previously only those of a serious nature were reported.

ACCIDENTS IN FACTORIES, 1912 TO 1921.

Year.			Number of Employees.	Number of Accidents.	Percentage of Accidents to Number of Employees.
1912	..	..	104,746	389	·371
1913	..	..	110,487	407	·368
1914	..	..	110,660	391	·353
1915	..	..	91,888	464	·505
1916	..	..	92,320	503	·544
1917	..	..	97,561	442	·453
1918	..	..	104,242	459	·440
1919	..	..	116,369	362	·311
1920	..	..	116,846	862	·737
1921	..	..	117,633	830	·705

**Manufactures—** The foregoing tables do not include particulars relating to work of various kinds done by the Penal Department at 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 1921-22 was £33,000, and of the materials used £22,800. This was less than in the preceding year, the decrease being attributed to the fire which occurred at Pentridge, and the difficulty experienced in obtaining raw material. The articles produced are used principally by Government Departments.

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

VALUE OF VICTORIAN PRODUCTION, 1917-18 to 1921-22.

Produce.	Value in—				
	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
<i>Cultivation.</i>	£	£	£	£	£
Wheat .. ..	7,547,510	5,994,469	5,726,667	14,307,277	10,509,945
Oats .. ..	965,973	1,175,882	1,848,903	1,295,229	931,346
Barley, malting ..	207,275	272,567	304,377	263,963	221,757
" other ..	166,104	188,489	173,196	183,389	179,843
Maize .. ..	243,766	190,522	336,920	186,529	194,358
Other Cereals ..	60,961	49,915	58,207	49,532	66,537
Grass and Clover					
Seed .. ..	7,445	5,405	5,606	8,570	6,113
Potatoes .. ..	519,605	1,079,496	1,328,640	586,458	555,111
Onions .. ..	141,343	236,451	274,375	131,104	157,930
Other Root Crops	10,640	16,813	14,148	13,151	11,259
Hay .. ..	2,801,158	4,622,523	8,304,475	5,259,863	4,413,091
Straw .. ..	52,424	71,263	68,893	75,015	66,164
Green Forage* ..	167,709	368,205	449,010	397,620	447,050
Tobacco .. ..	943	6,513	16,240	3,800	24,160
Grapes, not made					
into wine, raisins,					
&c. .. ..	11,268	26,674	42,025	21,010	39,978
Raisins, ordinary	40,811	79,930	138,889	84,533	125,154
" sultanas ..	150,712	237,738	494,037	263,772	445,319
Currants .. ..	92,803	139,880	139,153	157,298	187,605
Wine .. ..	90,008	202,396	347,370	333,346	166,883
Hops .. ..	4,190	3,654	10,365	14,988	22,650
Other Crops ..	62,450	79,526	71,859	57,027	68,536
Fruit grown for sale					
in orchards and					
gardens .. ..	765,405	893,108	1,274,715	1,054,491	1,184,069
Fruit in private					
orchards and gar-					
dens .. ..	6,620	14,895	13,810	15,250	12,660
Market Gardens ..	284,050	405,790	442,155	427,035	500,640
Total .. ..	14,401,173	16,362,104	21,884,045	25,190,350	20,538,158

\* Exclusive of area under sown grasses.

## VALUE OF VICTORIAN PRODUCTION, 1917-18 TO 1921-22—continued.

Produce.	Value in—				
	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£	£
<i>Dairying and Pastoral.</i>					
Milk consumed in natural state ..	1,755,620	2,034,510	2,424,050	2,622,010	2,027,040
Butter made ..	4,229,310	4,868,670	4,945,480	7,043,950	5,127,570
Cheese made ..	197,750	257,880	344,210	189,070	203,620
Cream made (not for butter) ..	25,690	29,290	32,970	76,560	80,130
Condensed, Concentrated, and Powdered Milk ..	1,005,580	1,331,240	1,516,000	1,885,080	2,074,620
Horses ..	70,880	97,640			71,800
Cattle ..	5,270,940	5,383,660	4,856,100	5,269,650	3,099,300
Pigs ..	1,002,250	884,280	2,782,290	1,250,680	1,277,730
Sheep (without wool) ..	3,641,630	3,288,330	1,139,960	1,750,220	1,991,600
Wool ..	6,410,077	7,621,410	7,908,010	4,729,400	4,662,750
Total ..	23,609,727	25,796,910	25,949,070	24,816,620	20,616,160
<i>Mining.</i>					
Gold ..	857,500	674,655	575,260	648,969	443,938
Coal ..	345,830	367,640	406,620	528,919	634,397
Stone from Quarries (including limestone) ..	171,990	189,770	300,100	383,002	434,520
Other Metals and Minerals ..	124,910	110,260	48,150	46,755	30,299
Total ..	1,500,230	1,342,325	1,330,130	1,607,645	1,543,154
<i>Forest Produce.</i>					
Timber (Forest Saw-mills only) ..	355,430	503,470	693,995	905,720	896,070
Firewood (estimated) ..	567,910	604,650	790,140	923,200	918,550
Bark for Tanning ..	116,460	120,300	153,260	125,830	138,520
Total ..	1,039,800	1,228,420	1,637,395	1,954,750	1,953,140
<i>Miscellaneous.</i>					
Honey and Beeswax ..	80,473	37,639	35,930	45,346	48,075
Poultry production (estimated) ..	2,160,650	2,738,620	3,579,230	4,545,620	4,406,750
Rabbits and Hares ..	266,490	210,130	913,220	401,690	238,632
Fish ..	137,423	172,977	181,760	167,340	149,400
Total ..	2,645,036	3,159,366	4,710,140	5,159,996	4,842,857
Total Value of Primary Products ..	43,195,966	47,889,125	55,510,780	58,729,361	49,493,469
Manufacturing—Added Value*	23,976,732	26,880,485	34,259,060	38,330,232	43,592,856
Grand Total ..	67,172,698	74,769,610	89,769,840	97,059,593	93,086,325

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

The value of primary production was considerably less in the year 1921-22 than in the preceding year, the most noticeable decline being shown in "Cultivation" and "Dairying and Pastoral." There has been a marked improvement in the value of forest produce in recent

years, this having advanced from £806,250 in 1912 to £1,953,140 in 1921-22.

The total value of primary production in 1921-22 was £49,493,469, or £9,235,892 less, and that of manufactures (added value) was £43,592,856, or £5,262,624 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,  
1917-18 to 1921-22.

Produce.	Value of Produce per head in—				
	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cultivation ..	10 4 2	11 8 9	14 12 7	16 11 6	13 4 10
Dairying and Pastoral	16 14 8	18 0 7	17 7 0	16 6 7	13 5 10
Mining ..	1 1 3	0 18 9	0 17 9	1 1 2	0 19 11
Forest ..	0 14 9	0 17 2	1 1 11	1 5 9	1 5 2
Miscellaneous ..	1 17 6	2 4 2	3 3 0	3 7 10	3 2 5
Total Primary Produce ..	30 12 4	33 9 5	37 2 3	38 12 10	31 18 2
Manufactures ..	16 19 10	18 15 9	22 18 1	25 4 5	28 2 2
Grand Total	47 12 2	52 5 2	60 0 4	63 17 3	60 0 4

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 66 per cent. higher in 1921-22 than in 1917-18.