

TOTALS

Year	Average Rainfall	Wheat		Wool	Live Stock	
		Area	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	30-27	3,125,692	16-37	94,845,024	1,175,098	12,576,587
1917	31-36	2,690,216	14-03	105,424,682	1,371,049	14,760,013
1918	24-70	2,214,490	11-40	126,647,061	1,596,544	15,773,902
1919	22-77	1,918,269	7-75	132,847,167	1,631,120	14,422,745
1920	24-71	2,295,865	17-19	90,250,571	15,575,159	12,171,084



KARKAROOC

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	17-22	1,245,761	15-08	18,477,482	24,882	479,558
1917	18-55	868,714	11-26	6,434,550	33,046	718,682
1918	13-62	942,158	7-70	8,035,091	48,483	944,186
1919	11-46	1,019,327	3-70	1,557,001	55,583	642,379
1920	16-83	867,720	13-67	14,917,157	41,554	536,431

WIMMERA

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	22-54	705,657	20-75	14,483,181	40,500	1,765,752
1917	21-96	687,983	20-03	18,289,706	46,680	2,258,967
1918	18-44	608,598	17-84	11,773,086	56,793	1,644,265
1919	15-85	476,283	14-85	5,531,677	55,723	1,249,035
1920	16-04	617,943	22-65	15,342,289	54,606	1,919,307

NORTHERN

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	25-60	849,055	18-86	13,574,238	131,888	1,823,176
1917	26-36	786,452	12-84	15,194,309	175,770	2,283,186
1918	22-86	582,461	10-87	11,381,729	228,432	2,894,771
1919	18-68	466,213	7-61	10,187,778	209,810	1,856,975
1920	20-15	585,370	16-79	12,846,881	277,440	1,883,693

NORTH EASTERN

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	44-01	67,805	11-32	6,736,135	146,373	953,014
1917	56-09	47,364	6-54	6,843,161	178,220	1,084,679
1918	36-46	22,962	7-69	7,241,136	211,407	1,031,086
1919	27-27	17,625	7-31	7,366,311	228,164	1,032,328
1920	34-42	40,775	17-35	5,423,069	292,755	432,030

NORTH CENTRAL

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	34-44	28,314	16-95	7,810,959	69,142	1,131,316
1917	35-86	22,723	11-55	8,685,418	79,505	1,296,730
1918	30-30	8,267	8-22	10,655,280	76,171	1,774,255
1919	21-21	6,589	12-37	10,670,152	100,369	1,277,484
1920	31-39	13,107	13-20	11,566,919	24,600	1,062,894

CENTRAL

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	38-78	42,230	13-24	8,555,443	209,630	1,293,986
1917	32-41	26,747	14-38	8,251,640	223,331	1,397,597
1918	30-11	7,776	13-38	10,070,746	184,037	1,391,355
1919	25-46	6,683	13-47	10,645,221	267,030	1,237,795
1920	31-39	13,107	19-23	12,810,458	349,252	1,043,682

WESTERN

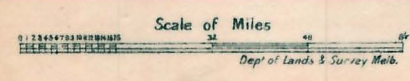
Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	30-72	164,560	12-38	31,471,659	233,775	3,331,890
1917	31-70	139,323	12-68	31,194,952	324,769	4,576,510
1918	25-70	70,531	10-43	19,840,370	355,838	4,899,263
1919	28-47	37,219	14-05	14,680,071	362,311	4,610,508
1920	25-59	67,228	20-10	32,793,180	528,004	1,982,441

BULN BULN

Year	Average Rainfall	Area	Wheat	Wool	Live Stock	
		Acres	Average per Acre	Total Product ⁿ	Cattle	Sheep
		Acres	Bushels	lbs.		
1916	37-78	21,102	15-68	8,367,921	284,930	1,667,656
1917	36-63	16,914	18-85	7,194,250	303,648	1,266,892
1918	33-39	3,772	14-64	8,669,011	348,606	1,326,466
1919	37-03	2,171	18-51	5,922,594	385,404	1,134,431
1920	33-37	6,604	20-32	5,264,279	366,307	687,724

VICTORIA.

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



PRODUCTION.

LAND SETTLEMENT, ETC.

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

	Acres.
Lands alienated in fee simple	24,793,053
Lands in process of alienation	8,211,944
Crown lands	23,240,763
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Total	56,245,760
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The Crown lands comprise—

Permanent forests (under Forests Act) ..	3,336,000
Timber reserves (under Forests Act) ..	743,000
State forests and Timber reserves (under Land Act)	303,600
Water reserves	318,013
Reserves for Agricultural Colleges, &c. ..	85,879
Reserves in the Mallee	397,881
Other reserves	302,000
Roads	1,757,040
Water frontages, beds of rivers, lakes, &c.; } unsold land in cities, towns, and boroughs }	1,776,865
*Land in occupation under—	
Grazing area leases	1,529,343
Perpetual leases	149,516
Other leases and licences	100,755
Temporary grazing licences	11,150,819
Unoccupied	1,246,052
	<hr/>
Total	23,240,763
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* NOTE.—In all cases where grazing area lessees failed to apply to select out of their holdings before the 29th December, 1920, the land embraced in such holdings reverted to the Crown, and is available to be dealt with for settlement purposes.

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 1910.

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

ALIENATION OF CROWN LANDS, 1911 TO 1920.

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.	£
1911	4,068	205,708	159,892	136,277
1912	4,120	114,630	128,427	165,854
1913	4,205	171,449	153,051	164,065
1914	3,705	166,026	129,525	145,003
1915	3,287	129,232	117,257	113,167
1916	2,061	140,341	89,203	80,238
1917	2,075	89,164	82,042	79,992
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

* Exclusive of Mallee selectors.

From the period of the first settlement of the State to the end of 1920 the amount realized by the sale of Crown lands was £33,951,956, 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.

Grazing licences are renewable annually, and are only granted for waste lands of the Crown until required under the principal sections of the Act. The lessee of a Mallee allotment has the privilege of selecting out of his lease 640 acres of first class, 1,000 acres of second class, or 1,280 acres of third class land, according to classification.

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

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

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

Transfer of Land Act. The "Torrens System," whereby persons acquiring possession of land may receive a clear title, was introduced into Victoria in 1862. The system has been the means of simplifying procedure in connexion with the transferring of land. It gives a title to the transferee free of any latent defect and reduces the cost of dealing in real estate by reason of the simplicity of the procedure. All land parted with by the Crown since 1862 is under the operation of the Transfer of Land Act, and the Crown grant issues through the Titles Office; but, to bring under the Act land that was parted with prior to that year, application must be made accompanied by strict proofs of the applicant's interest in the property. During 1920 there were submitted 526 applications to have brought under the Act land amounting to 20,904 acres in extent, and to £698,402 in value; whilst the land actually brought under the Act during the year by application was 14,511 acres valued at £433,000. Up to the end of 1920 there had been brought under the Act 3,011,067 acres valued at £61,128,874.

Assurance Fund. When application is made to have land brought under the Transfer of Land Act, a contribution to the assurance fund of $\frac{1}{2}$ d. in the £1 on the value of the land is levied on the applicant to assure and indemnify the Government in granting a clear title against all the world, as some other person may have a latent interest in the property, and it may be necessary for the Government to recompense such person out of the fund for the loss of his interest. The amount at credit of the fund at 30th June, 1919, was £141,239. Receipts during 1919-20 comprised contributions £1,615, 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 £60 was paid out of the fund for claims and £1,913 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, 1920, was £146,729. The amount paid up to 30th June, 1920, as compensation and for judgments recovered, including costs, was £7,782.

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 made for extension of payments under a lease to $46\frac{1}{2}$ years, the payments being by 93 half-yearly instalments. The deposit lodged with the application is credited as part of the principal, and the balance bears interest at $4\frac{1}{2}$ per cent. Each instalment includes interest upon the balance of purchase money remaining unpaid, and is 3 per cent. half-yearly (6 per cent. per annum) of the capital value of the allotment (less the amount of the deposit). Payments in advance may be made at any time, at the option of the lessee, and a proportionate reduction of interest secured thereby.

In special cases, when a lessee is unable to meet the instalments of purchase money as they fall due, the Board has power to suspend such payments up to an amount not exceeding 60 per cent. of the value of the improvements effected by 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 13 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.

Farm allotments. 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

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, $1\frac{1}{2}$ -in. mesh, 42 inches wide, weighs 28 cwt. to the mile, and is supplied in rolls of not less than 100 yards. Each advance is limited to a quantity sufficient for 6 miles of vermin-proof fencing, and the price of the wire netting is deemed to be the amount of the advance, which is repayable by a

cash payment or on terms over a period not exceeding ten years, with interest at 4 per cent. per annum.

Estates purchased. The following is a complete statement of all estates acquired by the Closer Settlement Board for the purpose of closer settlement at 30th June, 1921, 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, 1921.

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	..	..	26
Walmer	13,769	44,751	3 5 0	41	..	2	6
Whitfield	4,247	36,096	8 10 0	34	..	2	6
Brunswick	91	2,793	29 0 0	..	56	..	9
Eurack	5,109	53,640	10 10 0	45	..	..	4
Footscray	31	2,494	80 0 0	..	35	..	..
Dal Campbell	45	2,357	47 8 0	..	63	..	2
Springvale	3,396	25,895	7 12 6	22	..	..	..
Memsie	10,028	57,159	5 14 0	43	..	..	11
Richmond Vale	1,790	11,000	8 11 6	10	..	1	..
Overnewton	11,336	71,492	6 4 6	67	..	10	23
Wyuna	23,016	120,376	5 5 0	114	..	..	..
Restdown	17,894	60,391	3 7 6	53	..	..	29
Strathkellar	10,227	74,150	7 5 0	56	..	6	29
Bona Vista	2,060	28,832	14 0 0	29	..	4	111
Cadman's	18	844	50 0 0	..	42	..	..
Iara	8,329	45,825	5 10 0	32	..	7	343
Tandarra	4,558	21,083	4 12 6	19	..	..	8
Exford	3,054	64,039	8 0 0	45	..	6	4
Colbinabbin	19,164	110,198	5 17 6	83	..	..	69
Pirron Yaloak	1,058	23,796	22 7 6	21	..	..	..
Numurkah	2,360	18,901	8 0 0	13	..	1	..
Allambee	5,025	31,794	6 6 4	22	..	..	1,567
Pender's Grove	233	23,337	100 0 0	..	259	..	..
Phoenix	23	968	40 0 0	..	47	..	2
Keayang	1,494	14,966	10 0 0	13	..	..	..
Werneth	6,588	31,043	4 15 0	21	..	..	11
Staughton Vale	9,857	66,466	6 15 0	44	..	..	..
Glenhantly	74	7,040	94 0 0	..	158	..	2
The Heart	3,793	56,322	14 12 2	39	..	..	5
Mooralla	17,199	60,197	3 10 0	26	..	..	10
Maribyrnong	1,112	10,842	9 15 0	12	..	2	..
Kenilworth	13,440	55,321	3 0 0	29	..	12	10
Doogalook	4,640	29,002	6 5 0	16	..	..	..
Werribee	15,218	148,802	13 0 0	39	..	..	231
Konongwootong	10,181	104,363	10 3 0	65	..	15	45
Cornella Creek	29,567	121,034	4 15 0	78	..	1	616
Koyuga	789	3,914	..	2	..	..	..
Meadowbank	313	9,085	29 0 0	5	..	..	..
Oaklands	8,069	26,309	3 5 0	12	..	..	..
Hurstwood	6,493	31,311	4 15 0	14	..	..	..
Eumeralla	10,034	57,570	5 13 7	34	..	7	..
Morven	8,029	39,533	4 17 6	20	..	..	11
Mt. Widderin	8,333	48,634	5 15 6	23	..	..	3
Tooronga	101	17,675	178 4 4	..	210	..	..
Nerrin Nerrin and							
Westmere	7,743	67,915	..	32	..	1	74
Bellarine	204	5,457	26 15 0	7	..	..	33
Daylesford	70	2,957	42 5 2	15	..	..	..

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

CLOSER SETTLEMENT ESTATES AT 30TH JUNE, 1921—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.	
<i>Dry Areas—continued.</i>	acres.	£	£ s. d.				acres.
Mordialloc ..	460	7,850	17 1 6	..	..	34	..
Thomastown ..	581	11,230	19 5 6	23	..	2	..
Wangaratta ..	796	9,660	12 3 4	30	..	..	..
Warragul ..	98	2,060	21 0 0	7	..	..	..
Belmont ..	113	3,161	28 0 0	..	..	17	..
Highton ..	425	11,032	26 0 0	19	..	..	..
Deepdene ..	2,985	35,742	12 0 0	15	..	..	194
Glenaladale ..	2,109	23,787	13 10 0	17	..	..	..
Cremona ..	1,292	20,140	Various	1	..	1	..
Boisdale..	2,521	72,174	Various	47	..	..	..
Pannoo ..	15,102	93,455	Various	45	..	..	..
Marathon and Wil- low Grove ..	14,783	58,752	Various	28	..	..	31
Dunrobin ..	18,814	119,779	6 6 0	56	..	23	4
Kilmany ..	8,746	106,080	12 0 0	75	..	..	2
Wanbra..	47	1,042	22 10 0	10	..	3	..
Nathalia ..	30	362	12 0 0	..	..	5	..
Moyhu ..	2,422	19,580	8 0 0	14	..	..	..
†Condah ..	157	1,725	10 19 8	..	..	..	..
‡Mackey ..	1,078	20,626	19 2 10	..	..	..	..
Ascot Park ..	488	3,671	Various	..	..	..	..
Nanneella ..	738	7,767	Various	6	..	13	..
Cohuna ..	223	2,215	Various	2	..	..	..
Bamawm ..	162	1,391	8 12 0	..	..	..	..
Thornbury ..	11	5,625	..	..	47	..	..
Crown Lands ..	2,904	20,043	Various	19	79	19	..
Sec. 6-11—Pur- chases ..	53,095	347,925	Various	278	..	14	2,308
Land purchased for Discharged Sol- diers, but granted to civilians under Closer Settlement Act ..	3,557	34,666	Various	17	..	..	..
<i>Irrigable Areas—</i>							
Nanneella ..	8,565	78,654	Various	97	..	3	40
Bamawm ..	13,365	122,944	Various	162	..	11	160
Shepparton ..	9,243	136,839	Various	217	..	39	5
Swan Hill ..	7,358	73,637	Various	143	..	1	..
Cohuna ..	11,531	114,856	Various	111	..	6	918
Tongala..	15,228	172,396	Various	201	..	23	218
Kyabram ..	3,049	36,091	Various	47	..	7	115
Koondrook ..	3,423	23,201	Various	37	..	..	..
Werribee ..	7,996	153,871	..	150	..	19	740
Koyuga ..	4,173	36,228	..	43	..	13	19
Echuca ..	3,235	29,142	Various	28	..	..	..
Dingee ..	472	4,160	Various	9	..	7	20
Cornelia Creek ..	2,507	16,501	..	14	..	..	193
Stanhope (including Lauderdale and Bonshaw) ..	20,890	228,630	Various	275	..	16	2,716
Sec. 6-11—Pur- chases ..	710	7,521	..	8	..	..	..
Land purchased for Discharged Sol- diers (as above)	24	100	..	1	..	..	..
Total ..	576,154	4,298,765	..	3,619§	1,046	354	10,979

* 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 529 Discharged Soldiers.

On 30th June, 1921, the Board had 99 properties, with a total area of 576,154 acres, of which 10,979 acres were available for allotment. Portions of estates, amounting in the aggregate to 40,447 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, 1921, 529 allotments, containing 43,806 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 1917 to 1921 is summarized in the next statement.

Extent of
Closer
Settlement.

CLOSER SETTLEMENT HOLDINGS, 1917 to 1921.

	At 30th June—				
	1917.	1918.	1919.	1920.	1921.
In occupation—					
Number of Holdings ..	4,509	4,492	4,477	4,921	5,019
Area acres	507,500	506,838	508,463	547,087	560,450
Resident Population ..	17,782	17,620	17,616	19,392	19,973
Area unallotted .. acres	43,017	30,618	28,689	21,069	10,979

The sum of £3,564,582 had been repaid to the Closer Settlement Fund up to 30th June, 1921. Of that amount £1,857,263 had been transferred to revenue to meet interest due to stockholders, £60,000 had been invested to replace amounts written off estates re-valued, and £1,493,029 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, 1921, being £154,290. The balance of unredeemed stock is now £4,664,153, on which the interest payable amounts to £174,952 per annum. Up to the 30th June, 1921, 12,862 applications for advances aggregating £1,060,835 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 468 relating to closer settlement estates at 30th June, 1921.

Soldiers Settlement Scheme.

Up to the 30th September, 1921, the Closer Settlement Board and the State Rivers and Water Supply Commission had specially purchased for the settlement of soldiers 1,601,889 acres at a cost of £11,831,613. The number of soldiers settled up to that date was as follows:—

On land specially purchased by the Closer Settlement Board	5,257
On land specially purchased by the State Rivers and Water Supply Commission	1,000
On Closer Settlement old estates—Dry areas	66
On Closer Settlement old estates—Irrigable areas	516
On Crown Lands—Ordinary and Mallee Areas	877
On Crown Lands—Merbein and Nyah Irrigation Areas	184
Soldiers receiving assistance from the Closer Settlement Board, on share farming, leasing agreements and freehold land	425
Total	8,325

In addition to the above there were available or in process of being made available 1,255 allotments, of which 407 were on land specially purchased by the Closer Settlement Board, 610 in irrigable areas, and 238 on Crown land.

Up to the end of September, 1921, the amount of assistance rendered by the Board to soldier settlers by way of advances was £3,111,847.

WATERWORKS.**Victorian 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

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, 1920.**

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	1,264,742
Broken River Works ..	Stock and Domestic	..	14,853
		Acre feet.	
Goulburn-Waranga ..	Irrigation, &c. ..	302,000	1,571,946
North-west (Kerang) Lakes	Stock and Domestic	88,500	13,150
Kow Swamp Works ..	Irrigation, &c. ..	40,860	187,366
Loddon River Works ..	" " ..	14,000	167,636
Sugarloaf Reservoir (under construction) ..	" " ..	300,000	411,735
Glenmaggie Reservoir ..	" " ..	60,000	17,397
		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	158,006
Irrigation and Water Supply Districts (20)	" " ..	..	1,837,337
Waterworks Districts (19)	Stock and Domestic	..	2,780,000
First Mildura Irrigation and Water Supply Trust ..	Irrigation ..	..	106,878
		Gallons.	
Waterworks Trusts (98) ..	Stock and Domestic	1,180,000,000	1,179,473
Municipal Corporations (29)	" "	3,110,000,000	782,115
Abolished Irrigation and Water Supply Trusts (8)	Irrigation ..	..	31,710
Miscellaneous Expenditure	" ..	..	158,916
Melbourne and Metropolitan Board of Works ..	Domestic ..	6,460,000,000	4,968,317
Geelong Waterworks and Sewerage Trust ..	" ..	2,703,967,000	600,977
Total ..	.. ..	..	16,337,512

Of the expenditure given in the case of the Melbourne waterworks, £3,189,934 represents money borrowed by the State, £1,876,752 of which has been redeemed—£800,000 out of consolidated revenue, and £1,076,752 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, 1920, was £1 313,182. Further particulars relating to this Board will be found on page 214, 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., £178,054.

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, 1920.
	£	£	£	£	£	£
State Works	4,004,154	..	2,798*	..	..	4,004,154
Irrigation and Water Supply Districts (20)	1,837,337	..	15,406	575,152	18,712	1,243,473
First Mildura Irrigation and Water Supply Trust	106,878	..	..	..	4,263	102,615
Waterworks Districts (18)	1,515,909	..	46,439	169,927	36,733	1,309,229
Waterworks Trusts (9s)	1,151,845	6,871	37,414	125,861	140,633	892,222
Geelong Waterworks and Sewerage Trust	455,676	..	..	..	297,753	157,923
Municipal Corporations (20)	772,572	43,633	..	165,870	134,971	515,364
(9)	9,543	346	..	..	9,889	..
Melbourne and Metropolitan Waterworks System	3,189,934	..	..	..	1,876,752	1,313,182
Abolished Trusts (8)	31,710	..	243	31,630	30	..
Flood Protection Districts	112,365	..	..	..	..	112,365
Miscellaneous	176,333	..	..	..	..	176,313
Total	13,364,236	50,850	102,300	1,068,490	2,519,756	9,826,840

* 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, 1920, amounted to £37,802, viz., £12,218 against the First Mildura Trust, £14,970 against Waterworks Trusts, and £10,614 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 .. ..	..	12,812
Rodney	32,356	46,289
Stanhope (three years) .. ..	..	4,445
Tongala	2,270	7,779
Rochester	500	20,666
Dingee .. ..	..	1,624
Tragowel Plains	20,000	31,040
Supplied from the Murray—		
Cohuna	12,000	15,383
Gannawarra	7,825	15,844
Koondrook	5,029	14,934
Swan Hill	5,410	9,502
Nyah	569	1,822
Merbein	202	6,252
Supplied from the Werribee—		
Bacchus Marsh	31	3,058
Werribee .. ..	..	3,649
Total	86,192	195,099

The area under irrigated culture in the whole State, in 1920-21, for all kinds of crop, was 282,534 acres. This does not include 15,000 acres (private diversions) in regard to which details are not available.

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.	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.
	acres.	acres.	acres.	acres.	acres.	acres.
Cereals	23,715	18,790	3,243	44,765	76,810	26,546
Lucerne	24,124	74,042	50,869	64,131	71,364	72,338
Sorghum and other annual fodders ..	8,094	14,707	10,589	19,083	32,955	25,963
Pastures	50,541	87,458	54,935	88,986	117,263	100,424
Vineyards and orchards	17,524	38,246	32,785	38,260	43,586	50,281
Fallow	4,988	3,220	2,323	5,575	8,502	3,465
Miscellaneous ..	785	4,242	3,002	3,559	2,768	3,517
Details not available (private diversions)	129,771	240,705	157,796	264,359	353,248	282,534
	8,000	17,000	17,000	17,800	18,000	15,000
Total ..	137,771	257,705	174,796	282,159	371,248	297,534

Of the total area irrigated in 1920-21 for which details of crops are available—282,534 acres—the percentages devoted to different purposes were as follows :—Pastures, 36 ; cereals, 9 ; lucerne, 26 ; vineyards, orchards, and gardens, 18 ; sorghum and other annual fodder crops, 9 ; fallow, 1 ; and miscellaneous, 1. 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 policy of giving preference to the settlement of discharged soldiers, in the Closer Settlement operations of the Commission, was strictly adhered to during the past year. The strong demand for irrigation blocks experienced in the previous year was more than maintained; but the estates specially purchased for soldiers, together with the balance of the lands held in reserve for them, enabled the Commission to cope with the increased demand. During the year 1920-21, 682 holdings in Irrigated Closer Settlements were allotted, 636 to discharged soldiers, and the remaining 46—being not quite up to the standard adopted for soldier settlement—to specially selected experienced agriculturists who expect to be able to work them to advantage. The total area acquired by the Commission for subdivision is about 168,000 acres, of which 131,000 acres are now occupied; while an additional area of 17,500 acres, within Irrigation Districts but outside the Closer Settlement areas, has been purchased and settled under section 20 of the *Closer Settlement Act 1915*. With the exception of the Red Cliffs Estate, purchased last year, all the estates acquired by the Commission have been wholly subdivided for settlers. Two subdivisions at Red Cliffs have been made, comprising 7,500 acres of the irrigable portion of the estate, and some 2,000 acres of the lands unsuitable for irrigation have been disposed of in large areas. The balance of the high land will be sold in the same way.

Since the work of repatriation was commenced, the Commission has placed 1,700 soldiers on irrigable farms. Of this total, some 630 have settled in the districts served by the Goulburn Irrigation System, 870 in the newer settlements on the Murray frontage, and the others mainly at Werribee and Maffra. In the Goulburn areas there are 230 on the Stanhope Estate of 21,000 acres (now wholly subdivided), and 135 at Tongala, on lands mainly devoted to dairying; 106 at Shepparton, who are principally orchardists; and 106 in the Rodney District, and over 50 in the Rochester District, who are occupied in mixed farming. In the Murray Districts there are 62 in the districts administered from Cohuna and Kerang centres, and 120 at Swan Hill, engaged in fruit culture and dairying, while 226 have chosen fruit blocks on the Murray frontage settlements at Nyah and Merbein, and 446 at the new Red Cliffs Settlement. The other important settlements are at Werribee, where 71 are settled on dairying blocks, and at Maffra, where 43 are engaged in beet-growing and dairying. About 300 of the soldier settlers in these closer settlement areas and in irrigation districts generally 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. From this statement it will be seen that the subdivided portions of these estates are already supporting more than eighteen 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 IN IRRIGATION DISTRICTS.

PROPERTIES SUBDIVIDED AND SETTLEMENT THEREON.

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	325	31	325	301
Tatura ..	100	100	1	..	4	24	4	4
Stanhope ..	20,900	20,900	6	12	309	62	291	279
Kyabram ..	3,000	3,000	7	10	56	52	53	43
Tongala ..	16,300	16,300	33	31	255	61	255	224
Cornelia Creek ..	2,500	2,500	} Pt. 1	..	14	176	13	13
Koyuga ..	4,200	4,200			53	76	51	51
Nannella ..	9,000	9,000	17	7	105	83	104	97
Echuca ..	3,200	3,200	6	4	27	117	26	22
Bamawm ..	13,400	13,400	23	21	178	73	178	157
Dingee ..	500	500	3	1	15	30	15	14
Cohuna ..	11,800	11,800	28	9	131	87	118	109
Koondrook ..	3,400	3,400	5	4	34	99	34	30
Swan Hill ..	9,900	9,900	26	15	226	42	226	211
Werribee ..	8,900	8,900	} Pt. 1	11	198	41	179	168
Maffra ..	4,900	4,900			7	4	107	41	43	39
Nyah ..	3,800	3,800	8	1	208	17	200	199
Merbein (Crown Lands) ..	8,300	8,300	..	..	384	21	384	384
Red Cliffs ..	33,000	9,500	1	3	446	15	446	443
	167,800	144,300	204	157	3,075	42	2,945	2,788
Properties under Section 20, <i>Closer Settlement Act</i> 1915, outside above estates ..	17,500	..	..	..	..	..	194	..
	185,300							

With the exception of a few blocks on various estates, now available and ready for occupation, the lands in the earlier closer settlements which had been held in reserve for soldiers have been disposed of. The Commission has on hand, however, some 3,000 acres at Maffra which are temporarily occupied under lease for the purpose of enabling the soldier settlers there to make a living under the existing dry-farming conditions. This land will be made available on completion of the irrigation scheme. With a view to meeting the present demand, it is proposed to make the third subdivision of the Red Cliffs Estate available for application early next year. The balance of the irrigable portion of the estate will be made available as required.

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 commencement will now be made with the impounding of water. The enlargement of Waranga Reservoir is being completed. Progress was made with the works for supplementing the domestic and

Water Supply Construction Works, 1920-21.

stock supplies to the districts served by the Wimmera-Mallee system. The work of converting Taylor's Lake into a controllable reservoir to hold 30,000 acre-feet was practically completed during the year. The remainder of the upper beaching will be constructed very shortly, after which the storage can be utilized to its full capacity.

The Commission is steadily developing its policy of converting into storages the other Drung lakes adjacent to Taylor's Lake, viz. :— Pine Lake, Green Lake, and Dock Lake. Pine Lake is the most valuable of these depressions. Its natural holding capacity of 24,000 acre-feet can be increased to 62,000 acre-feet by banking along its lower margins at a reasonable cost. As the average depth of the lake, when its capacity has been increased to 62,000 acre-feet, will be some 30 feet, there is no doubt that it will be of great value as a strong general district reserve.

The Wimmera storages have now an actual capacity of over 118,000 acre-feet as against 69,000 acre-feet a few years ago, and, on the completion of the storage works in course of construction, the capacity will be increased to no less than 200,000 acre-feet. The total capacity of storages in the State was 172,000 acre-feet in 1902; it is now about 742,000 acre-feet.

The scheme prepared at the request of the Naval authorities for the supply of water to the Naval Base which is being established at Crib Point, Western Port, and the several townships and bayside resorts *en route* is well advanced, and water has been supplied to the Naval Base since 20th October, 1919.

In spite of great delays caused by difficulty in securing suitable materials, steady and satisfactory progress was made during the year with the works of this most important scheme. The Beaconsfield Reservoir (200,000,000 gallons capacity), Mornington Reservoir (44,000,000 gallons capacity), and Bittern Basins (6,000,000 gallons capacity) were filled and kept replenished, and the Frankston Reservoir (180,000,000 gallons capacity) was completed and filled. The greater portions of the reticulations of Mornington, Frankston, Seaford, Carrum, Chelsea, Edithvale, and Aspendale are now completed, and during the summer of 1921-22 a full supply of water should be available for practically all parts of these towns. Arrangements are being made for the early reticulation of Berwick, Beaconsfield, Cranbourne, Somerville, and Pakenham.

Special attention is being paid to the extensions to serve Dandenong, Noble Park, and Spring Vale, in order to provide for the considerable increase of population which may be expected in the near future in these well-situated centres.

Pending the completion of the full line of the projected 2 feet diameter main from Beaconsfield to the proposed reservoir 2 miles north of Spring Vale, the Dandenong end of this main from the Police Paddock to Heywood's Hill, Dandenong, has been put in hand and is being laid, together with a 12-in. diameter branch, to link up with the existing reticulation at Dandenong. This will connect the large service basins (6,000,000 gallons capacity) of the existing Dandenong supply

scheme effectively with the town reticulation, and give full service pending the completion of the large main which will bring supplies from Beaconsfield Reservoir.

It is proposed to construct a service basin with a capacity of 23,000,000 gallons and with an elevation of 270 feet reduced level at a suitable site on Heywood's Hill, about 2 miles north-west of Dandenong. The construction of this local storage will enable a supply main to be laid to serve existing populations at Spring Vale and Noble Park.

The Commission, in view of the probable requirements of the rapidly expanding districts lying between Dandenong, Spring Vale, and Port Phillip Bay, will, in laying out its scheme of supply, provide as far as practicable for all demands which will probably arise in the near future.

During the year operations upon these works have necessarily been confined chiefly to the construction of the foundations of the large cyclopean concrete dam to be built on the Macallister River at Bradley's Creek junction, just below Glenmaggie township. This has been carried on as vigorously as conditions have permitted; a "by-pass," designed to carry 2,000 cubic feet per second, has been cut through solid rock 20 feet wide, up to 20 feet deep, and some 12 chains in length, and concrete "cut off" walls have been constructed across the river both above and below the site of the main wall, so that all ordinary river flows can now be passed without retarding the progress of the dam proper. The river bed at the dam site has been explored and cleaned up satisfactorily. This will enable the foundations and lower part of the main structure to be carried on uninterruptedly as soon as the spring freshes in the river are past, and it is anticipated that by the end of the summer of 1921-22 the work will be sufficiently advanced to allow of valuable diversions of river flows being made to the head of the channel systems.

Further surveys have established the value of this site as a storage basin; at least 120,000 acre-feet can be stored at a very reasonable cost with a dam of only some 90 feet maximum height. As an almost equal additional volume of unregulated flows can be drawn from the river during the first half of an ordinary irrigation season, it is evident that very considerable extensions of the original scheme are feasible in the near future. It is, therefore, proposed to establish the foundations and lower part of the dam upon lines sufficiently large to allow of the completion of the work when required to the full height mentioned.

This was referred to in the *Year-Book* for 1919-20, page 471. The first subdivision of the proposed area of 15,000 acres, which was allotted in December, 1920, embraces the portion—4,650 acres—lying between the Mildura railway line and the River Murray. This portion has been subdivided into 295 soldier settler blocks averaging 16 acres each. The whole area has been grubbed and cleared, and the construction of the main channels and the general reticulation are near completion. A second allotment of 149 blocks was made in August, 1921. The total area cleared is now over 8,000 acres. A township on modern lines has been laid out, and the sale of allotments therein has been most successful, prices reaching £9 per foot.

**Maffra District
Irrigation
Scheme.**

**Red Cliffs
Irrigation
District.**

The pumping plant when completed will have a total capacity of 250 cubic feet per second, or 500 acre-feet per day, against a total head of 105 feet.

During the year from 800 to 1,000 returned soldiers have been employed in preparing the land for settlement, and most of these will take up blocks.

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

Artesian Bores.

ARTESIAN AND SUB-ARTESIAN BORING.

Number of Bores Sunk.		Total Depth of Bores.	
State.	Private.	State.	Private.
		Feet.	Feet.
105	206	44,025	42,006

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 :—

Mildura Irrigation 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 1920 in the same area it had risen to £2,419,600. The receipts and payments of the Mildura Irrigation Trust during the year ended 30th June, 1920, were as follows :—

RECEIPTS AND PAYMENTS OF FIRST MILDURA IRRIGATION TRUST, 1919-20.

<i>Receipts.</i>		£	<i>Payments.</i>		£
Horticultural Rates	..	27,719	Wages and Salaries	..	13,601
Special Waterings, &c.	..	4,821	Firewood	..	20,261
Miscellaneous	..	6,167	Interest, Sinking Fund and Depreciation	..	6,894
			Miscellaneous	..	9,996
Total	..	38,707	Total	..	50,752

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, and 41,808 acres in 1919-20.

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 1918, 1919, and 1920, and the average yearly amount of rainfall deduced from all available records to December, 1920, in each of the 26 river basins or districts constituting the State of Victoria:—

RAINFALL.—YEARLY RECORDS AND AVERAGES.

Basin or District.	Rainfall.			
	During 1918.	During 1919.	During 1920.	Yearly Average to December, 1920.
	Inches.	Inches.	Inches.	Inches.
Glenelg and Wannon Rivers ..	23.95	22.67	25.80	26.31
Fitzroy, Eumeralla, and Merri Rivers	28.04	28.12	25.97	29.19
Hopkins River and Mt. Emu Creek	23.87	21.85	24.11	25.19
Mt. Elephant and Lake Corangamite	22.81	20.87	22.19	24.88
Cape Otway Forest ..	39.32	40.37	45.87	41.85
Moorabool and Barwon Rivers ..	20.85	22.65	20.46	24.30
Werribee and Saltwater Rivers ..	22.77	23.94	24.36	23.69
Yarra River and Dandenong Creek ..	34.77	29.81	37.97	33.71
Koo-wee-rup Swamp ..	34.35	32.74	35.80	34.51
South Gippsland ..	37.66	45.16	36.51	39.02
Latrobe and Thomson Rivers ..	38.23	36.69	35.47	36.36
Macallister and Avon Rivers ..	25.56	31.32	21.80	23.65
Mitchell River ..	24.52	32.97	27.06	27.13
Tambo and Nicholson Rivers ..	24.51	33.68	30.28	27.97
Snowy River ..	32.99	45.24	40.09	35.30
Murray River ..	20.40	14.01	16.43	16.75
Mitta Mitta and Kiewa Rivers ..	32.63	27.68	36.50	35.42
Ovens River ..	39.85	25.73	35.73	34.50
Goulburn River ..	31.62	20.97	27.07	26.87
Campaspe River ..	24.26	19.36	26.21	23.19
Loddon River ..	21.55	21.19	22.24	20.05
Avoca River ..	16.36	13.82	17.51	17.08
Avon and Richardson Rivers ..	14.35	12.79	15.87	15.86
Eastern Wimmera ..	21.40	17.03	23.43	21.28
Western Wimmera ..	18.03	16.66	21.46	19.92
Mallee ..	13.82	10.06	15.03	12.85
Weighted Averages ..	24.70	22.77	25.43	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 12.85 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 in Square Miles.
Under 15 inches	19,912
From 15 to 20 inches	12,626
From 20 to 25 inches	14,070
From 25 to 30 inches	15,247
From 30 to 40 inches	14,029
From 40 to 50 inches	7,055
From 50 to 60 inches	3,348
Over 60 inches	1,597

The rainfall recorded for each quarter of 1920 and the quarterly averages up to 1920 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
Gleneig and Wannon Rivers	229	304	843	792	1020	889	483	586
Fitzroy, Eumeralla, and Merri Rivers	320	447	884	869	925	967	468	636
Hopkins River and Mt. Emu Creek	291	418	677	748	936	786	507	567
Mt. Elephant and Lake Corangamite	266	452	609	708	858	749	486	579
Cape Otway Forest	630	660	1626	1262	1663	1376	668	887
Moorabool and Barwon Rivers	202	473	492	667	765	699	587	591
Werribee and Saltwater Rivers	238	522	589	611	860	644	749	592
Yarra River and Dandenong Creek	477	690	956	886	1262	906	1102	889
Koo-wee-rup Swamp	433	651	901	993	1145	956	1101	851
South Gippsland	657	786	1013	1110	993	1120	988	886
Latrobe and Thomson Rivers	595	704	933	936	1015	1021	1004	975
Macallister and Avon Rivers	510	620	415	521	383	585	872	639
Mitchell River	817	682	522	646	528	690	839	695
Tambo and Nicholson Rivers	1056	707	512	685	570	679	890	726
Snowy River	1494	833	659	925	755	914	1101	858
Murray River	38	315	269	490	843	481	493	389
Mitta Mitta and Kiewa Rivers	378	621	1029	988	1490	1100	753	833
Ovens River	137	554	950	1019	1694	1113	792	764
Goulburn River	133	459	661	799	1201	832	712	597
Campaspe River	77	411	558	684	1232	733	754	491
Loddon River	88	347	480	606	1095	612	561	440
Avoca River	69	276	387	525	938	540	357	367
Avon and Richardson Rivers	81	249	386	483	849	516	271	338
Eastern Wimmera	157	305	626	646	1096	712	464	465
Western Wimmera	123	252	601	618	951	699	471	423
Mallee	34	233	231	358	727	399	511	295
The whole State	298	443	616	697	979	742	650	566

NOTE.—100 pts.—1 inch.

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	29·972	29·925	30·081	30·077
Monthly range of pressure of air—Inches	0·887	0·768	0·813	0·980
Mean temperature of air in shade—° Fahr.	57·7	66·6	59·3	50·0
Mean daily range of temperature of air in shade—° Fahr.	18·7	21·2	17·4	14·0
Mean relative humidity. Saturation = 100	62	57	66	72
Mean rainfall in inches	7·30	5·85	6·69	5·76
Mean number of days of rain	38	23	33	42
Mean amount of spontaneous evaporation in inches	10·192	17·223	7·754	3·640
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 1920 and for the past 65 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 1920.	Average for 65 Years.	Extremes between which the Yearly Average Values have oscillated in 65 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ..	30·007	30·014	30·106	29·945
Highest " " " " ..	30·658	30·607	30·762	30·488
Lowest " " " " ..	29·316	29·260	29·495	28·942
Range (inches)	1·342	1·347	1·719	1·104
Mean temperature of air in shade (°Fahr.)	58·6	58·4	59·9	57·3
Mean daily maximum .. (° Fahr.)	66·9	67·3	69·0	66·0
Mean daily minimum	50·3	49·5	51·2	47·2
Absolute maximum	105·8	105·1	111·2	96·6
Absolute minimum	34·0	30·7	33·9	27·0
Mean daily range	16·6	17·8	20·4	15·0
Absolute annual range	71·8	74·4	82·6	66·0
Solar Radiation (mean maxima) ..	115·7	118·0	127·6	106·0

YEARLY AVERAGES AND EXTREMES OF CLIMATIC ELEMENTS—
continued.

Meteorological Elements.	Yearly Averages and Extremes.			
	Year 1920.	Average for 65 years.	Extremes between which the Yearly Average Values have oscillated in 65 years.	
			Highest.	Lowest.
Terrestrial Radiation (mean minima) (°Fahr)	45·5	43·9	46·7	39·5
Rainfall (in inches)	28·27	25·60	38·04	15·61
Number of wet days	162	136	171	102
Year's amount of free evaporation (in inches)	41·928	38·809	45·657	31·590
Percentage of humidity (saturation = 100)	65	68	76	62
Cloudiness (scale 10 = overcast, 0 = clear)	5·7	5·9	6·4	4·8
Number of days of fog	34	18·2	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 Farming. The great expansion in our rural industries during recent years has been largely brought about by the general adoption of better methods of farming, and by the introduction of more prolific wheats, and it is claimed that these improvements have been adopted as the result of the experimental and demonstration work of the Department of Agriculture. For many years the Department carried out research work on a large number of experimental plots on private farms throughout the State, but in 1912 the great majority of these plots were discontinued, and a commencement was made towards a policy of concentration in experimental investigation. In furtherance of this policy a Central Research Farm has been established at Werribee, and it is there that

the initiative with regard to all experimental and research work 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 5,975 acres at Dookie, 2,386 acres at Longerenong, 2,500 acres at 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.

**School of
Primary
Agriculture
and
Horticulture.**

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.

For 1921, the students enrolled numbered 164.

**Experimental
Farms and
Agricultural
Colleges.**

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

GOVERNMENT EXPERIMENTAL FARMS AND AGRICULTURAL COLLEGES, 1920.

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	10	6	5
Hands employed	40	40	41	14	8
Students	15	14	146	52	171
	£	£	£	£	£
Value of plant and machinery	2,945	1,687	6,217	2,000	150
Value of produce for year	12,000	5,500	7,125	8,000	1,147
Receipts—					
Government Grant	12,160	8,300	450	..	2,110
Fees .. .. .	..	..	2,822	962	140
Sale of produce, &c.	9,743	3,432	4,326	3,896	1,106
Other	482	282	..	..	10
Total receipts	22,385	12,014	7,598	4,858	3,366
Expenditure—					
Salaries—					
Professional Staff	318	586	4,141	1,680	1,178
General Staff	4,546	7,076	4,110	1,632	1,020
Buildings and maintenance	2,019	1,587	12,423	4,227	882
Other	2,961	2,114	769	252	628
Total expenditure	9,844	11,363	21,443	7,791	3,208
	Acres.	Acres.	Acres.	Acres.	Acres.
Area under—					
Cereals for Grain	585	400	512	420	..
Hay	440	200	300	120	..
Fruit trees, &c. .. .. .	..	4	15	17	14
Vines .. .. .	..	95	6	5	1
Green fodder	100	85	38	50	..
Other crops	349	60	7	16	1
Total area under crop	1,474	844	878	628	15½
Area of land in fallow	480	115	340	420	..
Area under artificially sown grasses	60	17	..	3	9
Area resting	150	27	542	607	..
Total area of arable land	2,164	1,003	1,760	1,658	24½
Balance of area	45	310	4,153	728	8½
Total area of farm	2,209	1,313	5,913	2,386	33
	No.	No.	No.	No.	No.
Live Stock—					
Horses	111	33	91	47	1
Dairy cows	55	11	33	26	4
All other cattle	78	15	95	38	13
Sheep	950	750	1,691	850	..
Pigs .. .. .	..	46	176	50	..

The orchards, nurseries, and gardens of the State are systematically inspected by the officers of the Vegetation Inspection of Orchards, Nurseries, &c. 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 *Halterophora capitata* and diseases arising from other causes has necessitated a thorough examination of fruit from Queensland, New South Wales, and elsewhere. The fruit-fly question is a very grave one, and, should either of the above-named insects obtain a footing in Victoria, a great portion of the large and important fruit industry of our State would be practically ruined.

Plants and cuttings coming from foreign parts are fumigated 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 about 12,000,000 acres of woodland, and of this area 4,092,000 acres are set aside as climatic reserves and for the production of timber. Of the State forest domain, some 3,000,000 acres are situated on the slopes of high mountain ranges, and their protection is essential for the maintenance of streams and springs; over half-a-million acres are situated in the extreme Eastern part of the State and, owing to difficulties of transport, are not at present accessible for practical working; and half-a-million acres, chiefly in the central district, which have been cut over, are closed for the protection of the young timber. Timber cutting is carried on in reserves and ordinary Crown lands in various parts of the State.

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

There is a forest nursery with provision for an annual output of from four to five million tree plants at Creswick; the old nursery at Macedon is still in use, and there is also a large nursery at Broadford. The plantations at Creswick, Lara, and Mt. Alexander are being gradually extended, and new plantations have been formed in the Wimmera district, in southern Gippsland, at French Island, in coastal areas near Frankston, and at Pt. Campbell, Mt. Macedon, Ovens Valley, Scarsdale, and Ballarat East. In the past much of this work was experimental, but the experience gained in the propagation and growing of Australian hardwoods, as well as exotic conifers, has proved of great benefit to the community. Transplants are sold at low prices to municipalities and other public bodies, also to farmers. These are of special value to farmers, as

by planting trees around their homesteads their homes are protected from wind and weather, and shelter and shade are afforded to live stock, with the result that they have healthier flocks and herds, and their returns are increased. In addition to the three nurseries, there are 23 plantations having a total area of 21,940 acres.

The persons employed in connexion with the State forests and nurseries comprise administrative staff, 32; and protective and general staff, 100. The revenue from licences and royalties in 1920 amounted to £95,517. The expenditure was £71,386, of which sum about 50 per cent. was devoted to the improvement of the natural forests and the extension of plantations.

It is estimated that the quantity of timber produced in the rough in 1920 was 84,846,311 super. feet. In addition, 486,371 tons measurement of fuel timber were produced.

The State has rendered substantial assistance to the various branches of the agricultural and pastoral industries during past years. The appended table summarizes for the last five years the items of State expenditure from consolidated revenue in this direction, and shows the amount of revenue 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., 1915-16 to 1919-20.

	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£
<i>Expenditure.</i>					
Department of Agriculture ..	23,622	25,102	24,726	25,365	28,278
Grants to Agricultural and Horticultural Societies, &c. ..	1,163	826	675	675	675
Development of Export Trade	33,622	33,409	39,959	49,550	93,971
Viticultural Education and Inspection of Vineyards ..	3,479	3,996	4,988	4,600	5,000
Maffra Beet Sugar Factory ..	18,693	42,414	45,042	38,870	46,805
Fruit Cool Stores ..	3,342	7,817	1,756	..	..
Technical Agricultural Education, &c. ..	19,479	21,585	23,008	23,138	23,095
Publishing Agricultural Reports	2,290	2,700	2,700	200	250
Rabbit and Vermin Extermination ..	24,257	24,388	30,847	39,460	36,672
Stock and Dairy Supervision	20,953	21,190	22,038	23,327	28,396
Scab Prevention and Stock Diseases ..					
Labour Colonies ..	500	375	375	375	..
State Forests and Nurseries ..	54,018	67,411	60,193	64,192	86,142
Miscellaneous ..	3,229	2,029	2,079	8,451	3,172
Total ..	208,647	253,242	258,386	278,203	352,456
<i>Revenue.</i>					
Department of Agriculture ..	36,252	54,210	61,063	91,430	181,753
State Forests ..	53,430	55,192	61,945	67,181	96,609

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 1919-20 was £5,204,308 on account of closer settlement (including £5,202,396 under the Discharged Soldiers Settlement Act), and £20,985 on account of wire netting.

**Special Article
on Agriculture
and Live
Stock.**

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 33 per cent. in 1920-21, as against slightly less than 5 per cent. in 1891-2. The area under cultivation in the Mallee last season was 1,858,897 acres.

The area cultivated in the State in 1920-21 was 6,425,250 acres as against an annual average of 6,090,565 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 £4,075,507 in 1920-21, while the value of oversea exports of meats increased from £94,761 to £1,247,628 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 66 years :—

ACREAGE CULTIVATED ANNUALLY 1855 to 1921.

Period ended March.	Crop, Annual Average.	Fallow, Annual Average.	Total Cultivation, Annual Average.
	Acres.	Acres.	Acres.
1855-60	233,245	3,444	236,689
1860-65	418,108	20,848	438,956
1865-70	548,952	40,693	589,645
1870-75	699,802	73,855	773,657
1875-80	982,421	103,958	1,086,379
1880-85	1,631,420	171,114	1,802,534
1885-90	1,986,028	312,976	2,299,004
1890-95	2,232,625	415,588	2,648,213
1895-1900	2,838,381	395,734	3,234,115
1900-05	3,207,447	652,661	3,860,108
1905-10	3,375,273	1,029,071	4,404,344
1910-15	4,137,149	1,523,225	5,660,374
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

Areas under principal crops.

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

ANNUAL ACREAGE OF FIVE PRINCIPAL CROPS, 1855 To 1921.

Period ended March.	Average Annual Area of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Acres.	Acres.	Acres.	Acres.	Acres.
1855-60	79,079	50,148	3,723	21,129	70,489
1860-65	158,923	116,444	5,963	27,118	89,746
1865-70	230,505	123,435	16,024	35,460	110,293
1870-75	325,650	135,334	22,501	38,028	124,493
1875-80	537,238	129,317	28,354	38,517	170,777
1880-85	1,014,824	165,369	54,022	39,661	282,774
1885-90	1,140,327	206,962	65,267	46,210	434,175
1890-95	1,332,675	214,840	63,354	49,808	440,000
1895-1900	1,794,131	301,317	61,090	45,669	495,337
1900-05	2,002,429	390,597	44,568	44,817	585,608
1905-10	1,965,320	379,078	56,016	52,897	743,167
1910-15	2,415,353	402,207	64,740	59,648	954,008
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

**Production of
Principal
Crops.**

The annual production of the five principal crops for quinquennial periods from 1855 to 1915 and for each of the last six seasons was as follows:—

ANNUAL PRODUCTION OF PRINCIPAL CROPS, 1855 TO 1921.

Period ended March.	Average Annual Production of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	Bushels.	Bushels.	Bushels.	Tons.	Tons.
1855-60 ..	1,734,895	1,444,018	97,042	61,048	110,220
1860-65 ..	2,662,854	2,693,278	110,108	64,399	113,392
1865-70 ..	4,298,676	2,902,655	352,265	99,490	149,110
1870-75 ..	4,472,952	2,370,839	428,410	124,110	158,594
1875-80 ..	6,547,299	2,688,761	618,456	128,156	219,352
1880-85 ..	10,639,318	3,906,176	981,421	143,073	334,190
1885-90 ..	10,948,554	4,391,916	1,209,948	164,068	504,758
1890-95 ..	13,589,257	4,906,870	1,164,066	177,743	589,427
1895-1900 ..	11,631,934	5,229,188	973,661	133,122	563,809
1900-05 ..	16,432,357	8,069,719	921,499	135,593	782,155
1905-10 ..	22,052,448	8,063,570	1,182,288	149,022	1,006,061
1910-15 ..	23,761,038	6,621,366	1,304,597	167,869	1,163,392
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

Principal crops
in Districts.

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

PERCENTAGE OF TOTAL AREA UNDER EACH PRINCIPAL CROP IN EACH DISTRICT, 1920-21.

District.	Percentage in each District of Area under—					
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.
Central	57	6.01	32.28	46.57	18.74	34.22
North-Central	63	3.11	3.85	17.05	5.22	2.86
Western	2.50	13.11	15.91	16.47	12.19	6.78
Wimmera	26.89	24.69	11.20	.27	17.49	2.43
Mallee	41.89	21.24	8.90	..	16.09	9.47
Northern	25.49	27.52	15.40	.15	20.65	16.63
North-Eastern	1.78	3.09	.74	2.17	4.67	7.44
Gippsland .. ..	.25	1.23	11.72	17.32	4.95	20.17

NOTE.—For counties contained in each District, see table on page 497.

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

RELATIVE AREAS DEVOTED TO DIFFERENT CROPS IN EACH DISTRICT, 1920-21.

District.	Percentage of Total Area of all Crops under—					
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.
Central	3.00	6.09	6.92	6.66	57.03	20.30
North-Central	11.98	11.54	3.03	8.95	58.29	6.21
Western	17.84	18.13	4.66	3.22	50.66	5.49
Wimmera	63.18	11.21	1.08	.02	23.86	.65
Mallee	73.78	7.23	.64	..	16.46	1.89
Northern	56.26	11.73	1.39	.01	26.46	4.15
North-Eastern	29.53	9.92	.51	.99	45.04	14.01
Gippsland	3.83	3.60	7.26	7.16	43.56	34.59
Total for Victoria	51.15	9.88	2.09	1.39	29.70	5.79

NOTE.—For counties contained in each District, see table on page 497.

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, 1911-12 TO 1920-21.

Year ended March.			Wheat.	Oats.	Barley.	Potatoes.	Hay.
			Area per Head of Population.				
			Acres.	Acres.	Acres.	Acres.	Acres.
1912	..	..	1·62	·23	·04	·04	·64
1913	..	..	1·54	·32	·05	·03	·89
1914	..	..	1·84	·32	·06	·05	·70
1915	..	..	2·01	·31	·04	·05	·63
1916	..	..	2·58	·25	·04	·04	·93
1917	..	..	2·22	·31	·07	·05	·64
1918	..	..	1·91	·21	·06	·05	·53
1919	..	..	1·56	·24	·07	·04	·69
1920	..	..	1·29	·38	·06	·04	·75
1921	..	..	1·52	·29	·06	·04	·88
			Produce per Head of Population.				
			Bushels.	Bushels.	Bushels.	Tons.	Tons.
1912	..	..	15·62	3·43	·77	·09	·77
1913	..	..	19·36	6·15	1·29	·14	1·16
1914	..	..	23·64	6·38	1·30	·13	·97
1915	..	..	2·77	1·13	·42	·13	·40
1916	..	..	41·04	6·54	1·22	·12	1·64
1917	..	..	36·30	5·88	1·28	·13	·87
1918	..	..	26·85	4·37	1·40	·13	·68
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

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

Values of
five principal
crops.

acre on the average of the five years 1910-14, and for each of the years 1915 to 1920 :—

VALUES OF FIVE PRINCIPAL CROPS.

Year.	Annual Value of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	£	£	£	£	£
1911-12	3,547,266	663,916	261,443	614,540	3,200,109
1912-13	4,343,202	953,750	332,430	678,448	4,010,979
1913-14	5,352,141	777,903	236,804	573,227	2,565,740
1914-15	1,391,647	397,078	161,899	800,269	4,181,827
1915-16	10,972,820	942,607	294,597	1,017,563	4,098,664
1916-17	10,232,488	828,929	299,481	550,086	2,033,990
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
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Value per acre 1910-15, average ..	1 13 4	1 16 10	3 15 5	10 14 8	3 8 10
Value per acre 1915-16	2 19 7	2 13 3	4 16 0	17 17 7	3 1 7
„ „ 1916-17	3 5 6	1 17 6	3 4 5	7 9 5	2 5 4
„ „ 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

The value of the five principal crops was £21,896,279 in 1920-21, as against £17,686,258 in the previous year, £13,333,426 in 1918-19, £12,207,625 in 1917-18, £13,944,974 in 1916-17, £17,326,251 in 1915-16, and £8,936,686 on the average of the five years 1910 to 1915.

On the experience of the past five seasons the area under wheat for grain represented 57 per cent. of the total under all crops. The acreage, the total production, and the yield per

Wheat production.

acre are given in the next table for quinquennial periods from 1860 to 1910, and for each of the past eleven seasons:—

WHEAT PRODUCTION, 1860 to 1921.

Season ended March.	Wheat.		
	Acres, Annual Average.	Total Production, Annual Average.	Yield per Acre.
		Bushels.	Bushels.
1860-65	158,923	2,662,854	16·76
1865-70	230,505	4,298,676	18·65
1870-75	325,650	4,472,952	13·74
1875-80	537,238	6,547,299	12·19
1880-85	1,014,824	10,639,318	10·48
1885-90	1,140,327	10,948,554	9·60
1890-95	1,332,675	13,589,257	10·20
1895-1900	1,794,131	11,631,934	6·48
1900-1905	2,002,429	16,432,357	8·21
1905-1910	1,965,320	22,052,448	11·22
1911	2,398,089	34,813,019	14·52
1912	2,164,066	20,891,877	9·65
1913	2,085,216	26,223,104	12·58
1914	2,565,861	32,936,245	12·84
1915	2,863,535	3,940,947	1·38
1916	3,679,971	58,521,706	15·90
1917	3,125,692	51,162,438	16·37
1918	2,690,216	37,737,552	14·03
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

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 eleven seasons was 12·35 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, 165,502 acres of wheat were cut for hay last season, so that the total area sown under wheat in 1920-21 was 2,461,367 acres.

The production of wheat in the other Australian States in 1920-21 was as follows:—New South Wales, 53,715,840 bushels, South Australia, 34,236,914 bushels, Western Australia, 12,248,080 bushels, Queensland, 4,174,155 bushels, and Tasmania 565,874 bushels. The total production for the Commonwealth was 144,409,488 bushels.

Wheat growing in counties.

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.		
	1919.	1920.	1921.	1919.	1920.	1921.	1919.	1920.	1921.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bush.	Bush.	Bush.
Central—									
Bourke ..	2,198	1,351	3,881	28,177	16,427	82,061	12·82	12·16	21·14
Grant ..	5,314	2,880	8,723	73,918	40,266	162,414	13·01	13·98	18·61
Mornington ..	225	99	320	1,505	1,635	4,500	6·69	16·52	14·06
Evelyn ..	39	53	178	451	721	3,033	11·56	13·60	17·04
North-Central—									
Anglesey ..	542	544	908	4,317	3,122	14,656	7·96	5·74	16·14
Dalhousie ..	731	567	2,234	7,007	8,814	36,487	9·59	15·54	15·98
Talbot ..	7,594	5,478	11,123	61,594	69,561	219,375	8·11	12·70	19·72
Western—									
Grenville ..	11,893	4,890	10,218	140,242	78,964	189,796	11·79	16·15	18·57
Polwarth ..	59	25	92	669	284	1,409	11·34	11·36	15·32
Heytesbury ..	30	1	8	787	19	206	26·23	19·00	25·75
Hampden ..	13,053	6,843	8,175	143,564	114,934	182,773	11·00	16·80	22·36
Ripon ..	38,864	21,238	30,883	391,114	346,144	671,503	11·06	16·26	21·74
Villiers ..	829	543	1,709	6,120	7,062	30,894	7·38	13·01	18·08
Normanby ..	498	369	1,008	7,604	5,976	18,741	15·27	16·20	18·59
Dundas ..	5,192	3,217	4,823	50,245	40,805	54,413	9·68	12·68	11·28
Follett ..	113	63	309	2,171	810	5,269	19·21	12·86	17·05
Wimmera—									
Lowan ..	146,393	112,230	144,897	2,310,696	1,511,232	3,034,396	15·78	13·47	20·94
Borong ..	338,320	269,422	358,865	6,766,642	4,244,811	8,537,731	20·01	15·76	23·79
Kara Kara ..	123,996	94,633	113,733	1,784,033	1,334,220	2,417,404	14·39	14·10	21·25
Mallee—									
Millewa ..	2,609	1,628	2,200	24,258	5,279	30,851	9·30	3·24	14·02
Weeah ..	192,324	197,710	201,682	1,227,607	678,649	2,880,518	6·38	3·43	14·28
Karkaroo ..	457,884	454,691	463,758	3,274,192	1,496,070	6,223,977	7·15	3·29	13·42
Tatchera ..	289,295	265,292	294,080	2,729,812	1,220,355	4,013,077	9·44	4·60	13·65
Northern—									
Gunbower ..	38,432	30,670	28,383	336,026	274,866	433,345	8·74	8·96	15·27
Gladstone ..	108,096	80,233	96,200	1,245,275	969,476	1,800,765	11·52	12·08	18·72
Bendigo ..	120,159	94,884	105,988	1,360,945	882,069	1,543,657	11·33	9·30	14·56
Rodney ..	85,750	66,844	86,521	925,769	458,202	1,366,042	10·80	6·85	15·79
Moira ..	198,024	181,532	268,278	2,118,078	870,342	4,683,835	10·70	4·79	17·46
North-Eastern—									
Delatite ..	2,805	2,697	8,007	22,426	32,364	145,092	8·00	12·19	18·12
Bogong ..	19,956	14,665	32,471	147,336	91,558	556,550	7·38	6·24	17·14
Benambra ..	186	266	301	1,972	4,451	5,933	10·60	16·73	19·71
Wonnangatta ..	15	..	..	280	..	..	18·67	..	..
Gippsland									
Croajingolong ..	2	12	63	19	293	1,297	9·50	24·42	20·59
Tambo ..	95	118	183	634	2,677	2,606	6·67	22·69	15·99
Dargo ..	124	25	121	771	406	1,976	6·22	16·24	16·33
Tanjil ..	2,257	2,311	4,797	37,059	42,642	99,378	16·42	18·45	20·72
Buln Buln ..	594	145	660	6,506	2,344	12,665	10·95	16·17	19·19
Total ..	2,214,490	1,918,269	2,295,865	25,239,871	14,858,380	39,468,625	11·40	7·75	17·19

In all of the principal wheat growing counties, except Gunbower, the area under wheat was larger in 1920-21 than in the previous season.

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, 1911-12 TO 1920-21.

District and County.	Average Yield of Wheat per Acre (in Bushels) during Year ended March.									
	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.
Western District—										
Ripon	8.14	19.96	15.50	5.03	21.58	13.33	13.27	10.06	16.26	21.74
Wimmera District—										
Lowan	9.93	13.69	16.24	1.84	16.78	17.93	16.52	15.78	13.47	20.94
Borong	11.92	14.81	18.16	.95	19.27	22.49	22.62	20.01	15.76	23.79
Kara Kara	12.11	14.70	17.23	1.09	19.36	19.66	17.68	14.39	14.10	21.25
Mallee District—										
Weeah	4.95	10.03	4.89	.18	12.26	14.56	10.21	6.38	3.43	14.28
Karkaroc	5.84	7.58	5.44	.35	10.62	14.78	10.94	7.15	3.29	13.42
Tatchera	6.48	7.03	8.66	.37	10.09	15.80	12.30	9.44	4.60	13.65
Northern District—										
Gunbower	9.91	10.54	12.26	.23	15.33	15.89	14.23	8.74	8.96	15.27
Gladstone	11.63	13.00	17.38	1.52	17.94	19.10	14.17	11.52	12.08	18.72
Bendigo	12.22	14.37	15.60	.72	19.18	17.11	13.85	11.33	9.30	14.56
Rodney	11.50	14.60	14.75	1.05	20.15	14.69	12.67	10.80	6.85	15.79
Moira	10.83	14.52	16.14	1.74	17.88	14.44	11.38	10.70	4.79	17.46

The figures show that in all of the principal wheat growing counties the yield per acre in 1920-21 was higher than in any of the previous three seasons.

The weight of an imperial bushel of wheat is 60 lbs., but the actual weight of a bushel of Victorian wheat of the fair average quality standard annually fixed by the Chamber of Commerce was nearly 62 lbs. on the average of the past ten years. The following statement shows the variation in the f.a.q. standard weight of a bushel of Victorian wheat for each season since 1910-11 :—

F.A.Q. WHEAT STANDARD, 1912 TO 1921.

Season ended March.			Weight of Bushel (f.a.q.).	Season ended March.			Weight of Bushel (f.a.q.).
			lbs.				lbs.
1912	..	..	61½	1917	..	..	60¼
1913	..	..	63	1918	..	..	60
1914	..	..	62½	1919	..	..	62½
1915	..	..	62	1920	..	..	62
1916	..	..	61	1921	..	..	60½

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, 1921, and at the same date in each of the previous nine years, were as follows:—

WHEAT AND FLOUR ON HAND, 30TH JUNE, 1912 TO 1921.

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

Wheat
marketing
scheme.

This scheme was originated in the year 1915, and the *Year-Book* for 1919-20 contains on page 490 a statement of its main features. The compulsory pool which was established in connexion with it is now being wound up. The position of the pool as regards Victoria for the five seasons 1915-16 to 1919-20 inclusive, and for the period 9th November, 1920, to 30th June, 1921, was as follows:—

Period.					Total Number of Bushels Received.	Amount Paid to Growers (Cash at Station).	Total Receipts for Sales (Delivered from all Pools).
						£	£
1915-16	..	..	..	..	59,926,000	12,343,000	..
1916-17	..	..	..	..	50,407,000	9,256,000	..
1917-18	..	..	..	..	36,369,000	8,387,000	..
1918-19	..	..	..	..	23,337,000	5,558,000	..
1919-20	..	..	..	..	12,368,000	4,427,000	..
1920-21 (9th June)	..	..	..	..	38,444,000	9,498,000	60,751,000

At 30th June, 1921, there was a bank credit balance of £32,000. Up to that date advances had been made on account of the 1915-16 and subsequent harvests as follows:—1915-16, 4s. 9d. per bushel, less freight and handling charges; 1916-17, 4s. per bushel, less freight; 1917-18,

5s. per bushel, less freight; 1918-19, 5s. 2d. per bushel, less freight; 1919-20, 7s. 6d. per bushel, less freight; and 1920-21 (to 30th June, 1921), 5s. per bushel.

The Government has now provided for the creation of a voluntary pool to take the place of the compulsory one. Its main feature is a Government guarantee of 4s. per bushel, less freight and handling charges, the first payment being 3s. 4d. per bushel to farmers on delivery of wheat at railway stations.

Oats. In 1920-21 the area harvested for oats in Victoria was 443,636 acres, from which a yield of 10,907,191 bushels was obtained, giving an average of 24·59 bushels to the acre. The following statement shows the harvest results for this crop for each of the past eleven seasons and for five-year periods prior thereto back to 1865:—

OATS GROWN, 1865 TO 1921.

Period ended March.	Area under Crop (Annual Average).		Produce (Annual Average).		Average per Acre.
	Acres.	Bushels.	Bushels.	Bushels.	
1865-70	123,435	2,902,655		23·52	
1870-75	135,334	2,370,839		17·52	
1875-80	129,317	2,688,761		20·79	
1880-85	165,369	3,906,176		23·62	
1885-90	206,962	4,391,916		21·22	
1890-95	214,840	4,906,870		22·84	
1895-1900	301,317	5,229,188		17·35	
1900-05	380,597	8,069,719		21·20	
1905-10	379,078	8,063,570		21·27	
1911	392,681	9,699,127		24·70	
1912	302,238	4,585,326		15·17	
1913	439,242	8,323,639		18·95	
1914	442,060	8,890,321		20·11	
1915	434,815	1,608,419		3·70	
1916	353,932	9,328,894		26·36	
1917	441,598	8,289,289		18·77	
1918	293,214	6,141,287		20·94	
1919	342,867	5,274,984		15·38	
1920	559,547	6,603,067		11·80	
1921	443,636	10,907,191		24·59	

In addition to the area for grain shown for last season there were 1,140,578 acres of oats cut for hay, so that the total area sown with oats in 1920-21 was 1,584,214 acres. During 1920-21 there were exported from Victoria to oversea countries 340,657 bushels of oats and 121,994 lbs. of oatmeal.

Barley. The area under barley in 1920-21 was 93,954 acres, of which 50,297 were under malting, and 43,657 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, 1911-12 TO 1920-21.

Year ended March.	Area under Crop.		Produce.		Average per Acre.		
	Malting.	Other.	Malting.	Other.	Malting.	Other.	Total.
	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1912 ..	36,748	16,793	725,803	298,781	19.75	17.79	19.14
1913 ..	52,311	19,320	1,269,634	474,893	24.27	24.58	24.35
1914 ..	44,584	38,767	971,334	841,556	21.79	21.71	21.75
1915 ..	31,268	31,224	368,647	231,952	11.79	7.43	9.61
1916 ..	29,473	31,927	868,879	865,632	29.48	27.11	28.25
1917 ..	43,131	49,884	806,280	993,504	18.69	19.91	19.35
1918 ..	41,065	43,866	980,219	990,431	23.87	22.58	23.20
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

During 1920-21, 2,024,886 bushels of barley were used locally in the production of 2,016,922 bushels of malt.

Potatoes. The area planted with potatoes in 1920-21 was 62,687 acres, and the production was 171,628 tons, which represented a yield of 2.74 tons per acre, as compared with 2.71 tons in the previous season and 2.66 tons in 1918-19. The following table shows the potato returns for the past eleven years and for earlier years in five-year periods back to 1890 :—

POTATO PRODUCTION, 1890 TO 1921.

Period ended June.			Area under Crop (Annual Average).	Produce (Annual Average).	Average per Acre.
			Acres.	Tons.	Tons.
1890-95	..	..	49,808	177,743	3.57
1895-1900	..	..	45,669	133,122	2.91
1900-05	..	..	44,817	135,593	3.03
1905-10	..	..	52,897	149,022	2.82
1911	..	..	62,904	163,312	2.60
1912	..	..	47,692	119,092	2.50
1913	..	..	47,575	191,112	4.02
1914	..	..	74,574	176,602	2.37
1915	..	..	65,495	189,225	2.89
1916	..	..	56,910	173,821	3.05
1917	..	..	73,618	187,992	2.55
1918	..	..	66,966	182,195	2.72
1919	..	..	51,620	137,533	2.66
1920	..	..	53,918	145,888	2.71
1921	..	..	62,687	171,628	2.74

The estimated value of the potatoes produced last season was £586,458, as against £1,328,640 for the preceding year, and £1,079,496 for the year 1918-19.

Hay. In 1920 the production of hay amounted to 1,984,854 tons, as against 1,242,489 tons in the previous year and 1,113,861 tons in 1918. The quantity of straw returned for the season 1920-21 was 54,556 tons as against 45,929 tons for the previous year. The hay returns for the five-year periods 1890 to 1909 and for each of the past eleven seasons are shown in the following table :—

HAY PRODUCTION, 1890 to 1920.

Period.				Area cut for Hay (Annual Average).	Produce (Annual Average).	Average per Acre.
				Acres.	Tons.	Tons.
1890-94	..	..	..	440,000	589,427	1·34
1895-99	..	..	..	495,337	563,809	1·14
1900-04	..	..	..	585,608	782,155	1·34
1905-09	..	..	..	743,167	1,006,061	1·35
1910	..	..	..	832,669	1,292,410	1·55
1911	..	..	..	860,205	1,032,288	1·20
1912	..	..	..	1,203,728	1,572,933	1·31
1913	..	..	..	977,684	1,350,374	1·38
1914	..	..	..	895,755	568,956	·64
1915	..	..	..	1,330,455	2,342,094	1·76
1916	..	..	..	897,186	1,232,721	1·37
1917	..	..	..	748,808	949,545	1·27
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

The estimated value of hay was £5,259,863 for 1920, as compared with £8,304,475 for 1919, and £4,622,523 for 1918. Of the total hay produced in 1920, 1,714,651 tons were oaten, 225,801 tons were wheaten, and 44,402 tons were made from lucerne and other crops, and the yields per acre were 1·50, 1·36, and 1·63 tons respectively.

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
agricultural
produce.

PRICES OF PRODUCE, 1912 TO 1921.

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.
1912 ..	3 4 $\frac{3}{4}$	2 10 $\frac{3}{4}$	5 7	3 11 $\frac{1}{4}$	62 0	116 0	101 0
1913 ..	3 3 $\frac{3}{4}$	2 3 $\frac{3}{4}$	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 $\frac{1}{2}$	6 7 $\frac{1}{2}$	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

The area under other than principal crops and the production since March, 1918, are shown in the subjoined table:—

OTHER THAN PRINCIPAL CROPS, 1918-19 TO 1920-21.

Crop.	1918-19.		1919-20.		1920-21.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize ..	22,559	711,679	23,474	878,922	24,149	1,065,880
Rye ..	982	7,428	784	8,547	1,717	21,359
Peas ..	11,021	142,835	8,253	120,636	6,654	125,547
Mangel-wurzel ..	581	9,818	547	6,388	524	6,742
Beet, Carrots, Parsnips, and Turnips ..	407	2,412	460	2,121	410	2,289
Onions ..	5,512	24,211	6,863	27,032	8,000	42,985
Green Forage ..	73,641	..	89,802	..	79,524	..
Grass and Clover Seeds ..	2,152	15,443	1,235	8,625	1,872	11,555
Hops ..	71	522	72	691	93	1,199
Tobacco ..	167	1,825	406	2,669	95	†
Vines—Grapes	26,072	1,019,379	27,441	1,324,437	29,255	1,072,767
Flax ..	1,420	3,800 fibre 5,200 seed	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
Gardens and Or- chards ..	96,724	..	98,969	..	87,768	..
Minor Crops ..	7,936*	..	6,843*	..	6,709*	..
Land in Fallow	1,548,121	..	1,357,536	..	1,935,747	..
Artificial Grasses	1,269,493	..	1,062,244	..	1,051,299	..

* For details see page 513.

† Not available.

Maize. The area under maize for grain in 1920-21 was 24,149 acres, and the production was 1,065,880 bushels, which represented a yield of 44·14 bushels per acre, as compared with 37·44 bushels in the preceding season and 31·55 bushels in 1918-19. Of the total production for last season 83 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 eleven seasons and for five-year periods prior thereto back to 1890 :—

MAIZE PRODUCTION, 1890 TO 1921.

Period ended June.	Area under Maize for Grain (Annual Average).	Total Production (Annual Average).	Produce per Acre.
	Acres.	Bushels.	Bushels.
1890-5	7,483	376,844	50·36
1895-1900	9,894	523,970	53·46
1900-5	10,704	699,630	65·36
1905-10	13,461	732,686	54·43
1911	20,151	982,103	48·74
1912	18,223	792,660	43·50
1913	19,986	715,299	35·79
1914	17,962	800,529	44·57
1915	19,433	1,018,419	52·41
1916	22,258	999,886	44·92
1917	23,076	1,172,330	50·80
1918	20,987	1,152,787	54·93
1919	22,559	711,679	31·55
1920	23,474	878,922	37·44
1921	24,149	1,065,880	44·14

On the average of the past five seasons the yield per acre was 43·6 bushels, as against 65·4 in 1900-5, and 53·5 in 1895-1900. The relatively light yield per acre for the latest five-year period was probably due to the cultivation of new areas which are less fertile than the rich river flats upon which this cereal was grown exclusively in earlier periods.

Rye. The area under rye in 1920-21 was 1,717 acres, from which 21,359 bushels of grain were obtained. The production was 8,547 bushels in the previous season, and 7,428 bushels in 1918-19. Rye was grown principally in the counties of Delatite, Grant, Normanby, and Talbot last season. The area under this crop in the four counties mentioned was about 66 per cent. of the total for the whole State.

Peas. The area under peas in 1920-21 was 6,654 acres, and the return 125,547 bushels, the former being 1,599 acres less and the latter 4,911 bushels more than in the previous year. Last season peas were grown to some extent in all districts. The counties from which the largest returns were obtained were Grant 39,710 bushels, Bourke 22,625 bushels, Buln Buln 13,676 bushels, Mornington

12,552 bushels, and Talbot 5,210 bushels. The production of peas in the five counties mentioned was equal to 75 per cent. of the total for the whole State.

In 1920-21 there were 524 acres under mangel-wurzel, as against 547 in the previous season, 581 in 1918-19, 690 in 1917-18, 860 in 1916-17, 1,091 in 1915-16, and 893 in 1914-15. The production last year was 6,742 tons, as compared with an average of 9,481 tons for the preceding five-year period. Mangolds are grown principally in the counties of Villiers, Tanjil, Heytesbury, Grant, and Buln Buln. The production for last season in the counties mentioned represented 86 per cent. of the total for the State.

The cultivation of beet, carrots, parsnips, and turnips, exclusive of those grown in market gardens, showed a decrease in area as compared with the previous season. In 1920-21 the extent of land sown was 410 acres, as against 460 in the preceding year, 407 in 1918-19, 500 in 1917-18, 524 in 1916-17, and 758 in 1915-16. The produce for last year was 2,289 tons, as compared with 2,121 tons in the previous season, and 2,412 tons in 1918-19.

Onions are grown in nearly every county south of the Dividing Range. The returns for last season show that in Grenville the yield was 8,491 tons from 1,678 acres; in Buln Buln, 7,851 tons from 1,772 acres; in Polwarth, 6,618 tons from 1,015 acres; in Villiers, 5,994 tons from 870 acres; in Bourke, 4,921 tons from 871 acres; in Grant, 4,609 tons from 873 acres; and, in Mornington, 3,985 tons from 815 acres. The following is a statement showing the area and yield for the last ten years :—

ONION CULTIVATION, 1911-12 to 1920-21.

Year.	Area.	Produce.	Year.	Area.	Produce.
	Acres.	Tons.		Acres.	Tons.
1911-12 ..	3,652	20,911	1916-17 ..	6,324	28,163
1912-13 ..	4,977	28,641	1917-18 ..	5,134	21,745
1913-14 ..	6,121	24,755	1918-19 ..	5,512	24,211
1914-15 ..	8,937	31,528	1919-20 ..	6,863	27,032
1915-16 ..	9,294	37,587	1920-21 ..	8,000	42,985

The value of onions grown was £131,104 in 1920-21, as compared with £274,375 in the previous season and £236,451 in 1918-19.

Green forage. The area devoted to green forage in 1920-21 was 79,524 acres, as compared with 89,802 in the previous season, 73,641 in 1918-19, 55,903 in 1917-18, 49,667 in 1916-17, 60,426 in 1915-16, and 139,654 in 1914-15.

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 to 1921.

Year ended March.	Number of Farms on which made.	Number of Silos (Pits and Stacks).	Weight of Materials used.
1912	371	450	Tons. 20,888
1913	287	385	17,877
1914	270	362	19,505
1915	161	221	9,055
1916	269	353	16,356
1917	179	223	10,974
1918	117	158	9,852
1919	95	157	8,249
1920	74	117	6,072
1921	99	175	9,702

Grass and clover seed. The area harvested for grass and clover seed last season was 1,872 acres, as compared with 1,235 in the previous year, 2,152 in 1918-19, 2,312 in 1917-18, 1,769 in 1916-17, 2,435 in 1915-16, 149 in 1914-15, and 1,452 in 1913-14. The production in 1920-21 was 11,555 bushels, as against 8,625 in the previous year, 15,443 in 1918-19, 22,059 in 1917-18, 13,174 in 1916-17, 24,087 in 1915-16, 1,100 in 1914-15, and 16,349 in 1913-14.

Hops. The hop-growing industry attained its maximum development in 1883-4, when 1,758 acres yielded 15,717 cwt. In 1920-21 the return from 93 acres was 1,199 cwt., the area cultivated being the fifth smallest since 1871-2. Delatite, Bogong, Polwarth, Dargo, and Buln Buln were the only counties in which hops were grown last season.

Flax. The area sown to flax in 1920-21 was 1,350 acres, as compared with 1,611 acres in the previous season, and 1,420 acres in 1918-19. The whole of the flax grown last season was purchased by the Commonwealth Flax Committee under a Government guarantee of £6 per ton for unthreshed flax of standard quality delivered at the nearest mill. The value of the fibre, linseed, and tow obtained

from the 1919-20 flax crop is estimated at £16,708. Particulars of the crop for the last ten years are given in the following statement :—

FLAX, 1911-12 to 1920-21.

Year.	No. of Growers.	Area under Crop.		Seed Produced.	Fibre Produced.	Straw awaiting Treatment.
		Acres.	Cwt.	Cwt.	Tons.	
1911-12	29	443	1,958	1,327	75	
1912-13	55	648	4,536	1,189	615	
1913-14	62	1,046	3,768	1,096	652	
1914-15	49	671	1,827	1,318	25	
1915-16	22	361	1,370	1,987	..	
1916-17	13	443	1,481	1,371	..	
1917-18 .. ..	..	419	1,337	925	..
1918-19 .. ..	..	1,420	5,200	3,800*	..
1919-20	112	1,611	4,970	1,053*	1,653	
1920-21	87	1,350	3,658	938*	662	

NOTE.—In addition to the above, 90 acres of New Zealand flax were harvested for 80 tons of dressed fibre and 1 cwt. of seed.

* Including 2,000 cwt. of tow in 1918-19, 394 cwt. of tow in 1919-20, and 99 cwt. of tow in 1920-21.

In 1920-21 imports into Victoria from countries outside Australia included linseed to the value of £511, linseed oil worth £46,328, and fibre worth £332,004.

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 95 acres, of which 74 were in Delatite, and 14 in Bogong. Particulars relating to the cultivation of tobacco for the last ten years are as follows :—

CULTIVATION OF TOBACCO, 1911-12 to 1920-21.

Year.	Number of Growers.	Area.		Produce.
		Acres.	Cwt. (dry).	
1911-12	58	356	3,686	
1912-13	54	138	661	
1913-14	67	284	2,037	
1914-15	46	196	1,192	
1915-16	39	160	596	
1916-17	26	73	410	
1917-18	†	82	526	
1918-19	†	167	1,825	
1919-20	†	406	2,669	
1920-21	†	95	†	

† Not available.

Vines, wine, raisins, &c. During the period 1904-1915 the area under vines decreased by 6,712 acres, or by nearly 24 per cent., and the number of growers decreased by 521, or by 23 per cent. Since 1915 there has been a fairly large increase in the area and the number of growers. Vineyards are distributed fairly well over the State, and there are certain districts where the principal industries are connected with vine-growing. The Shire of Mildura produced last season 789,478 cwt. of grapes; Rutherglen, 119,208 cwt.; Swan Hill, 52,452 cwt.; Rodney, 9,334 cwt.; Stawell, 15,427 cwt.; Ararat, 16,229 cwt.; Chiltern, 14,249 cwt.; Benalla, 10,298 cwt.; and Shepparton, 3,553 cwt. At Mildura the crop is principally dried for raisins and currants. The results of ten years' operations are given below:—

VINE PRODUCTION, 1912 TO 1921.

Year ended June.	Number of Growers.	Area.	Produce.			
			Grapes gathered.	Wine made.	Raisins made.	Currants made.
			Acres.	Cwt.	Gallons.	Cwt.	Cwt.
1912 ..	1,650	24,193	683,250	983,423	102,924	46,789
1913 ..	1,808	24,579	733,579	1,206,111	109,677	48,337
1914 ..	1,776	22,435	836,493	1,121,491	120,303	62,098
1915 ..	1,739	21,801	620,876	605,633	111,006	28,527
1916 ..	1,700	22,353	1,084,766	1,380,367	180,104	70,556
1917 ..	1,751	23,264	1,013,197	1,302,660	142,970	66,449
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

Of the total quantity of grapes gathered in 1921, 355,698 cwt. was used for making wine, 667,633 cwt. for raisins and currants, and 49,436 cwt. for table consumption and export. Of the 116,887 cwt. of raisins made, 83,737 cwt. were sultanas, of which all but 9,547 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 97,000 cwt. of the production in 1921 is available for interstate or oversea export. A year's consumption of currants is about 30,000 cwt., which would enable approximately 33,000 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 7,705 in 1920-21, as against 7,719 in the previous season, 7,620 in 1918-19, 7,314 in 1917-18, 7,309 in 1916-17, 7,319 in 1915-16, and 6,811 in 1914-15. The area under orchards in each of those years was 84,718, 83,574, 82,151, 80,508, 79,247, 76,382, and 70,392 acres respectively. The orchards are distributed fairly evenly over the whole State. The

counties having the largest areas last season were as follows:—Evelyn, 14,324 acres; Mornington, 14,300 acres; Bourke, 14,064 acres; Rodney, 9,945 acres; Moira, 6,370 acres; Talbot, 3,691 acres; Bendigo, 3,483 acres; Borung, 2,455 acres; Karkaroc, 2,245 acres; Grant, 1,821 acres; Tatchera, 1,780 acres; Bogong, 1,441 acres; and Buln Buln, 967 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
Total Large Fruits ..	2,785,559	4,172,454	6,958,013	2,421,592	4,802,654	7,224,246
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
Total Nuts ..	20,044	28,333	48,377	17,792	26,381	44,173

The area of orchards growing fruit for sale in 1920-21—84,718 acres—is the largest recorded. Details of the produce from orchards growing fruit for sale in each of the past ten years are as follows:—

ORCHARDS GROWING FRUIT FOR SALE, 1911-12
TO 1920-21.

Year ended March.	Number of Fruit-growers.	Area of Gardens and Orchards.	LARGE FRUITS GATHERED.			
			Apples.	Pears.	Quinces.	Plums.
		Acres.	Bushels.	Bushels.	Bushels.	Bushels.
1912 ..	5,955	55,769	1,330,961	239,431	54,425	151,936
1913 ..	6,285	59,119	2,036,756	669,898	90,119	260,330
1914 ..	6,498	63,058	1,653,035	476,430	67,799	292,389
1915 ..	6,811	70,392	509,697	401,301	32,949	88,698
1916 ..	7,319	76,382	2,953,968	601,357	100,566	337,154
1917 ..	7,309	79,247	617,929	661,962	80,093	258,218
1918 ..	7,314	80,508	1,864,508	414,721	72,436	242,598
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

Large Fruits Gathered—continued.

	Cherries.	Peaches.	Apricots.	Oranges.	Lemons.	Figs.	Others.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1912 ..	96,663	260,258	281,460	48,982	65,833	17,891	10,259
1913 ..	152,257	289,731	138,881	44,039	48,170	25,223	19,496
1914 ..	151,262	361,414	308,307	63,542	57,562	23,764	15,639
1915 ..	48,411	277,435	109,301	83,220	66,704	17,362	16,040
1916 ..	98,382	303,992	256,229	63,434	56,569	21,433	16,546
1917 ..	40,024	787,406	217,424	59,985	53,940	25,063	25,650
1918 ..	69,743	430,770	238,420	75,315	76,296	26,885	30,521
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

ORCHARDS GROWING FRUIT FOR SALE, 1911-12 TO 1920-21—
continued.

Year ended March.	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	6,658	6,103	4,173	1,429	1,333	100,982	26,329	1,473	8,821
1913	5,207	3,839	3,874	876	1,179	90,317	22,127	1,220	8,305
1914	4,580	4,351	4,912	802	1,233	92,621	21,649	2,143	11,361
1915	6,011	2,290	223	183	1,072	70,139	26,026	2,664	9,316
1916	3,534	3,347	5,061	491	2,069	62,148	18,173	660	8,344
1917	4,996	4,960	3,902	273	1,822	53,590	7,895	2,339	11,384
1918	7,539	5,175	5,052	443	2,080	47,900	16,673	1,510	14,788
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

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 1920-21—Melons, 7,421 cwt. ; rhubarb, 12,510

dozen bundles; and tomatoes, 111,334 bushels. There were also 3,050 acres laid down in gardens growing fruit for private use, the value of the produce from which was estimated at about £15,250.

According to prices received by growers the value of **Value of fruit sold.** fruit which reaches market was estimated to be £524,380 in 1910-11, £558,604 in 1911-12, £629,863 in 1912-13, £742,900 in 1913-14, £470,970 in 1914-15, £742,100 in 1915-16, £575,264 in 1916-17, £737,025 in 1917-18, £868,000 in 1918-19, £1,248,500 in 1919-20, and £1,029,741 in 1920-21. This, of course, does not represent the actual value of all the fruit grown, as large quantities are privately consumed in various ways. No very reliable estimate of the value of such fruit can be prepared, but it may be set down at about £40,000.

Market gardens. The area under market gardens for the year 1920-21 was 12,201 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 £427,035. This does not include crops of one acre and over of potatoes, onions, mangel-wurzel, beet, carrots, parsnips, and turnips grown in market gardens, such crops being tabulated under their respective heads in the returns relating to agriculture.

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

DRIED FRUIT, 1911-12 TO 1920-21.

Year ended June.	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Pears.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1912 ..	21,929	72,400	143,112	492,041	31,027	16,502	777,011
1913 ..	48,853	84,053	56,151	61,465	27,274	38,633	316,429
1914 ..	39,899	155,031	118,187	363,356	33,151	7,900	717,524
1915 ..	16,817	28,788	70,897	43,606	31,981	55,581	247,670
1916 ..	290,258	128,520	61,667	69,215	33,939	22,224	605,823
1917 ..	27,109	118,999	357,329	149,940	10,567	108,379	772,323
1918 ..	134,342	221,728	88,241	235,534	47,201	38,257	765,303
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*

* Includes 9,011 lbs. of nectarines.

A striking feature of the returns for the season 1920-21 was the increase in all fruits except figs and pears. In that year about 35 per

cent. of the dried fruit came from Mildura, where, in addition to fruits included above, 11,881,408 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, 1919-20 AND 1920-21.

Crop.	1919-20.		1920-21.	
	Area.	Produce.	Area.	Produce.
	Acres.		Acres.	
Beans	1,402	8,003 bushels	1,001	20,603 bushels
Chicory	295	148 tons (dry)	392	310 tons (dry)
Flowers	185	..	196	..
Garlic	16	560 cwt.	26	1,420 cwt.
Herbs	4	..	16	..
Flax—New Zealand ..	..	..	90	80 tons fibre 1 cwt. seed
Millet—Broom ..	1,787	{ 7,720 cwt. fibre 5,180 cwt. seed }	1,429	{ 8,877 cwt. fibre 6,806 cwt. seed }
" Japanese	63	980 cwt. seed	170	997 cwt. seed
Mustard	40	39 cwt.	33	9 cwt.
Nursery	756	..	893	..
Opium poppies	1	½ lb.	..	..
Pumpkins	1,089	6,125 tons	1,061	6,593 tons
Seeds—Agricultural and Garden	76	..	129	..
Sugar Beet	1,080	13,084 tons beet	1,180	7,147 tons beet
Sunflowers	49	440 cwt.	93	947 cwt.
Total	6,843	..	6,709	..

While the fallowing of land in Victoria commenced in 1858, and increased in popularity in later years, it is only within the past sixteen years that this method of cultivation has become fairly general throughout the State. The area fallowed in 1920-21 was 1,935,747 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 ten years was as follows:—

LAND IN FALLOW.

Year ended March.	Acres.	Year ended March.	Acres.
1901	602,870	1916	1,358,343
1906	1,049,915	1917	1,899,559
1911	1,434,177	1918	1,672,729
1912	1,469,608	1919	1,548,121
1913	1,627,233	1920	1,357,536
1914	1,738,572	1921	1,935,747
1915	1,346,545		

Nearly all of the fallowed area is devoted to wheat production. Of the 1,935,747 acres in fallow last season 666,186 were in the Wimmera, 512,166 in the Northern, and 555,394 in the Mallee District. The total for these three districts represented, therefore, 90 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 36,073, as compared with 21,586 in 1905, and 7,318 in 1898. The following table shows the number of farmers using manure, and the quantity used in 1901 and 1906 and each of the last ten years:—

MANURE USED FOR FERTILIZATION, 1901 TO 1920.

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
1912	29,524	3,029,418	222,253	94,010
1913	30,610	3,401,013	219,423	105,612
1914	31,874	3,728,279	209,534	117,935
1915	33,378	4,336,252	187,602	128,667
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

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 1920, 80 per cent. During 1920-21 the quantity of fertilizers imported into Victoria from oversea countries was 134,382 tons, valued at £397,233. This included 73,114 tons of rock phosphates, of which 35,797 tons, valued at £98,812, were obtained from Ocean Island, and 37,317 tons, valued at £93,087, 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, 1911 to 1920.

Year.	Males.	Females.	Total.
1911	100,689	55,040	155,729
1912	100,665	52,868	153,533
1913	101,353	51,837	153,190
1914	98,354	49,242	147,596
1915	98,617	49,038	147,655
1916	95,535	50,964	146,499
1917	95,890	51,992	147,882
1918	95,584	52,548	148,132
1919	98,308	54,318	152,626
1920	100,236	51,014	151,250

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.

In the next return will be found particulars of the rates of wages paid (with rations) upon farms and pastoral holdings during 1920-21. The information has been furnished by the occupiers of holdings.

Wages—agricultural and pastoral.

WAGES, AGRICULTURAL AND PASTORAL, 1920-21.

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	30s. to 40s. 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
Generally useful men	25s. to 50s. per week ..	40s. per week
Shearers, hand*	30s. to 50s. per 100 sheep	40s. per 100 sheep
„ machine*	30s. to 50s. 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	30s. 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.

The pastoral and dairying industries have always been **Live Stock.** 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.

LIVE STOCK IN VICTORIA, 1861 to 1921.

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
<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
<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

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 302 sheep in 1921 as against 306 in 1911 and 237 in 1881—an increase of 27 per cent. in the carrying capacity of the land in 40 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.

Size of Holdings. (In acres.)	Year.	Privately-owned Land.		Crown Land held in conjunction with that privately owned.	Total Area Occupied.	Area under—		
		Number of Holdings.	Area Occupied.			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	23,902	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	297	1,825,862	342,848	2,168,710	111,910	2,056,800
		1919	290	1,896,606	378,877	2,275,483	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	7,210,753	36,140,110	5,670,428	30,469,682
		1919	72,679	29,976,151	7,368,694	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.

The following tables show the land in occupation in March, 1921, in districts, and the uses to which the land was applied :—

LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA,
MARCH, 1921.

(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 ..	18,318	506,709	154,278	2,028,456	162,223	2,851,656
North-Central ..	5,819	138,537	67,194	1,894,446	60,401	2,160,578
Western ..	12,269	408,729	198,950	5,871,775	262,687	6,742,141
Wimmera ..	6,667	1,643,726	4,771	3,984,629	380,142	6,013,268
Mallee ..	6,691	1,858,897	5,406	3,098,526	633,479	5,596,308
Northern ..	12,651	1,552,724	54,898	3,634,015	66,466	5,308,103
North-Eastern ..	5,562	159,065	4,318	4,201,440	169,784	4,534,607
Gippsland ..	9,171	156,863	561,475	3,917,798	665,823	5,301,959
Total ..	77,148	6,425,250	1,051,290	28,631,085	2,401,005	38,508,620

PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.

Central ..	..	17·77	5·41	71·13	5·69	100·00
North-Central ..	..	6·41	3·11	87·68	2·80	100·00
Western ..	..	6·06	2·95	87·09	3·90	100·00
Wimmera ..	..	27·33	·08	66·26	6·33	100·00
Mallee ..	..	33·22	·09	55·37	11·32	100·00
Northern ..	..	29·25	1·04	68·46	1·25	100·00
North-Eastern ..	..	3·51	·10	92·65	3·74	100·00
Gippsland ..	..	2·96	10·59	73·89	12·56	100·00
Total ..	..	16·69	2·73	74·35	6·23	100·00

PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.

Central ..	23·75	7·88	14·68	7·08	6·76	7·41
North-Central ..	7·54	2·16	6·39	6·62	2·52	5·61
Western ..	15·90	6·36	18·93	20·51	10·94	17·50
Wimmera ..	8·64	25·58	·45	13·92	15·83	15·62
Mallee ..	8·67	28·93	·51	10·82	26·38	14·53
Northern ..	16·40	24·17	5·22	12·69	2·77	13·78
North-Eastern ..	7·21	2·48	·41	14·68	7·07	11·78
Gippsland ..	11·89	2·44	53·41	13·68	27·73	13·77
Total ..	100·00	100·00	100·00	100·00	100·00	100·00

It will be seen from these tables that the largest area under cultivation and the largest proportion of cultivation to land occupied are

found in the Northern, Wimmera, and Mallee districts. Of the occupied land, about 29 per cent. in the Northern, 33 per cent. in the Mallee, and 27 per cent. in the Wimmera districts are devoted to agriculture, and these divisions supply 7½ 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, 53 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, 1921.

AREA OCCUPIED AND STOCK THEREON, 1921.

District.	Areas Occupied for—		Number of—		
	Agriculture.	Pasture.	Horses.	Cattle.	Sheep.
Central	506,709	2,182,734	101,412	248,292	1,043,682
North-Central	138,537	1,961,640	24,833	94,680	1,042,984
Western	408,729	6,070,725	65,086	328,204	3,982,441
Wimmera	1,643,726	3,989,400	68,488	54,606	1,919,901
Mallee	1,858,897	3,103,932	56,699	40,556	636,431
Northern	1,552,724	3,688,913	92,469	217,448	1,853,893
North-Eastern	159,065	4,205,758	33,973	235,172	832,030
Gippsland	156,863	4,479,273	44,543	356,201	859,722
Total	6,425,250	29,682,375	487,503	1,575,159	12,171,084

The area occupied does not include 2,401,005 acres which are mostly in an unproductive state. Compared with 1920, sheep decreased by 16 per cent., horses by 5 per cent., and cattle by 3 per cent.

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 529 of this volume.

LIVE STOCK IN VICTORIA, 1917 to 1921.

Live Stock.	1917.	1918.	1919.	1920.	1921.
Horses (including foals)	514,403	514,061	523,788	513,500	487,503
Cattle—					
Dairy Cows	488,086	534,388	592,079	623,652	620,005
Other (including calves)	687,012	836,661	1,004,465	1,007,468	955,154
Sheep	12,576,587	14,760,013	15,773,902	14,422,745	12,171,084
Pigs	254,436	323,159	267,819	186,810	175,275

In the subjoined table will be found a statement of the average and the range of prices ruling in Melbourne during the years 1919-20 and 1920-21 for live stock. The information has been extracted from the Melbourne *Stock and Station Journal* :—

PRICES IN MELBOURNE OF LIVE STOCK, 1919-20 AND 1920-21.

Stock.	Prices in 1919-20.			Prices in 1920-21.		
	Average.	Range.		Average.	Range.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<i>Horses.</i>						
Extra heavy draught	33 5 0	29 0 0 to	35 0 0	35 10 0	33 10 0 to	38 0 0
Medium draught ..	22 5 0	20 0 0 to	23 0 0	23 5 0	21 0 0 to	26 0 0
Delivery cart ..	18 10 0	17 0 0 to	21 0 0	16 12 6	15 0 0 to	18 0 0
Saddle and harness	8 15 0	8 0 0 to	9 10 0	6 2 6	5 0 0 to	8 0 0
Ponies ..	11 2 6	10 0 0 to	13 0 0	10 10 0	10 0 0 to	11 0 0
Order cart ..	..	..	..	11 15 0	10 10 0 to	12 10 0
<i>Fat Cattle.</i>						
Bullocks—						
Extra prime ..	30 15 0	25 15 0 to	37 18 0	31 15 0	19 16 0 to	51 19 0
Prime ..	26 17 0	23 5 0 to	32 0 0	27 2 0	17 4 0 to	42 3 0
Good ..	22 17 0	20 15 0 to	27 0 0	22 7 0	13 19 0 to	33 12 0
Good light and handy weights	19 4 0	16 10 0 to	23 0 0	17 10 0	11 6 0 to	25 12 0
Second ..	15 9 0	12 5 0 to	18 10 0	14 5 0	8 18 0 to	19 4 0
Cows—						
Best ..	19 10 0	15 5 0 to	24 10 0	20 3 0	12 14 0 to	34 7 0
Others ..	13 7 0	9 11 0 to	17 5 0	13 6 0	8 0 0 to	20 2 0
<i>Dairy Cattle.</i>						
Best milkers ..	23 5 0	16 0 0 to	30 10 0	25 12 0	22 3 0 to	31 13 0
Springers, best ..	14 4 0	11 10 0 to	17 0 0	17 9 0	14 10 0 to	20 2 0
<i>Fat Sheep.</i>						
Wethers (cross)—						
Extra prime ..	2 0 10	1 6 6 to	3 5 0	2 2 7	1 6 5 to	3 9 3
Prime ..	1 15 7	1 2 6 to	2 18 0	1 17 1	1 3 9 to	2 17 3
Good ..	1 10 1	0 17 6 to	2 8 6	1 11 11	1 0 2 to	2 7 4
Ewes (cross)—						
Extra prime ..	1 15 11	1 2 3 to	2 16 6	1 17 8	1 3 6 to	3 2 6
Prime ..	1 10 0	0 18 4 to	2 7 6	1 12 0	1 0 1 to	2 11 10
Good ..	1 3 10	0 14 0 to	1 13 6	1 7 4	0 17 8 to	2 2 4
Wethers (merino)—						
Prime ..	1 7 0	0 15 0 to	2 3 0	1 15 10	1 2 2 to	3 2 7
Good ..	1 0 3	0 10 6 to	1 10 6	1 10 3	0 18 8 to	2 9 8
Ewes (merino) best	1 3 10	0 14 0 to	2 2 0	1 8 1	0 18 6 to	2 7 8
<i>Fat Lambs.</i>						
Extra prime ..	1 11 4	1 2 3 to	2 6 0	1 16 7	1 5 3 to	2 16 6
Prime ..	1 6 0	0 18 0 to	1 19 6	1 11 7	1 2 2 to	2 6 8
Good ..	1 0 10	0 12 6 to	1 13 0	1 6 0	0 13 4 to	1 18 3
Second ..	0 15 3	0 7 6 to	1 5 0	0 19 10	0 13 5 to	1 7 8
<i>Pigs.</i>						
Back Fattens—						
Extra heavy prime	11 15 0	7 15 0 to	14 12 0	15 11 0	9 14 0 to	21 2 0
Extra prime and weighty ..	9 5 0	5 0 0 to	12 2 0	12 1 0	7 11 0 to	16 15 0
Baconers—						
Extra prime ..	6 5 0	4 17 0 to	7 18 0	7 4 0	5 16 0 to	8 19 0
Prime ..	5 7 0	4 0 0 to	6 12 0	6 5 0	4 19 0 to	7 14 0
Porkers ..	3 5 0	2 11 0 to	4 0 0	4 4 0	3 10 0 to	4 17 0

The average prices of stock were generally higher in 1920-21 than in 1919-20.

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

STOCK SLAUGHTERED, 1911 TO 1920.

Year.	Number Slaughtered.		
	Sheep and Lambs.	Cattle.	Pigs.
1911	4,348,363	347,926	345,547
1912	4,153,269	368,512	331,364
1913	4,742,231	410,694	286,931
1914	4,550,272	470,011	260,017
1915	2,973,803	356,174	216,003
1916	2,647,200	247,781	214,228
1917	2,499,002	217,480	298,073
1918	3,581,460	223,340	377,390
1919	6,324,490	362,475	329,190
1920	4,244,798	374,545	240,557

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

PURPOSES FOR WHICH STOCK WERE SLAUGHTERED, 1911 TO 1920.

Year.	For Butcher and Private Use.*			For Export.			For Preserving and Salting.			For Bolling Down.		
	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.	Sheep.	Cattle.	Pigs.
1911	2,678,517	321,251	134,546	1,578,132	17,354	1,609	69,486	7,640	209,177	22,228	1,681	215
1912	2,610,665	344,706	148,394	1,409,243	10,793	3,120	104,472	10,129	179,717	28,889	2,884	133
1913	2,587,895	355,868	107,089	2,107,180	36,692	..	41,034	15,383	179,710	6,122	2,751	132
1914	2,834,696	385,548	76,464	1,659,258	64,838	1,713	34,141	15,276	181,756	22,177	4,349	84
1915	1,935,162	338,475	86,580	1,023,232	175	..	9,762	12,082	129,259	5,647	5,442	164
1916	2,290,979	233,910	46,922	334,391	8,243	156	20,925	4,850	167,003	905	778	147
1917	2,257,785	209,909	99,053	1,07,064	1,124	971	133,140	5,540	197,880	1,013	907	166
1918	2,773,298	95,328	174,689	248,825	3,520	615	553,090	23,580	201,900	6,247	912	186
1919	3,136,059	281,636	23,509	2,854,059	44,437	1,070	283,966	32,580	20,480	50,406	3,822	201
1920	1,835,419	353,429	82,315	2,385,966	14,912	5,465	2,067	1,133	152,556	21,346	5,071	122

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

Of the 4,244,798 sheep and lambs slaughtered in Victoria in 1920, 2,385,966 or 56 per cent., were frozen, as compared with 651,914, or 23 per cent., in 1906. In 1920 the oversea exports included 97,137,665 lbs. of mutton and lamb, valued at £2,233,740.

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

Mutton and Lamb frozen for Export.

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. In the year 1920-21 the quantity exported was below the normal amount, chiefly on account of the scarcity of lambs and a general shortage in stock.

FROZEN MUTTON AND LAMB EXPORTED.

Year.	Number of Carcasses Exported.		
	Mutton.	Lamb.	Total.
1894	250,000	..	250,000
1911	624,940	953,192	1,578,132
1912	566,541	842,702	1,409,243
1913	948,162	1,159,018	2,107,180
1914-15	653,329	1,056,823	1,710,152
1915-16 .. ..	..	47,546	47,546
1916-17	52,724	365,694	418,418
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

Dairying. The dairying industry is one of the principal sources of the wealth of the community. The value of dairy produce in 1920 was £11,816,670, as compared with £9,262,710 in the previous year, £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 each of the last ten years:—

DAIRYING, 1911 to 1920.

Year.	Number of Cow-keepers.	Number of Dairy Cows at end of Year.	Butter made.	Cheese made.
			lbs.	lbs.
1911	53,319	699,555	86,500,474	4,549,843
1912	54,447	655,939	67,655,834	4,176,778
1913	55,423	656,080	73,381,567	4,856,321
1914	55,553	610,517	62,421,288	4,395,502
1915	53,381	451,088	42,345,113	3,497,278
1916	53,940	488,086	59,568,771	5,869,562
1917	54,348	534,388	64,405,711	5,285,003
1918	58,766	592,079	66,240,403	6,055,964
1919	56,639	623,652	60,218,945	7,735,023
1920	58,117	620,005	64,938,458	3,636,571

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

Butter and
cheese made
on farms.

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

BUTTER AND CHEESE MADE ON FARMS.

Year.				Butter.	Cheese.
				lbs.	lbs.
1911	..	..	..	5,233,355	1,502,582
1912	..	..	..	5,428,690	2,004,865
1913	..	..	..	5,679,870	2,008,370
1914	..	..	..	4,845,529	1,722,506
1915	..	..	..	4,750,866	1,367,243
1916	..	..	..	5,080,408	1,680,929
1917	..	..	..	4,704,151	1,311,893
1918	..	..	..	5,116,733	1,031,514
1919	..	..	..	4,743,906	937,030
1920	..	..	..	5,086,723	492,952

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 each of the last ten years were as follows:—

BUTTER, CHEESE, ETC., MADE IN FACTORIES, 1911 to 1920-21.

Year.		Butter made.	Cream sold.	Cheese made.	Concentrated, Condensed and Powdered Milk made.
		lbs.	gallons.	lbs.	lbs.
1911	..	81,267,119	34,028	3,047,261	13,697,691
1912	..	62,227,144	41,952	2,171,913	18,456,094
1913	..	67,701,897	45,762	2,847,951	20,942,260
1914	..	57,575,759	54,388	2,672,996	19,093,750
1915	..	37,594,247	27,934	2,130,035	16,690,426
1916-17	..	54,488,363	68,842	4,188,633	33,280,635
1917-18	..	59,701,560	60,890	3,973,110	37,805,070
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

NOTE.—In addition, 1,873,815 lbs. of casein were made in 1920-21.

The quantities of milk in gallons received at factories and creameries were 191,128,362 in 1911, 150,079,730 in 1912, 166,339,178 in 1913, 144,317,040 in 1914, 93,846,750 in 1915, 138,746,860 in 1916-17, 151,615,600 in 1917-18, 157,814,940 in 1918-19, 147,455,930 in 1919-20, and 154,042,546 in 1920-21.

Exports of
butter and
cheese.

In 1920-21 there were exported from Victoria to countries outside Australia 32,813,204 lbs. of butter, valued at £4,027,256, all of which was Australian produce. The quantity sent to the United Kingdom was 29,025,644 lbs., valued at

£3,547,396. The quantity of cheese exported to oversea countries was 970,385 lbs., and the value thereof £48,251.

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 1920-21 and earlier seasons was as follows :—

VICTORIAN WOOL CLIP AND ESTIMATED TOTAL PRODUCTION.

Districts.	Wool Clip, 1920-21.			
	Sheep.	Lambs.	Total.	
	lbs.	lbs.	lbs.	
Central	5,102,087	266,313	5,368,400	
North-Central	5,530,301	278,067	5,808,368	
Western	24,081,217	1,282,602	25,363,819	
Wimmera	11,668,913	426,265	12,095,178	
Mallee	3,374,735	165,841	3,540,576	
Northern	9,289,528	498,706	9,788,234	
North-Eastern	4,209,542	272,097	4,481,639	
Gippsland	4,361,153	342,574	4,703,727	
Total Clip	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
1911-12	81,902,229	6,504,990	88,407,219	
	1917-18.	1918-19.	1919-20.	1920-21.
	lbs.	lbs.	lbs.	lbs.
Wool clip	89,805,832	100,986,431	98,379,589	71,149,941
Wool stripped from Victorian skins and on Victorian skins exported (estimated) ..	15,618,850	25,660,630	34,467,578	19,100,630
Total production ..	105,424,682	126,647,061	132,847,167	90,250,571
Total value ..	£6,410,077	£7,621,413	£7,908,007	£4,729,400

The wool produced last season was 32 per cent. less than in the previous season. In 1920 there were 10,595,458 sheep and 1,725,305

lambs shorn, as compared with 12,275,005 sheep and 3,141,655 lambs in 1919, and 12,425,095 sheep and 3,843,701 lambs in 1918.

Weight of
a fleece.

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

WEIGHT OF A FLEECE, 1911 to 1920.

Year.	Weight of a Fleece.		
	Sheep.	Lambs.	Sheep and Lambs combined.
	lbs.	lbs.	lbs.
1911	7·28	2·33	6·29
1912	6·31	2·20	5·68
1913	7·50	2·35	6·46
1914	6·37	2·16	5·58
1915	6·44	2·31	5·79
1916	7·53	2·55	6·26
1917	7·57	2·42	6·19
1918	7·41	2·31	6·21
1919	7·44	2·26	6·38
1920	6·38	2·05	5·77

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

WOOL PRODUCTION : HOME CONSUMPTION AND EXPORTABLE BALANCE, 1911 to 1920-21.

Year.	Production.		Used in Manufactures.		Available for Export.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1911 ..	110,463,041	4,142,747	5,774,870	228,920	104,688,171	3,913,827
1912 ..	88,762,612	3,751,083	5,535,483	247,943	83,227,129	3,503,140
1913 ..	106,833,690	4,032,954	5,917,410	240,395	100,916,280	3,792,559
1914 ..	95,406,867	3,410,913	6,118,450	254,935	89,288,417	3,155,978
1915 ..	82,330,198	4,066,003	11,052,250	460,510	71,277,948	3,605,493
1916-17	94,845,024	5,927,814	8,669,460	433,473	86,175,564	5,494,341
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

Prices
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, 1918-19 TO 1920-21.

Class of Wool.	Average Price per lb. in—		
	1918-19.	1919-20.	1920-21.
GREASY MERINO.			
Extra Super (Western District)	28d. to 31½d.	28d. to 31½d.	30d. to 36d.
Super	24d. to 27d.	24d. to 27d.	24d. to 28d.
Good	18d. to 23d.	18d. to 23d.	16d. to 20d.
Average	15d. to 17d.	15d. to 17d.	12d. to 14d.
Wasty and Inferior	10d. to 12d.	10d. to 12d.	6d. to 8d.
Extra Super Lambs	24d. to 27½d.	23d. to 26½d.	18d. to 20d.
Super Lambs	19d. to 23d.	18d. to 22d.	13d. to 15d.
Good Lambs	15d. to 18d.	15d. to 17d.	10d. to 12d.
Average Lambs	11d. to 14d.	11d. to 14d.	7d. to 8d.
Inferior Lambs	6d. to 9d.	6d. to 9d.	2d. to 4d.
GREASY CROSSBRED.			
Extra Super Comebacks	27d. to 30½d.	26d. to 29d.	22d. to 24d.
Super Comebacks	23d. to 27d.	23d. to 27d.	19d. to 21d.
Fine Crossbred	20d. to 24d.	20d. to 24d.	9d. to 11d.
Medium Crossbred	15d. to 19d.	15d. to 19d.	5d. to 7d.
Coarse Crossbred and Lincoln	13d. to 15d.	13d. to 15d.	2d. to 3½d.
Super Fine Crossbred Lambs	16d. to 20d.	16d. to 20d.	11d. to 14d.
Good Crossbred Lambs	12d. to 15d.	12d. to 15d.	6d. to 7d.
Coarse and Lincoln Lambs	10d. to 12d.	10d. to 12d.	4d. to 5d.
SCOURED.			
Extra Super Fleece	42d. to 48d.	42d. to 48d.	45d. to 51d.
Super Fleece	38d. to 41d.	38d. to 41d.	38d. to 41d.
Good Fleece	34d. to 37d.	34d. to 37d.	29d. to 32d.
Average Fleece	28d. to 33d.	28d. to 33d.	23d. to 27d.
RECORD PRICES FOR THE SEASON.			
Greasy Merino Fleece	31½d.	31½d.	49½d.
„ Comeback Fleece	30½d.	29d.	37½d.
„ Merino Lambs	27½d.	26½d.	26d.
„ Comeback Lambs	23½d.	22½d.	27d.
Scoured Fleece	48d.	48d.	64d.

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 :—

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.

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, 1921, for Victoria and Tasmania; December, 1920, for Queensland, Western Australia and the Northern Territory; and

Live Stock
in Australia
and
New Zealand.

June, 1921, for New South Wales and South Australia. The returns for New Zealand relate to April, 1921, in the case of sheep, and to January, 1921, in the case of other stock.

LIVE STOCK IN AUSTRALASIA.

State, &c.	Horses.	Cattle.		Sheep.	Pigs.
		Dairy Cows.	Other.		
Victoria	487,503	620,005	955,154	12,171,084	175,275
New South Wales ..	662,264	769,931	2,314,401	29,249,253	253,910
Queensland	742,217	448,634	6,006,433	17,404,840	104,370
South Australia ..	268,187	152,178	224,221	6,359,944	78,395
The Northern Territory ..	37,837	70	659,770	6,062	1,416
Western Australia ..	178,664	47,719	802,084	6,332,965	60,581
Tasmania	39,117	63,681	144,521	1,570,832	38,116
New Zealand	333,743	993,473	2,119,269	23,236,328	342,227

Bee-keeping. The returns for 1920-21 show that there were in that year 3,408 bee-keepers, who owned 27,480 frame and 9,595 box hives, producing 1,671,434 lbs. and 53,508 lbs. of honey respectively, and 24,222 lbs. of beeswax. The number of bee-keepers owning 20 hives and upwards was 473, as compared with 465 in the previous season. The quantity of honey produced in the Wimmera, the chief producing district, was 548,978 lbs. in 1920-21, as compared with 686,883 lbs. in the previous season, 806,754 lbs. in 1918-19, 1,631,171 lbs. in 1917-18, 800,505 lbs. in 1916-17, 390,494 lbs. in 1915-16, 345,747 lbs. in 1914-15, and 691,263 lbs. in 1913-14. The more important particulars of the industry for the past ten years are given below:—

BEE-KEEPING, 1911-12 to 1920-21.

Season ended May.	Number of Bee-keepers.	Number of Hives.	Honey produced.	Beeswax produced.
			lbs.	lbs.
1912	3,787	53,711	1,635,260	28,405
1913	4,796	52,723	3,277,590	45,354
1914	5,643	55,565	1,961,746	37,323
1915	2,639	35,051	700,672	20,017
1916	3,633	31,233	933,933	18,707
1917	3,661	36,561	1,547,023	22,131
1918	4,427	58,146	4,974,888	64,980
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

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

Poultry
Farming.

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

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 1920-21 was £4,545,620.

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, 1920, sums amounting to £842,043 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	1913-14	29,596
1889-90 to 1898-9 ..	208,638	1914-15	32,211
1899-1900 to 1908-9 ..	170,050	1915-16	24,257
1909-10	23,005	1916-17	24,388
1910-11	23,123	1917-18	30,847
1911-12	29,524	1918-19	39,460
1912-13	27,309	1919-20	36,672

In addition to the expenditure of £842,043 referred to above, a loan of £150,000 for the purchase of wire-netting to be advanced to land-holders was allocated to shires in 1890, and one of £50,000 in 1896, both of which have been repaid. Further sums amounting to £45,850 in 1908-9, £10,734 in 1909-10, £43,648 in 1910-11, £21,116 in 1911-12, £54,061 in 1912-13, £62,428 in 1913-14, £19,731 in 1914-15, £3,078 in 1915-16, £3,203 in 1916-17, £9,472 in 1917-18, £3,766 in 1918-19, and £20,985 in 1919-20 were advanced from loans for the purchase of wire netting for supply to municipalities and land-owners. A complete system, administered by an officer called the Chief Inspector under the Vermin Destruction Act, exists for effectually keeping the rabbits under control.

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

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

RABBITS, HARES, AND WILD-FOWL SOLD AT THE
MELBOURNE FISH MARKET, 1911 to 1920-21.

Year.	Rabbits.	Hares.	Wild-fowl.
	pairs.	brace.	brace.
1911	320,292	222	24,420
1912	480,192	363	29,562
1913	605,724	93	23,598
1914	732,444	488	19,614
1915	508,324	51	6,934
1916-17	580,368	132	17,448
1917-18	746,160	256	23,062
1918-19	622,896	50	19,224
1919-20	444,456	..	20,022
1920-21	405,564	40	7,158

Frozen
rabbits, &c.,
exported.

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

RABBITS AND HARES AND RABBIT AND HARE SKINS
EXPORTED OVERSEA.

Year.	Frozen Rabbits and Hares.		Rabbit and Hare Skins.	
	Quantity.	Value.	Quantity.	Value.
	pairs.	£	lbs.	£
1911	1,373,501	69,426	3,435,928	156,877
1912	1,111,902	57,233	3,904,379	221,614
1913	2,044,501	107,818	4,182,044	271,463
1914-15	2,478,273	127,721	1,827,557	68,777
1915-16	1,420,182	90,588	1,195,455	44,325
1916-17	1,426,888	111,632	493,137	35,361
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

The quantity of rabbit and hare skins exported oversea in 1920-21 was the third largest since 1913.

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 1920-21 :—

VICTORIAN FISHERIES—MEN AND BOATS EMPLOYED, 1920-21.

Fishing Stations.	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
Anderson's Inlet	5	3	£ 130	£ 150
Barwon Heads and Ocean Grove ..	17	10	926	145
Brighton	11	8	147	87
Corner Inlet, Welshpool, and Toora ..	72	49	5,675	3,385
Dromana	40	28	1,258	451
Frankston	24	18	770	333
Geelong	74	34	2,738	790
Gippsland Lakes	221	139	12,994	7,924
Kerang	5	5	21	47
Lorne	9	5	203	151
Mallacoota	5	4	954	300
Mentone	6	5	465	145
Mordialloc	30	25	1,681	257
Mornington	32	25	1,221	716
Portarlington and St. Leonards ..	75	51	3,030	1,344
Portland	47	30	3,931	619
Port Albert	47	25	2,320	1,153
Port Fairy	59	38	5,355	1,467
Port Melbourne	69	41	3,213	854
Queenscliff	120	67	10,292	1,616
Sandringham	31	20	1,163	378
Sorrento, Portsea, and Rye	39	25	1,277	397
St. Kilda	30	14	777	581
Warrnambool	12	10	393	287
Werribee	11	7	293	168
Western Port (Coves, Hastings, Grantville, Flinders, San Remo, and Tooradin)	258	166	14,783	8,747
Williamstown	31	21	1,114	394
Total	1,380	873	77,124	32,886

Melbourne Fish Market. The quantities and values of fish sold in the Melbourne Fish Market during each of the years 1919-20 and 1920-21 were as shown in the next table.

**FISH SOLD IN THE MELBOURNE FISH MARKET,
1919-20 AND 1920-21.**

		1919-20.		1920-21.	
		Quantity.	Value.	Quantity.	Value.
Fresh Fish (Victorian)	lbs.	10,305,790	£ 143,210	10,931,950	£ 136,650
Crayfish	doz.	33,620	36,140	35,424	32,324
Imported Fish (fresh or frozen)	lbs.	1,746,500	36,385	1,957,134	40,774
Oysters	bags	10,323	26,000	8,251	27,269
Total			241,735		237,017

In addition to the above, 6,384 cwt. of smoked fish, and 204 baskets of prawns were sold in this market in 1920-21.

Victorian fish sold. The quantity and value of fish caught in Victorian waters and sold in the Melbourne and Ballarat markets and elsewhere in 1920-21 were as follows:—

VICTORIAN FISH SOLD IN 1920-21.

Markets.	Quantity.		Value.	
	Fish.	Crayfish.	Fish.	Crayfish.
	lbs.	doz.	£	£
Melbourne	10,931,950	15,980	136,650	14,580
Ballarat	636,330	2,455	9,150	1,520
Other	196,020	255	2,450	230
Total	11,764,300	18,690	148,250	16,330

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 1920-21 are appended:—

FISH IMPORTED, 1909 AND 1920-21.

	1909.—Interstate.		1909.—Oversea.		1920-21.—Oversea.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Fish—		£		£		£
Fresh or Frozen lbs.	1,772,999	22,720	758,545	11,076	953,645	38,573
Smoked	127,016	662	99,793	3,322	55,403	3,440
Fresh Oysters cwt.	16,941	8,529	7,935	4,145	2,092	2,708
Potted, &c. .. ..	..	41	..	4,559	..	14,213
Preserved in tins, &c. .. lbs.	117,177	3,266	4,823,366	116,931	3,165,775	191,304
N.E.I. .. cwt.	214	356	5,815	9,434	2,229	10,180
Total		35,574		149,467		260,418

The most important item in this table is fish preserved in tins and other air-tight vessels, of which 2,191,432 lbs. came from the United Kingdom and Canada in 1920-21.

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 four years 1915 to 1918—years representing war conditions—and for the year 1919 :—

AVERAGE ANNUAL IMPORTS OF CERTAIN ARTICLES INTO UNITED KINGDOM FROM AUSTRALIA, OTHER BRITISH POSSESSIONS, AND FOREIGN COUNTRIES, 1907-13, 1915-18. AND 1919.

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
	1915-18	3,931,773	4,041,401	13,189,874	21,163,048
	1919	5,251,176	4,369,288	10,233,963	19,854,427
Cheese	1907-13	13,102	5,704,495	1,256,492	6,974,089
	1915-18	214,896	11,544,508	3,095,874	14,855,278
	1919	830,935	13,461,276	878,409	15,170,620
Wheat	1907-13	4,497,088	14,371,951	23,170,834	42,039,873
	1915-18	3,417,400	18,970,707	44,342,892	66,730,999
	1919	13,623,692	17,509,822	37,288,995	68,422,509
Wheatmeal and Flour	1907-13	216,477	1,512,672	4,384,282	6,113,431
	1915-18	1,319,741	4,861,706	11,576,418	17,757,865
	1919	2,289,891	8,128,733	15,310,620	25,729,244
Meat	1907-13	4,108,980	6,651,731	34,457,389	45,218,100
	1915-18	6,627,772	21,006,662	86,000,050	113,634,484
	1919	10,594,415	34,269,610	128,997,546	173,861,571
Fruit—Fresh, Dried, and Preserved	1907-13	395,110	1,409,440	12,933,186	14,737,736
	1915-18	425,637	1,533,550	14,234,441	16,193,628
	1919	684,643	4,913,634	41,928,675	47,526,952
Wine	1907-13	127,388	29,076	3,848,344	4,004,808
	1915-18	81,937	36,855	3,902,095	4,020,687
	1919	151,197	37,003	17,978,877	18,167,077
Wool	1907-13	13,621,012	13,085,172	5,697,694	32,403,878
	1915-18	21,107,699	17,194,622	3,055,514	41,357,835
	1919	57,522,055	34,733,239	4,633,536	96,888,830
Skins, Furs, and Hides	1907-13	1,928,626	4,105,504	7,937,906	13,972,036
	1915-18	1,564,191	6,483,258	8,762,500	16,809,949
	1919	4,983,555	13,003,078	12,896,468	30,883,101
Tallow and Stearine ..	1907-13	1,352,280	725,532	1,464,682	3,542,494
	1915-18	804,993	627,554	840,259	2,272,806
	1919	2,092,414	2,578,397	3,216,391	7,887,202
Leather	1907-13	409,128	3,034,535	6,498,824	9,942,487
	1915-18	645,918	4,860,217	7,286,191	12,792,326
	1919	2,020,271	12,918,428	22,423,873	37,362,572
Total—Eleven Articles	1907-13	29,801,002	52,393,030	120,534,289	202,728,321
	1915-18	40,141,957	91,160,840	196,286,108	327,588,905
	1919	100,044,244	145,922,508	295,787,353	541,754,105

The value of the above-mentioned articles imported into the United Kingdom from Australia amounted to £100,044,244 in 1919 as compared

with £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 1920 are for comparative purposes placed side by side in the table which follows:—

AGRICULTURE AND LIVE STOCK IN VICTORIA AND GREAT BRITAIN, 1920.

				Victoria.	Great Britain.
Area	..	..	.. acres	56,245,760	56,208,959
Wheat	..	..	.. bushels	39,468,625	55,432,000
Oats	..	..	.. "	10,907,191	127,224,000
Barley	..	..	.. "	2,495,762	58,464,000
Peas	..	..	.. "	125,547	3,552,000
Potatoes	..	..	.. tons	171,628	4,388,000
Turnips and swedes	..	..	.. "	2,289*	21,885,000
Mangolds	..	..	.. "	6,742	7,336,000
Hay	..	..	.. "	1,984,854	9,153,000
Horses	..	..	.. No.	487,503	1,365,700
Cattle	..	..	.. "	1,575,159	5,546,800
Sheep	..	..	.. "	12,171,084	13,382,700
Pigs	..	..	.. "	175,275	1,993,900

* 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 1919-20 from miners' rights was £2,273.

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 1919-20 was £3,817.

The area of Crown and private lands under occupation for mining purposes on 31st December, 1920, was 48,561 acres. The subjoined table shows the area being worked for different minerals :—

AREA UNDER OCCUPATION FOR MINING PURPOSES,
31ST DECEMBER, 1920 (CROWN LANDS AND PRIVATE
LAND).

Nature of Mineral, &c.	Area.
	acres.
Gold	33,571
Coal (ordinary)	3,498
Coal (brown)	358
Barytes	29
Bismouth and Felspar	29
Bluestone	23
Clay Slum	78
Copper	240
Copper and Silver	72
Dolomite and Clay	1
Felspar	8
Granite	18
Gypsum	718
Hematite and Iron Ores	8
Infusorial Earth	59
Iron	336
Iron Oxides	5
Kaolin	114
Limestone	62
Limestone and Clay	27
Magnesite	114
Manganese	2,014
Manganese and Cobalt	19
Marble	126
Molybdenite	699
Molybdenite, Copper, and Silver	29
Ochre	3
Pigments and Clay	22
Pigments and Limestone	65
Porphyry	12
Quicksilver	55
Salt	199
Silicate of Alumina	52
Silver, Bismuth, Wolfram, and Phosphates	48
Silver and Gold	30
Silver and Lead	217
Slate	53
Sulphates and Oil	223
Tin	3,404
Wolfram	336
Wolfram and Tin	542
Wolfram, Molybdenite, and Bismuth	45
Wolfram, Molybdenite, and Silver	96
Water-right Licences	904
Total	48,561

The mining industry has been well fostered by the **Mining development.** Government, not only in the way of financial assistance but also by means of geological surveys and boring. Apart from the annual expenditure of the Mining Department from consolidated revenue, of which a statement is appended, loan moneys amounting to £510,645 (including £239,623 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, 1915-16 to 1919-20.

	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Expenditure from Consolidated Revenue.					
	£	£	£	£	£
Mining Department	26,550	24,154	22,453	22,030	24,423
State Coal Mine	202,953	238,213	263,730	266,244	367,733
Coal Mines Regulation—Sinking Fund and Depreciation Fund	41,468	2,951	29,068	17,107	56,613
Victorian Coal—Allowance to Railway Department on carriage of	7,621	6,994	2,368	1,871	2,284
Diamond drills for prospecting ..	9,901	8,816	8,889	11,728	11,703
Testing plants	10,081	4,639	3,553	3,813	4,028
Geological and underground surveys of mines	2,579	2,348	2,010	2,186	2,138
Mining Development— Advances to companies, &c., boring for gold, coal, &c. ..	31,460	29,868	74,173	52,387	115,046
Miscellaneous	2,148	4,816	3,258	2,190	3,063
	334,761	322,799	409,502	379,556	587,031
Expenditure from Surplus Revenue.					
Mining Development— Advances to companies, &c., boring for gold, coal, &c. ..	793	36	..	..	..
Total	335,554	322,835	409,502	379,556	587,031

Yearly grants are also made to Schools of Mines, particulars of which will be found on page 359 of this work: Since 1st July, 1899, £510,645 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 ..	239,623
Miscellaneous ..	9,740
Total ..	510,645

The advances from loan moneys and revenue to mining companies to 30th June, 1920, for the development of mining, totalled £238,833, of which sum £27,179 had up to that date been repaid, £39,404 realized, and £113,568 written off, leaving £58,682 outstanding. Interest received during 1919-20 amounted to £832, and interest outstanding on 30th June, 1920, to £3,301.

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 1920.

TOTAL MINERAL PRODUCTION TO 31ST DECEMBER, 1920.

Metals and Minerals.	Recorded prior to 1920.		Recorded during 1920.		Total Recorded to end of 1920.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Gold ..	Fine ozs. 70,602,955	£ 209,901,566	Fine ozs. 152,792	£ 648,969	Fine ozs. 70,755,747	£ 300,550,535
Silver ..	1,430,420*	216,730	6,231	1,714	1,436,651	218,444
Platinum ..	30,577	7,880	..	..	30,577	7,880
	311	1,671	..	..	311	1,671
Coal, black ..	tons. 8,213,528	4,547,015	tons. 442,241	£ 464,739	tons. 8,655,769	£ 5,011,754
” brown ..	301,635	91,720	162,682	64,180	464,317	155,900
Ore—copper ..	18,730	218,590	..	..	18,730	218,590
” tin ..	16,430	878,747	85	12,815	16,515	891,562
” antimony ..	94,479	534,927	4,678	14,238	99,157	549,165
” silver-lead ..	793	5,760	..	..	793	5,760
” iron ..	5,434	12,540	..	..	5,434	12,540
” manganese ..	247	919	..	..	247	919
Wolfram ..	110‡	11,430	7	355	118	11,785
Diamonds ..	..	128	..	..	..	128
Sapphires, &c. ..	..	630	..	..	..	630
Gypsum ..	29,232	22,485	3,393	1,696	32,625	24,181
Magnesite ..	1,105	3,363	151	453	1,256	3,816
Kaolin ..	15,946	23,017	2,130	2,264	18,076	25,281
Diatomaceous earth ..	7,057	28,137	1,000	5,000	8,057	33,137
Pigment clays ..	675	1,345	637	339	1,312	1,684
Phosphate rock ..	5,309	6,059	4,222	4,222	9,531	10,281
Molybdenite ..	56	680	48	3,616	104	4,296
Fluorspar ..	414	1,220	13	43	427	1,263
Bluestone, freestone, granite, &c.† ..	..	5,631,607	..	383,002	..	6,014,609
Limestone, &c.† ..	..	..	..	..	..	..
Total ..	..	312,148,166	..	1,607,645	..	313,755,811

* 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 1920 was £300,550,535, 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:—

Period.	Quantities (Fine Ozs.).	Period.	Quantities (Fine Ozs.).
1851-60	23,334,263*	1909	654,222
1861-70	16,276,566*	1910	570,383
1871-80	10,156,297*	1911	504,000
1881-90	7,103,448*	1912	480,131
1891-1900	7,476,038*	1913	434,932
1901	730,453	1914	413,218
1902	720,866	1915	329,068
1903	767,297	1916	256,643
1904	765,600	1917	201,872
1905	747,166	1918	158,827
1906	772,290	1919	135,427
1907	695,576	1920	152,792
1908	671,208		

* Gross ozs.

The yield has been on the down grade since 1906, the return for 1919 having been the lowest for the State since 1851. The quantities raised in the other principal gold-producing States in 1920 were 617,842 ounces in Western Australia, 115,230 ounces in Queensland, and 48,907 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, but fall short of that of 1919 by 5,952 ounces.

**DISTRICT YIELDS OF GOLD, ALLUVIAL AND QUARTZ,
1919 AND 1920.**

Mining District.	1919.			1920.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Ararat and Stawell ..	3,864	5,174	9,038	5,619	4,231	9,850
Ballarat	4,356	3,583	7,939	2,622	2,728	5,350
Beechworth	22,983	7,962	30,945	14,670	25,753	40,423
Bendigo	826	63,823	64,649	587	87,274	87,861
Castlemaine	6,543	9,857	16,400	4,627	13,146	17,773
Gippsland	3,126	3,364	6,490	2,942	858	3,800
Maryborough	4,964	604	5,568	1,319	261	1,580
Total	46,662	94,367	141,029	32,386	134,251	166,637

Gold-mining dividends. 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, 1916 TO 1920.**

Mining District.	Amount Distributed.				
	1916.	1917.	1918.	1919.	1920.
	£	£	£	£	£
Ararat and Stawell	27,500	14,583	..	..	..
Ballarat	4,200	..	..	..	..
Beechworth	30,165	32,874	34,050	19,220	36,690
Bendigo	8,875	8,288	..	..	44,226
Castlemaine	19,760	28,225	17,100	5,800	11,595
Gippsland	450	675	525	160	2,668
Maryborough	7,600	2,500	1,250	..	..
Total	98,550	87,145	52,925	25,180	95,179

By comparison with 1919 the amount of the dividends declared in 1920 represents an increase of 278 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, 1911 TO 1920.

Year.				Alluvial Miners.	Quartz Miners.	Total.
1911	..	..	..	5,144	8,871	14,015
1912	..	..	..	4,156	7,700	11,856
1913	..	..	..	4,222	7,709	11,931
1914	..	..	..	3,637	6,761	10,398
1915	..	..	..	2,867	5,888	8,755
1916	..	..	..	2,587	3,815	6,402
1917	..	..	..	..	..	6,069
1918	..	..	..	..	..	3,547
1919	..	..	..	1,155	1,910	3,065
1920	..	..	..	1,138	2,604	3,742

The number of men employed in each mining district in 1920 was as follows :—Ararat and Stawell, 241 ; Ballarat, 124 ; Bendigo, 1,747 ; Beechworth, 841 ; Castlemaine, 502 ; Gippsland, 41 ; and Maryborough, 246.

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, 1916 TO 1920.

Year.				Approximate Value of Machinery Employed in—		
				Alluvial Mining.	Quartz Mining.	Total.
1916	..	..	..	£ 498,729	£ 974,378	£ 1,473,107
1917	..	..	..	..	..	825,450
1918	..	..	..	..	..	650,600
1919	..	..	..	198,490	425,110	623,600
1920	..	..	..	181,400	703,416	884,816

Dredging and sluicing. A feature of alluvial mining in Victoria for the past nineteen 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 1920 the

number of bucket dredges at work was 15, and the number of pump hydraulic sluices 4, in addition to which 18 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, 1916-20.

Year.			Number of Plants.	Area Worked.	Quantity of Material Treated.	Gold Obtained.	Tin Obtained.
				Acres.	Cub. yds.	Ozs.	Tons.
1916	..	..	73	344	10,235,000	48,724	105
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

These plants employed 421 men in 1920. The yield of gold in that year per cubic yard of material was 2·2 grains, which was a slight increase on that of the previous year. Since the inception of dredge mining 1,838,407 ounces of gold and 1,271 tons of tin have been won by this system.

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

CYANIDATION, 1916 TO 1920.

Year.			Number of Plants.	Quantity of Tailings Treated.	Yield of Gold.	Value of Yield.
				Tons.	Ozs.	£
1916	..	..	105	203,016	14,635	49,332
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

Records show that the total amount of tailings which have been treated by the cyanide and other processes is 15,882,687 tons, and that the gold that has been won thereby amounts to 1,264,118 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, 1916 TO 1920.

Year.	Number of Batteries.	Quantity of Ore Treated.	Yield of Gold.
		tons.	ozs.
1916	30	4,511	2,450
1917	33	3,278	2,102
1918	33	4,092	2,905
1919	34	2,941	3,778
1920	33	2,664	2,849

Since 1897, the year in which the first battery was erected, 69,156 tons of ore have been crushed for 47,359 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 464,317 tons (valued at £155,900), of which 162,682 tons were obtained in 1920. The whole of the output for 1920 was obtained from the State Brown Coal Mine at Morwell, its value being £64,180.

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, 1920, was 376,286 tons, valued at £377,667. The total output up to the end of 1920 was 4,618,580 tons, valued at £2,633,621. The average number of men employed at the mine throughout the year ended 30th June, 1920, was 1,390, and comprised 537 coal miners, 499 others below ground, and 354 surface men. The mine was worked 212 days during the year.

The quantity of coal, exclusive of brown coal, raised in Victoria up to the end of 1920 was 8,655,769 tons, valued at £5,011,754. The total production prior to 1892, the average annual production for the periods 1892-1900 and 1901-10, and the annual production for the years 1911 to 1920, 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	.. ..	653,864	9 2
1912	.. ..	589,143	8 9
1913	.. ..	593,913	9 3
1914	.. ..	617,536	9 4
1915	.. ..	588,104	9 4
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

* Total production up to date mentioned.

In addition to the above there were raised, up to the end of 1920, 464,317 tons of brown coal, valued at £155,900. As has been mentioned above, the output of brown coal in 1920 was 162,682 tons, valued at £64,180.

The quantities of coal produced in the other States in 1920 were as follows :—New South Wales 10,715,999 tons, Queensland 1,109,913 tons, Western Australia 462,021 tons, and Tasmania 75,429 tons.

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

MINING ACCIDENTS, 1911 TO 1920.

Year.	Gold Mines.			Coal Mines.		
	Miners Employed.	Persons Killed.	Persons Injured.	Miners Employed.	Persons Killed.	Persons Injured.
1911	14,051	19	65	1,754	..	23
1912	11,856	16	76	1,486	2	19
1913	11,931	9	61	1,377	4	24
1914	10,398	15	45	1,405	2	21
1915	8,755	10	34	1,312	3	20
1916	6,402	6	19	1,282	..	18
1917	6,069	5	17	1,885	3	24
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

As a result of gold mining accidents during the past ten years 92 persons were killed and 351 were injured and rendered unfit for work for a period of at least fourteen days. These numbers were equivalent to annual rates of 1·15 and 4·40 respectively per 1,000 employed. Coal mining accidents during the same period accounted for 24 deaths and 173 injuries resulting in disablement for at least fourteen days, these being equal to yearly rates of 1·47 and 10·62 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, 1916 TO 1920.

Year.	Drills worked by—		Bores put down for—			Total Depth Bored.
	Steam.	Other Power.	Gold.	Coal.	Total.	
1916	1	11	119	8	127	feet. 19,627
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

Antimony. Up to the end of 1920 the quantity of antimony ore produced in Victoria was 99,157 tons valued at £549,165. Nearly the whole of it was obtained at Costerfield. The production for 1920 was 4,678 tons of ore, which yielded 961 tons of concentrates valued at £14,238. For the previous year the production was 4,322 tons of ore, which yielded 1,208 tons of concentrates of the value of £24,160.

Tin. The production of tin ore in the State up to the end of 1920 was 16,515 tons, valued at £891,562. In the year 1920 the quantity produced was 85 tons, as against 113 tons in the preceding year, and 135 tons in 1918. 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 1920 was 3,393 tons, nearly all of which was obtained at Lake Boga and Boort. The output for the previous year was 820 tons, which was obtained almost entirely at Lake Boga. Up to the end of 1920, the quantity raised in Victoria was 32,625 tons, valued at £24,181.

Kaolin. The quantity of kaolin produced in 1920 was 2,130 tons, and in the previous year 2,049 tons. Up to the end of last year the total output was 18,076 tons, valued at £25,281.

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, 1916-17 to 1920-21.

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.	£
1916-17 ..	103	628,155	22,796	1,365	43,998	125,106
1917-18 ..	103	744,630	24,190	2,250	44,450	171,992
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

In 1920-21 the number of persons employed in quarries was 1,472, and the wages paid amounted to £246,198. 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 1904 the number of factories has increased by 55 per cent., the number of persons employed by 84 per cent., the amount of salaries and wages paid by 346 per cent., the value of output by 358 per cent., the value of machinery and plant and premises by 160 per cent., and the engine power of factories by 346 per cent. The difference between the cost of materials used and the value of the output was equivalent to an added value of £288 10s. 4d. per person employed in 1920-21, as compared with £128 in 1904. This favorable economic result coincides with a larger proportion of establishments using mechanical power in 1920-21, when 79 per cent. were so equipped, as against 60 per cent. in 1904, and with the increased aggregate engine power of factories previously referred to. The increase in the added value relatively to employees, the larger proportion of factories using power, and the higher aggregate power of establishments as a whole are indications of increasing industrial efficiency. The proportion of child labour in factories has shown very slight variation during the past ten years.

An interesting feature of manufacturing activities is the great increase in recent years in the strength of the largest sized factories. Since 1904 the number of factories employing over 100 hands has increased by 94 per cent., and the number of hands employed therein by 133 per cent., as against increases of 54 per cent. in the number of, and 60 per cent. in the hands engaged in factories employing less than 100. The figures relating to distinct industries show that steady progress has been maintained in almost every class during recent years. This is most noticeable in industries associated with the manufacture of

clothing and textile fabrics (including boots) and with the preparation of food, &c.

The appended table summarizes the position of the industries at various stages since 1871, but except for the period 1904 to 1920-21 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

* Particulars not available.

† 1880.

‡ 1890.

§ 1900.

The first Factories Act in Victoria was passed in 1873, and since that year many other Acts dealing with the subject have been placed upon the statute-book. The *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, 1920-21.

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 1920-21 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, 1920-21.

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	16	145	10	112	..	1	£ 26,485	£ 8,657	£ 113,689	£ 142,373
Bone milling	14	1,006	18	94	..	2	20,327	7,278	65,789	106,430
Tanning	48	3,179	60	2,064	1	12	446,231	35,610	2,096,554	2,943,173
Fellmongering	32	1,528	26	684	..	4	128,901	25,520	997,727	1,256,904
Chaffcutting and grain crushing ..	185	2,351	177	625	1	9	78,655	11,985	769,078	1,013,531
Other	7	46	2	142	..	1	31,833	457	74,873	124,246
Total	302	8,255	293	3,721	2	29	732,432	89,507	4,117,710	5,586,657
<i>Class II.—Oils and Fats, Animal and Vegetable.</i>										
Oil, grease, glue	11	159	4	121	..	14	26,924	8,016	218,864	297,540
Soap and candle	16	472	17	548	..	131	115,749	37,545	799,098	1,134,820
Total	27	631	21	669	..	145	142,673	45,561	1,017,962	1,432,360

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

Brick, pottery, &c. ..	92	5,547	65	2,612	..	117	481,352	171,441	105,768	1,025,105
Cement, including cement pipes ..	14	1,730	7	506	..	3	90,950	45,910	97,186	371,470
Glass, including bottles ..	8	445	12	1,056	..	14	222,540	79,014	79,435	503,694
Glass bevelling ..	23	94	18	188	..	5	35,469	992	93,527	164,145
Marble and stone dressing ..	40	331	59	306	1	7	58,222	1,845	51,127	161,049
Modelling ..	13	61	10	215	..	3	40,196	544	50,158	119,161
Other ..	18	223	21	260	..	1	48,962	20,008	18,326	109,445
Total ..	208	8,431	192	5,143	1	150	977,691	319,754	495,527	2,454,069

Class IV.—Working in Wood.

Cooperage ..	7	211	5	147	..	..	37,662	1,222	44,514	101,520
Saw-milling (forest) ..	246	5,100	328	3,172	..	9	563,627	1,158	45,278	1,137,115
Saw-milling, moulding, &c. ..	286	10,145	257	4,747	3	75	941,622	29,951	2,128,973	3,519,498
Mantelpiece ..	7	64	8	213	1	5	36,436	496	40,852	94,743
Wood carving, turning ..	24	442	22	282	..	6	54,864	2,592	60,832	137,315
Other ..	10	242	9	168	..	72	38,830	2,027	74,046	138,670
Total ..	580	16,204	629	8,729	4	167	1,673,041	37,446	2,394,495	5,128,861

Class V.—Metal Works, Machinery, &c.

Agricultural implement ..	60	1,197	68	2,607	2	34	512,363	42,193	756,204	1,550,704
Engineering, iron foundry, &c. ..	510	11,567	602	10,095	2	170	1,984,834	206,806	2,882,847	6,206,289
Railway workshop ..	19	2,751	..	5,380	..	7	1,163,669	37,974	1,131,604	2,566,571
Nail ..	12	349	9	158	..	3	28,728	2,671	161,426	222,061
Sheet-iron, tin, &c. ..	88	511	81	1,457	1	200	257,491	9,801	865,819	1,284,264
Brass, copper smithing ..	84	793	97	1,241	..	78	228,214	20,251	314,254	682,314
Wireworking ..	17	277	14	195	..	8	36,104	1,849	160,057	218,276
Metallurgical, &c., cyanide ..	4	41	2	44	..	..	8,711	1,921	27,047	54,646
Oven, range ..	17	97	21	133	..	..	27,327	1,368	49,159	94,692
Other ..	52	710	58	496	3	10	93,023	11,419	272,000	447,553
Total ..	863	18,293	952	21,806	8	510	4,340,464	336,253	6,620,417	13,327,370

Production.

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1920-21—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	1,343	21	406	..	15	£ 90,394	£ 12,911	£ 1,098,832	£ 1,335,186
Butter, cheese, butterine	191	4,477	37	1,969	..	206	431,897	116,663	8,280,320	9,455,359
Meat freezing, preserving	16	5,872	2	871	..	17	200,207	46,027	871,759	1,236,410
Biscuit	7	396	4	878	..	558	193,211	21,429	748,647	1,098,338
Flourmilling	51	5,253	36	898	..	13	191,688	45,121	5,120,260	5,745,507
Jam, sauce, &c.	42	1,122	35	1,156	3	904	270,555	23,760	1,110,600	2,031,226
Oatmeal, starch, &c.	37	1,930	23	373	..	296	94,111	14,485	734,196	960,184
Sugar, confectionery, &c.	89	5,174	81	1,934	18	1,638	491,257	101,735	4,620,240	5,446,643
Aerated water, cordial, &c.	123	429	115	752	9	78	154,186	5,440	310,523	649,013
Malt	24	485	10	312	..	6	69,463	20,678	514,119	822,561
Brewing	16	3,938	6	1,044	..	4	270,595	68,165	1,079,493	2,098,720
Distilling	10	264	2	138	..	5	32,288	9,700	160,501	245,944
Condiments, coffee, cocoa, &c.	20	983	10	284	1	169	69,109	9,060	692,230	874,242
Tobacco, &c.	16	491	16	1,207	1	762	334,748	6,162	1,650,326	2,401,618
Other	36	1,875	29	294	1	26	59,523	17,762	72,588	203,205
Total	700	34,032	427	12,516	33	4,697	2,953,232	519,098	27,064,634	34,604,156

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

Woolen mill	17	5,679	15	1 521	..	1,806	444,631	61,989	1,166,201	2,397,610
Clothing, tailoring, &c.	485	472	479	1,627	36	7,053	982,105	17,537	2,282,111	3,960,514
Dressmaking and millinery	475	384	109	224	296	8,484	739,104	10,285	1,654,045	2,900,217
Underclothing, shirt	171	717	91	247	82	5,218	471,434	11,504	1,707,102	2,648,286
Hat, cap	47	683	39	670	6	874	219,574	14,510	522,423	916,427
Hosiery	115	1,099	77	458	59	3,108	340,204	14,326	1,379,108	2,088,282
Oilskin, waterproof clothing	4	49	3	54	1	131	26,765	758	82,414	137,765
Boot, shoe	304	2,498	378	5,252	10	3,572	1,208,760	24,568	2,911,852	4,964,462
Fur	31	23	29	105	10	230	35,689	720	117,360	190,230
Rope, twine, &c.	8	1,472	7	611	..	370	138,013	12,409	465,514	729,747
Sail, tent, &c.	17	29	16	79	..	74	22,601	339	162,024	220,764
Other	35	292	35	289	5	501	89,776	5,240	214,596	358,378
Total	1,709	13,397	1,278	11,137	505	31,421	4,718,656	174,185	12,664,750	21,512,682

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

Printing	377	3,646	442	5,016	5	1,495	1,257,931	35,403	2,073,437	4,506,861
Account-book, stationery, &c.	28	531	30	637	2	644	169,268	4,393	490,314	810,390
Fancy box	31	283	20	202	8	739	105,070	2,580	286,198	491,729
Die sinking, engraving, &c.	20	105	21	225	..	12	35,713	941	28,332	94,534
Other	27	2,432	24	638	..	121	130,275	44,536	230,772	528,422
Total	483	6,997	537	6,718	15	3,011	1,698,257	87,853	3,109,053	6,431,936

Class IX.—Musical Instruments

..	16	252	10	352	..	22	64,857	1,336	58,928	155,070
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Class X.—Arms and Explosives

..	11	685	3	390	..	257	102,558	9,127	293,788	450,729
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FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1920-21—continued.

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Victorian Year-Book, 1920-21.

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, &c.</i>							£	£	£	£
Coachbuilding	289	847	356	2,161	..	25	369,793	12,401	467,000	1,036,169
Bicycle, &c.	319	1,094	391	2,281	1	101	405,940	12,878	370,170	974,505
Saddle, harness	52	48	64	423	..	83	80,578	599	157,660	277,943
Other	14	99	14	173	1	13	30,197	765	48,250	98,960
Total	674	2,088	825	5,038	2	222	886,508	26,643	1,043,080	2,387,577
<i>Class XII.—Shipbuilding, Fitting, &c.</i>	12	1,438	10	884	..	6	199,892	8,667	153,438	435,530
<i>Class XIII.—Furniture, Bedding, &c.</i>										
Upholstery, bedding, &c. .. .	58	425	39	454	1	225	97,703	3,122	297,297	443,596
Cabinet, including billiard table .. .	299	1,841	385	2,410	3	91	419,341	10,178	649,516	1,296,548
Picture frame	21	40	24	85	..	16	15,679	356	29,331	54,901
Other	8	107	5	163	..	16	31,735	2,273	71,959	134,053
Total	386	2,413	453	3,112	4	348	564,458	15,929	1,048,103	1,929,098

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

Blacking, blue, &c.	24	228	13	183	..	201	49,245	2,398	285,521	407,634
Chemicals, drugs, &c.	42	863	32	589	2	430	163,843	16,326	477,567	851,950
Fertilizers	7	1,881	2	760	..	7	168,741	29,080	930,925	1,246,559
Other	49	312	60	267	1	17	36,857	1,742	165,221	244,078
Total	122	3,284	107	1,799	3	655	418,686	49,546	1,859,234	2,750,221

Class XV.—Surgical and Scientific Appliances

	34	48	27	151	1	20	25,931	760	23,527	67,556
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Class XVI.—Timepieces, Jewellery, and Platedware.. ..

	107	364	117	1,111	3	166	199,749	5,883	309,087	662,021
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Class XVII.—Heat, Light, and Energy.

Electric apparatus	49	290	48	549	..	26	89,475	3,126	132,841	285,655
Electric light	79	54,189	3	1,183	..	56	283,309	373,064	1,660	1,131,331
Gas, coke	45	1,865	4	2,142	..	67	576,515	5,644	658,992	1,608,999
Other	7	1,223	..	201	..	459	83,380	8,393	276,637	485,276
Total	180	57,567	55	4,075	..	608	1,032,679	390,227	1,070,130	3,511,261

Production.

FACTORIES—POWER, WORKERS, WAGES, ETC., AND PRODUCTION, 1920-21—*continued.*

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Victorian Year-Book, 1920-21.

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>	53	424	59	547	4	447	£ 133,347	£ 3,302	£ 482,265	£ 743,572
<i>Class XIX.—Wares, not elsewhere included.</i>										
Umbrella	7	12	6	41	..	100	16,145	236	70,166	105,311
Rubber goods	15	7,211	12	1,927	..	718	417,348	61,715	1,365,668	2,075,264
Brush, broom	18	117	19	288	1	79	56,713	994	117,139	200,862
Basket, wickerware	25	..	27	166	..	..	21,899	74	22,324	56,131
Total	65	7,340	64	2,422	1	897	512,105	63,019	1,575,297	2,437,568
Grand Total	6,532	182,143	6,059	90,320	586	43,778	21,377,216	2,184,096	65,401,425	106,008,294

Increase in value of output of each industry, 1915 and 1920-21.

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 1915 and 1920-21 is shown in the following table, the industries being arranged in order of increase in value :—

OUTPUT OF INDUSTRIES, 1915 AND 1920-21.

Industry.	Value of Output.		Increase in Five Years.	
	1915.	1920-21.	Value.	Per cent.
	£	£	£	
Butter, cheese, and butterine, &c.	2,836,570	9,455,359	6,618,789	233·3
Engineering, iron foundry, &c.	3,029,713	6,206,289	3,176,576	104·8
Sugar, confectionery ..	2,351,371	5,446,643	3,095,272	131·6
Flour mills	2,739,730	5,745,507	3,005,777	109·7
Boot, shoe	2,436,673	4,964,462	2,527,789	103·7
Printing	2,169,018	4,506,861	2,337,843	107·8
Sawmills, moulding, &c. ..	1,702,227	3,519,498	1,817,271	106·8
Hosiery	426,294	2,088,282	1,661,988	389·9
Clothing, tailoring, &c. ..	2,315,842	3,960,514	1,644,672	71·0
Dressmaking and millinery ..	1,348,923	2,900,217	1,551,294	115·0
Underclothing, shirt, &c. ..	1,157,430	2,648,286	1,490,856	128·8
Woollen mills	931,774	2,397,610	1,465,836	157·3
Tobacco, &c.	1,199,660	2,401,618	1,201,958	100·2
Rubber goods	923,754	2,075,264	1,151,510	124·7
Coach, motor, and cycle building	866,045	2,010,674	1,144,629	132·2
Brewing	1,061,196	2,098,720	1,037,524	97·8
Agricultural implements ..	526,756	1,550,704	1,023,948	194·4
Jam, sauce, &c.	1,009,533	2,031,226	1,021,693	101·2
Tanning	2,106,358	2,943,173	836,815	39·7
Forest sawmills	308,728	1,137,115	828,387	268·3
Cabinet, including billiard table	479,520	1,296,548	817,028	170·4
Sheet iron, tin, &c. ..	477,995	1,284,264	806,269	168·7
Railway workshops	1,828,874	2,566,571	737,697	40·3
Electric light	536,251	1,131,331	595,080	111·0
Brick, pottery, &c.	434,856	1,025,105	590,249	135·7
Gas, coke	1,035,941	1,608,999	573,058	55·3
Bacon curing	767,778	1,335,186	567,408	73·9
Drugs, chemicals	296,195	851,950	555,755	187·6
Account book, &c.	284,905	810,390	525,485	184·4
Fertilisers	724,871	1,246,559	521,688	72·0
Condiments, coffee, cocoa, &c.	355,271	874,242	518,971	146·1
Hat, cap	457,453	916,427	458,974	100·3
Oatmeal, starch, &c. ..	523,374	960,184	436,810	83·5
Brass, copper	248,413	682,314	433,901	174·7
Biscuit	669,841	1,098,338	428,497	64·0
Malt	409,332	822,561	413,229	101·0
Soap, candle	721,845	1,134,820	412,975	57·2
Fancy cardboard box ..	138,285	491,729	353,444	255·6

OUTPUT OF INDUSTRIES, 1915 AND 1920-21—continued.

Industry.	Value of Output.		Increase in Five Years.	
	1915.	1920-21.	Value.	Per cent.
	£	£	£	
Timepiece, jewellery, &c. ..	313,990	662,021	348,031	110·8
Glass bottles	189,271	503,694	314,423	166·1
Fancy leather	195,004	499,185	304,181	156·0
Rope, twine, &c.	445,436	729,747	284,311	63·8
Paper, strawboard, &c. ..	125,060	386,198	261,138	208·8
Aerated water	394,994	649,013	254,019	64·3
Upholstering, bedding, &c. ..	195,278	443,596	248,318	127·2
Match	198,598	444,927	246,329	124·0
Cement, &c.	170,368	371,470	201,102	118·0
All others	7,399,499	11,092,903	3,693,404	49·9
Total	51,466,093	106,008,294	54,542,201	106·0

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., 1911 to 1920-21.

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.
			£			£
1911	88	2,005	165,964	2,123	97	198,692
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

The quantity of bark used in connexion with tanning operations in 1920-21 was 10,709 tons. The output of tanneries for each of the last ten years was as follows:—

OUTPUT OF TANNERIES, ETC., 1911 to 1920-21.

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.			
1911 ..	523,989	199,257	817,866	1,301,298	9,356,529	1,843,189
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	1,538,173	13,843,439	3,962,202
1917-18 ..	601,950	217,605	1,418,595	1,641,000	24,560,590	5,061,235
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

The value of the leather, &c., imported into Victoria from oversea countries during the year ended 30th June, 1921, was £446,049.

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

SOAP AND CANDLE WORKS, 1911 to 1920-21.

Year.	Number of Establish- ments.	Value of Machinery and Plant in Use.	Number of Employees.	Amount of Wages Paid.	Products.		Value of Output.
					Soap.*	Candles.	
1911 ..	16	£ 113,664	528	£ 53,474	189,048 cwt.	41,557 cwt.	£ 572,000
1912 ..	17	117,034	593	61,398	215,629	40,157	562,013
1913 ..	18	117,692	561	60,703	223,598	39,099	610,881
1914 ..	17	120,215	604	65,155	243,558	37,564	641,104
1915 ..	17	121,946	627	71,282	267,426	41,031	721,845
1916-17 ..	18	128,100	670	84,036	214,526	38,746	802,179
1917-18 ..	17	130,795	756	91,604	228,310	37,290	951,114
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

* Not including soap made in small soap works not classified as factories, viz., 6,216 cwt. in 1911, 4,732 cwt. in 1912, 3,564 cwt. in 1913, 3,489 cwt. in 1914, 1,664 cwt. in 1915, 927 cwt. in 1916-17, 1,134 cwt. in 1917-18, 1,054 cwt. in 1918-19, 907 cwt. in 1919-20, and 996 cwt. in 1920-21.

The quantity of tallow used in 1920-21 in the manufacture of soap and candles was 134,431 cwt. in factories, and 368 cwt. in minor works.

The imports from oversea countries in 1920-21 included 290,152 lbs. of soap valued at £28,600, and 45,846 lbs. of candles valued at £2,841.

Brickyards, potteries, &c. Particulars relating to brickyards and potteries for the ten years 1911 to 1920-21 are shown in the following statement. The value of the land, plant, buildings, &c., used in connexion with such works in 1920-21 was £744,560.

BRICKS, POTTERY, PIPES, AND TILES, 1911 to 1920-21.

Year.	Number of Establishments.	Number of Employees.	Amount of Wages Paid	Number of Bricks Made.*	Value of—	
					Pipes and Tiles.	Pottery.
			£		£	£
1911 ..	120	1,856	197,282	153,944,800	97,478	35,522
1912 ..	119	2,047	236,526	180,724,200	123,944	44,788
1913 ..	106	1,974	233,157	175,644,900	132,709	32,839
1914 ..	109	2,117	260,877	188,238,420	124,826	47,948
1915 ..	89	1,839	230,969	142,601,380	134,623	52,732
1916-17 ..	79	1,636	200,781	108,444,400	147,840	57,266
1917-18 ..	78	1,842	231,090	107,139,000	171,836	73,398
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

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

The estimated value of bricks made in 1920-21 was £485,200, being an increase of £163,832 on the value of those made in the preceding year.

Forest saw-mills. Detailed information in regard to the forest saw-mills of the State for the ten years 1911 to 1920-21 is given in the table which follows:—

FOREST SAW-MILLS, 1911 to 1920-21.

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.	£
1911 ..	142	148,136	1,892	170,579	70,931,500	265,990
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

In addition to the forest saw-mills there were 334 other factories working in wood. Particulars relating to these for the year 1920-21 are given on page 551.

It is estimated that the approximate value of the production of firewood for consumption in the year 1920-21 was £923,200. 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 1904 the number of factories has increased by 120 per cent., the number of persons employed therein by 134 per cent., the amount of wages paid by 407 per cent., the value of machinery and plant by 175 per cent., the value of materials used by 537 per cent., and the value of the output by 468 per cent. The chief particulars of the industry for the years 1911 to 1920-21 are given in the next table:—

ENGINEERING, IRON FOUNDRY, ETC., 1911 to 1920-21.

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.
			£		£	£	£	£
1911..	304	4,746	553,685	7,372	762,324	913,476	77,674	2,194,805
1912..	326	5,857	635,481	8,649	988,802	1,154,377	83,841	2,640,453
1913..	345	6,670	715,909	8,745	1,029,136	1,206,001	90,005	2,824,892
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	1,340,270	106,483	3,029,713
1916-17	364	7,964	809,940	7,726	1,008,627	1,366,280	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	4,220,094
1920-21	510	11,567	1,207,930	10,265	1,984,834	2,882,847	206,806	6,206,289

The above figures are exclusive of railway workshops, which in 1920-21 numbered 19, and gave employment to 5,387 hands who were paid £1,163,669; the value of the materials dealt with in that year was £1,131,604, and the value of the output was £2,566,571, of which 69 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, 1911 TO 1920-21.

Year.	No. of Factories.	No. of Employees.	Wages Paid.	Approximate Value of—		
				Fuel, &c., Used.	Materials Used.	Output.
			£	£	£	£
1911 ..	59	2,651	297,824	19,299	345,665	831,474
1912 ..	67	2,590	309,789	19,388	329,397	799,217
1913 ..	66	2,166	268,880	16,915	324,063	710,832
1914 ..	65	1,895	242,158	16,866	278,283	638,827
1915 ..	64	1,678	206,764	15,337	213,257	526,756
1916-17 ..	63	1,832	250,450	18,666	359,342	743,196
1917-18 ..	62	1,904	261,045	20,911	435,665	830,876
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

The year under review, 1920-21, 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 nearly double the amount for the year 1911, which was the most successful year in the history of the industry. The number of employees in 1920-21 was practically the same as in 1911.

The wages averaged for each employee £89 19s. 5d. in 1904 and £194 0s. 1d. in 1920-21. 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 1911 to 1920-21. The value of the machinery, plant, land and buildings in connexion with these establishments was £75,299 in 1911 and £276,295 in 1920-21.

BACON CURING, 1911 to 1920-21.

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.	£
1911 ..	26	349	39,041	177,029	15,190,449	549,748
1912 ..	29	399	45,794	179,717	16,044,228	634,366
1913 ..	28	423	49,305	179,710	16,345,955	726,906
1914 ..	26	442	57,965	181,756	16,298,474	772,318
1915 ..	25	362	49,672	129,259	11,451,031	767,778
1916-17 ..	23	405	58,191	167,003	15,376,600	972,477
1917-18 ..	21	433	65,870	197,880	17,908,100	1,084,440
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

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 695 in 1911, 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, and 150 in 1920-21; the quantity (in pounds) of bacon and hams cured was 70,440 in 1911, 50,500 in 1912, 51,620 in 1913, 87,258 in 1914, 45,030 in 1915, 31,300 in 1916-17, 12,970 in 1917-18, 9,790 in 1918-19, 11,500 in 1919-20, and 14,000 in 1920-21.

In addition, the following quantities of bacon and hams were returned as having been cured on farms:—4,356,323 lbs. in 1911, 3,999,478 lbs. in 1912, 2,943,303 lbs. in 1913, 2,476,023 lbs. in 1914, 2,208,943 lbs. in 1915, 2,738,428 lbs. in 1916-17, 3,403,776 lbs. in

1917-18, 3,859,205 lbs. in 1918-19, 2,698,919 lbs. in 1919-20, and 1,755,993 lbs. in 1920-21. The total quantity of bacon and hams cured in 1920-21 was thus 15,139,100 lbs.—a decrease of 4,246,409 lbs. as compared with 1919-20.

The number of butter, cheese, and kindred factories in 1920-21 was 184. Of these 152 were making butter, 25 cheese, 3 concentrated milk, 7 condensed milk, 16 powdered milk, 13 casein and 1 milk sugar. There were also 23 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 1911 to 1920-21 were as follows:—

BUTTER AND CHEESE FACTORIES, 1911 TO 1920-21.

Year.	Number of Factories.	Value of Machinery, Plant, Land, and Buildings.	Number of Employees.	Amount of Wages Paid.	Value of Output.
		£		£	£
1911	199	626,331	1,489	147,897	3,964,312
1912	197	635,358	1,374	152,922	3,636,174
1913	197	649,931	1,311	159,529	3,562,057
1914	197	643,677	1,290	161,740	3,228,640
1915	190	644,960	1,145	139,543	2,715,784
1916-17	182	647,128	1,398	185,024	4,815,833
1917-18	181	683,140	1,642	226,050	5,086,238
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

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 524.

Meat freezing and preserving works numbered sixteen in 1920-21, and gave employment to 888 hands and two working proprietors, the wages of the hands amounting to £200,207. The approximate value of machinery, plant, land and buildings in that year was £980,670. The output for each of the last ten years is given in the following table:—

MEAT FREEZING AND PRESERVING, 1911 TO 1920-21.

Year.	Frozen.			
	Cattle.	Sheep.	Rabbits.	Poultry.
	Qrs.	No.	No.	No.
1911	40,184	1,578,133	2,312,928	35,388
1912	29,752	1,409,243	2,101,704	28,824
1913	126,568	2,107,180	4,674,588	25,284
1914	212,520	1,710,152	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	59,648	786,086	2,189,378	9,468

Year.	Preserved.			
	Beef.	Mutton.	Rabbits.	Other Meats, &c.
	Cwt.	Cwt.	Cwt.	Cwt.
1911	28,654	14,890	3,422	2,679
1912	37,984	22,387	..	3,056
1913	49,445	8,793	63	3,321
1914	49,103	7,316	2,368	5,936
1915	38,835	2,092	422	3,448
1916-17	15,591	4,484	5,245	2,693
1917-18	17,810	28,530	9,530	15,110
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

NOTE.—In addition to the above, there were treated at freezing works 7,308 calves, 1,609 pigs, and 58,008 hares in 1911; 3,355 calves, 3,120 pigs, and 43,224 hares in 1912; 5,050 calves, and 39,420 hares in 1913; 11,708 calves, 1,713 pigs, and 57,576 hares in 1914; 3,072 hares in 1915; 1,120 calves, 156 pigs, and 6,872 hares in 1916-17; 166 calves, 971 pigs, and 9,180 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; and 2,569 calves and 5,465 pigs in 1920-21.

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, 1921 :—

MEATS IMPORTED AND EXPORTED OVERSEA, 1920-21.

	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Meats, Frozen—				
Mutton .. ..	..	..	16,583,694 lbs.	362,296
Lamb .. ..	..	..	13,362,144 „	483,359
Beef	72 lbs.	5	1,911,841 „	42,803
Rabbits and Hares .. ..	..	..	1,094,689 prs.	131,130
Game	1,432 lbs.	386	..	..
Other	1,250 „	171	..	17,394
Meats—Potted and Concentrated				
.. ..	..	9,697	..	14,041
.. Preserved in tins	63,988 lbs.	5,835	1,208,596 lbs.	50,789
.. Sausage Casings ..	..	78,392	..	78,284
.. Not elsewhere included ..	..	171	..	3,686
Total value ..	..	94,657	..	1,183,782

Flour mills. The value of the machinery, plant, land and buildings used in connexion with flour mills was estimated at £460,713 in 1910, and at £591,685 in 1920-21. Particulars of the industry for the ten years 1911 to 1920-21 are as follows :—

FLOUR MILLS, 1911 to 1920-21.

Year.	Number of Mills.	Number of Employees.	Amount of Wages Paid.	Wheat Ground into Flour.	Flour Made.	Value of Total Output.
			£	busbels.	tons.	£
1911 ..	61	784	93,503	12,266,013	247,434	2,456,533
1912 ..	61	790	95,266	11,185,138	225,376	2,565,914
1913 ..	61	790	102,882	12,459,988	252,763	2,633,694
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	126,289	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

In addition to the flour made, the wheat ground in 1920-21 produced 5,927,600 bushels of bran and 5,008,080 bushels of pollard. Other grain operated on amounted to 84,707 bushels in 1911, 98,243 bushels in 1912, 39,826 bushels in 1913, 38,992 bushels in 1914, 43,618 bushels in 1915, 44,150 bushels in 1916-17, 31,960 bushels in 1917-18, 40,113 bushels in 1918-19, 39,235 bushels in 1919-20, and 40,094 bushels in 1920-21.

Exports of bread-stuffs.

During the year 1920-21, 2,919,774 lbs. of biscuits, valued at £110,609, and 87,423 tons of flour, valued at £1,900,888, were exported from Victoria to countries beyond Australia.

Jam, pickle, and sauce works.

In 1920-21 there were 42 establishments in which the manufacture of jams, pickles, and sauces was carried on, and the number of persons employed therein was 2,098, of whom 38 were working proprietors. The wages paid to the employees amounted to £270,555, and the value of machinery, plant, land and buildings was £335,185. 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, 1911 to 1920-21.

Year.	Fruit Used.	Sugar Used.	Jams and Jellies Made.	Fruit Preserved.	Fruit Pulped.	Sauce Made.	Pickles Made.
	cwt.	cwt.	cwt.	cwt.	cwt.	pints.	pints.
1911 ..	315,362	156,376	286,543	53,562	52,427	4,348,500	1,617,156
1912 ..	307,458	154,381	258,470	63,133	56,488	5,886,336	1,482,252
1913 ..	400,048	179,243	265,727	102,608	100,690	6,458,748	1,752,396
1914 ..	341,189	175,538	271,755	81,425	75,299	5,648,280	1,840,920
1915 ..	300,861	193,243	305,445	52,939	40,993	5,827,176	1,285,476
1916-17..	372,424	257,481	347,152	60,419	132,182	6,433,032	1,803,408
1917-18..	497,650	286,860	398,500	115,580	94,810	7,064,520	1,972,320
1918-19..	496,690	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

Some of these establishments also candied fruit peel, the quantities being 3,549 cwt. in 1911, 2,763 cwt. in 1912, 5,519 cwt. in 1913, 6,892 cwt. in 1914, 4,628 cwt. in 1915, 3,360 cwt. in 1916-17, 9,330 cwt. in 1917-18, 8,449 cwt. in 1918-19, 10,466 cwt. in 1919-20, and 13,306 cwt. in 1920-21. The value of the output in 1920-21 of the whole of the establishments whose produce is shown in the above table was £2,031,226.

Beet Sugar Industry.

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

Season.	Area Harvested.	Sugar Beet Harvested.	Sugar Produced.
	acres.	tons.	tons.
1911-12	752	4,000	519
1912-13	900	6,207	648
1913-14	1,000	7,431	920
1914-15	990	8,843	1,181
1915-16	461	4,928	560
1916-17	1,320	15,159	1,948
1917-18	1,200	14,487	1,650
1918-19	1,009	12,289	1,263
1919-20	1,080	13,084	1,551
1920-21	1,180	7,147	833

Owing to an absence of soaking subsoil rains, and a very dry autumn, the crops were very disappointing last season, but a large area is under preparation for next season.

Breweries. Particulars regarding breweries for the ten years 1911 to 1920-21 are set forth in the next table. Machinery and plant were valued at £318,072 in 1911 and at £441,470 in 1920-21, whilst land and buildings were valued at £357,952 in 1911 and at £391,335 in 1920-21. The wages paid in 1920-21 amounted to £270,595.

BREWERIES, 1911 to 1920-21.

Year.	Number of Breweries.	Number of Employees.	Materials Used—			Beer Made.	Value of Output.
			Sugar.	Malt.	Hops.		
			cwt.	bushels.	lbs.	gallons.	£
1911	33	1,009	111,314	548,341	649,892	19,077,420	912,829
1912	29	984	119,667	566,779	659,323	20,247,337	980,927
1913	26	966	123,073	586,375	653,803	20,925,354	1,024,708
1914	25	1,036	133,707	678,526	738,953	23,865,467	1,196,306
1915	22	893	111,363	600,333	661,299	20,339,924	1,061,196
1916-17	19	857	105,238	616,630	710,470	20,111,704	1,118,288
1917-18	18	866	109,640	650,500	748,840	21,021,070	1,334,344
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	21,377,100	2,098,720

Distilleries. The number of distilleries working in 1920-21 was 10, and the persons employed numbered 145, of whom 2 were working proprietors. The estimated value of the machinery, plant, land and buildings was £175,470. The quantities of materials used in manufacture and of spirits distilled in each of the last ten years were as follows:—

DISTILLERIES, 1911 to 1920-21.

Year.	Materials Used.				Spirits Distilled.
	Wine.	Malt.	Other Grain.	Molasses.	
	gallons.	bushels.	bushels.	lbs.	proof gal.
1911	370,119	61,981	752	1,293,152	298,237
1912	580,976	..	..	791,056	152,645
1913	944,277	54,544	..	1,057,280	335,251
1914	1,248,957	39,043	118	1,649,760	409,815
1915	984,817	34,896	118	1,592,640	386,152
1916-17	1,452,048	176,472	170	1,093,120	658,357
1917-18	1,137,640	376,830	..	3,962,560	1,150,091
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

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:—29,745 gallons in 1911, 23,874 gallons in 1912, 13,357 gallons in 1913, 12,256 gallons in 1914, 9,955 gallons in 1915, 9,937 gallons in 1916-17, 5,134 gallons in 1917-18, 2,232 gallons in 1918-19, 5,141 gallons in 1919-20, and 15,486 gallons in 1920-21.

Tobacco factories. The number of tobacco, cigar, and cigarette factories licensed in 1920-21 was twenty-eight, of which twelve were too small to be classified as ordinary factories and were consequently not included in the statistical tabulation on page 552. In the year mentioned the remaining sixteen employed 1,969 hands, who were paid £334,748 in wages; also 17 working proprietors; and used machinery, plant, land and buildings valued at £318,730. 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, 1911 TO 1920-21.

Year.	Unmanufactured Leaf Operated on.		Quantity Manufactured of—			
	Australian.	Imported.	Tobacco.	Snuff.	Cigars.	Cigarettes.
	lbs.	lbs.	lbs.	lbs.	No.	No.
1911 ..	180,501	4,972,275	5,521,175	603	22,424,806	116,435,800
1912 ..	165,156	5,137,331	5,641,647	702	23,333,951	97,400,400
1913 ..	254,561	5,113,935	5,605,566	500	25,019,435	103,382,600
1914 ..	340,296	4,708,548	5,140,695	746	23,533,572	140,100,500
1915 ..	515,969	4,414,921	5,022,910	565	22,676,586	138,111,000
1916-17 ..	656,320	5,254,110	6,089,929	446	26,268,733	123,480,200
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

Woollen mills. There were seventeen woollen mills working in 1920-21, and the number of persons employed therein was 3,342, of whom fifteen were working proprietors. The wages paid to employees amounted to £444,631, and the approximate value of the machinery, plant, land and buildings was £1,313,630. The value of the raw materials used in mills during the year was £1,166,201, and that of the goods manufactured in the same period was £2,397,610. The

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

WOOLLEN MILLS, 1911 to 1920-21.

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.	£
1911	3,409,105	897,804	901,348	4,691,255	240,961	13,718	473,686
1912	3,265,390	1,061,201	1,013,444	4,604,654	265,637	14,476	473,880
1913	3,489,150	1,068,214	1,017,776	4,965,527	287,814	19,443	513,252
1914	3,607,690	1,075,666	1,036,079	5,546,841	258,859	22,455	577,434
1915	6,521,130	702,653	1,331,137	5,136,258	347,988	6,418	931,774
1916-17	5,114,320	599,288	1,238,363	5,250,093	259,080	3,661	1,006,635
1917-18	4,332,420	832,400	1,429,050	5,411,990	214,410	8,560	1,036,081
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	4,033,238	224,745	47,179	2,397,610

During the period 1911 to 1920-21 the value of the output of woollen mills increased by 406 per cent. The quantity of tweed and cloth manufactured increased by 178 per cent., and was greater than in any previous year. There was a falling off in the output of flannel and blankets.

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

BOOT FACTORIES, 1911 to 1920-21.

Year.	Number of Factories.	Persons Employed.	Value of Land, Buildings, and Machinery.	Wages Paid.
			£	£
1911	154	7,001	363,540	542,707
1912	151	6,774	378,501	570,025
1913	162	6,951	426,573	578,503
1914	172	6,924	455,168	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

OUTPUT OF BOOT FACTORIES, 1911 TO 1920-21.

Year.	* Goods Manufactured—		Value of Materials Used.	Value of Output.
	Boots and Shoes.	Slippers.*		
	No. of pairs.	No. of pairs.	£	£
1911	5,198,030	164,313	1,103,653	1,878,308
1912	4,966,768	220,616	1,132,045	1,951,998
1913	5,013,143	254,844	1,230,725	2,094,866
1914	4,913,593	272,866	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	5,535,636	471,072	2,911,852	4,964,462

* 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 £12,994,011 in 1920-21, as compared with £4,756,604 in 1911. During the period 1911 to 1920-21 the persons employed increased by 1 per cent., the wages paid by 107 per cent., the value of materials used by 205 per cent., and the value of the output by 173 per cent. Particulars of the industry for each of the last ten years are as follows :—

DRESS (EXCLUSIVE OF BOOT) FACTORIES, 1911 TO 1920-21.

Year.	Number of Factories.	Number of Persons Employed.			Amount of Wages Paid.	Value of Materials Used.	Value of Output.
		Males.	Females.	Total.			
					£	£	£
1911 ..	1,213	3,921	26,114	30,035	1,384,678	2,557,287	4,756,604
1912 ..	1,205	4,067	26,255	30,322	1,532,559	2,760,001	5,184,535
1913 ..	1,296	4,221	25,955	30,176	1,579,957	2,868,302	5,430,240
1914 ..	1,298	4,019	25,660	29,679	1,591,133	3,001,379	5,568,744
1915 ..	1,198	3,833	24,126	27,959	1,554,921	3,295,009	5,901,238
1916-17	1,196	3,744	25,739	29,483	1,747,478	3,919,333	6,765,326
1917-18	1,209	3,730	24,630	28,360	1,788,136	4,512,648	7,674,705
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

Electric light and power works.

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

ELECTRIC LIGHT AND POWER WORKS, 1911 TO 1920-21.

Year.	Number of Stations.	Horse-power of Machinery.	Value of Machinery and Plant.	Persons Employed.	Wages Paid.	Electricity Supplied.	Value of Output.
			£		£	British Units.	£
1911 ..	20	15,819	733,769	590	75,722	23,011,340	270,498
1912 ..	24	20,005	912,712	666	89,435	27,579,734	309,156
1913 ..	51	26,213	1,165,020	860	114,874	35,637,971	400,192
1914 ..	58	28,485	1,418,511	924	131,854	44,890,249	473,918
1915 ..	63	33,127	1,569,553	957	135,045	53,209,990	536,251
1916-17	74	42,144	1,787,477	1,144	178,430	71,622,490	673,769
1917-18	75	48,526	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

The electricity supplied in 1920-21 represented an increase of 400 per cent. on that supplied in 1911.

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 £1,739,507 in 1911, and £1,926,265 in 1920-21. The gas made in the latter year was 60 per cent. in excess of that made in 1911. Particulars in regard to these works are given below.

GASWORKS, 1911 TO 1920-21.

Year.	Number of Works.*	Persons Employed.	Wages Paid.	Coal Used.	Gas Made.	Coke Produced.	Value of Output.
			£	tons.	cubic feet.	tons.	£
1911 ..	47	1,601	230,626	261,848	2,813,159,700	155,488	810,414
1912 ..	47	1,835	275,755	284,670	3,108,555,700	171,750	873,134
1913 ..	47	1,973	302,354	294,541	3,480,180,200	176,810	935,910
1914 ..	47	2,117	332,971	300,152	3,806,380,100	195,178	979,229
1915 ..	47	2,175	347,434	307,902	4,107,577,600	204,957	1,035,941
1916-17 ..	47	2,093	365,777	317,450	4,449,230,000	200,673	1,181,066
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	2,277	472,855	331,149	4,592,335,000	203,245	1,395,320
1920-21 ..	45	2,213	576,515	339,250	4,499,088,000	216,771	1,608,999

* Including one establishment manufacturing coke only, which was not working during 1919-20.

Oil was used as well as coal in the manufacture of gas, the number of gallons consumed each year being 274,353 in 1911, 306,405 in 1912,

348,385 in 1913, 332,586 in 1914, 328,230 in 1915, 345,272 in 1916-17, 396,717 in 1917-18, 355,933 in 1918-19, 343,764 in 1919-20, and 360,876 in 1920-21.

The facilities afforded in the metropolitan area have had the effect of bringing within that area the more important of the manufactories. The distribution of factories by classes as between the metropolis and the remainder of the State, for the years 1903, 1911, 1919-20, and 1920-21, is exhibited in the following statement:—

NUMBER AND LOCATION OF FACTORIES.

Class of Industry.	Number of Factories.							
	Metropolis.				Remainder of State.			
	1903.	1911.	1919-20	1920-21	1903.	1911.	1919-20	1920-21.
Treating raw material, product of pastoral pursuits, &c. ..	97	84	96	95	227	253	209	207
Treating oils and fats, animal, vegetable, &c. ..	12	12	16	18	12	11	10	9
Processes in stone, clay, glass, &c. ..	79	96	114	126	112	119	82	82
Working in wood ..	107	168	226	250	161	207	286	330
Metal works, machinery, &c. ..	304	440	577	654	241	234	197	209
Connected with food and drink, &c. ..	160	197	261	271	461	454	415	429
Clothing and textile fabrics, &c. ..	827	1,128	1,249	1,361	281	288	324	348
Books, paper, printing, &c. ..	193	255	309	328	104	165	156	155
Musical instruments, &c. ..	2	5	12	15	..	..	..	1
Arms and explosives ..	2	6	10	11	3	3	..	..
Vehicles, saddlery, harness, &c. ..	164	219	291	329	170	191	321	345
Ship and boat building and repairing ..	6	11	10	10	2	1	2	2
Furniture, upholstery, and bedding ..	169	222	304	353	18	20	28	33
Drugs, chemicals, and by-products ..	45	50	79	83	17	31	45	39
Surgical and other scientific appliances ..	9	16	30	32	..	1	3	2
Jewellery, time-pieces, and platedware ..	47	74	92	100	5	6	7	7
Heat, light, and power ..	25	29	62	69	43	54	108	111
Leatherware, n.e.i. ..	20	32	45	53	1	..	..	..
Minor wares, n.e.i. ..	25	44	60	62	..	..	2	3
Totals ..	2,293	3,088	3,843	4,220	1,858	2,038	2,195	2,312

Since 1903 the number of factories in the State has increased by 2,381, the greatest numerical increase in the classes being that

of the clothing and textile factories, of which there were 601 more in 1920-21 than in 1903.

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

AVERAGE NUMBER OF PERSONS EMPLOYED IN
FACTORIES.

Class of Industry.	1903.	1917-18.	1918-19.	1919-20.	1920-21.
Treating raw materials, product of pastoral pursuits, &c. ..	2,976	3,632	4,204	4,759	4,045
Treating oils and fats, animal, vegetable, &c. ..	528	883	807	878	835
Processes in stone, clay, glass, &c. ..	3,076	3,921	4,436	4,828	5,486
Working in wood ..	3,713	6,948	7,669	8,802	9,529
Metal works, machinery, &c. ..	10,350	16,183	16,261	19,079	23,276
Connected with food and drink, &c. ..	10,602	17,100	19,185	20,545	17,673
Clothing and textile fabrics, &c.	26,301	40,312	39,739	44,245	44,341
Books, paper, printing, &c. ..	6,525	8,940	9,051	9,487	10,281
Musical instruments, &c. ..	25	229	255	285	334
Arms and explosives ..	342	1,030	864	839	650
Vehicles, saddlery, harness, &c.	2,973	4,654	4,974	5,707	6,087
Ship and boat building and repairing ..	98	653	692	938	900
Furniture, bedding, and upholstery ..	1,978	2,867	3,023	3,657	3,917
Drugs, chemicals, and by-products ..	987	2,207	2,268	2,447	2,564
Surgical and other scientific appliances..	35	149	159	174	199
Jewellery, time-pieces, and plated ware ..	594	1,028	1,199	1,347	1,397
Heat, light, and power ..	988	4,146	4,289	4,466	4,738
Leatherware, n.e.i. ..	283	750	762	1,045	1,057
Minor wares, n.e.i. ..	855	2,609	2,512	2,994	3,384
Total ..	73,229	118,241	122,349	136,522	140,743

The total increase in the number of hands employed during the period covered by the above table was 67,514, and represented an advance of about 92 per cent. The greatest development had taken place in clothing factories, metal works, and industries connected with food, drink, &c., which showed increases of 18,040, 12,926, and 7,071 respectively in the number of persons employed in 1920-21 as compared with the number in 1903.

Size of factories. An examination of the figures relating to different factories in 1911 and 1920-21 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 23 per cent., and the number of hands engaged therein by 33 per cent., whilst the factories employing less than 100 and their employees have increased by 28 and 21 per cent. respectively. Particulars of factories of different sizes in 1911 and 1920-21 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.	
	1911.	1920-21.	1911.	1920-21.
Under 4 hands	727	1,240	1,779	2,819
4	550	685	2,200	2,740
5 to 10	1,868	2,201	13,022	15,289
11 to 20	901	1,069	13,496	15,554
21 to 50	673	849	20,896	26,917
51 to 100	221	259	15,537	17,566
Over 100	186	229	45,018	59,858
Total	5,126	6,532	111,948	140,743

PROPORTION OF FACTORIES OF DIFFERENT SIZES.

Size of Factory.	Percentage to Total.			
	Factories.		Hands.	
	1911.	1920-21.	1911.	1920-21.
Under 4 hands	14·18	18·97	1·59	2·00
4	10·73	10·49	1·97	1·95
5 to 10	36·44	33·70	11·63	10·87
11 to 20	17·58	16·37	12·05	11·05
21 to 50	13·13	13·00	18·67	19·12
51 to 100	4·31	3·96	13·87	12·48
Over 100	3·63	3·51	40·22	42·53
Total	100·00	100·00	100·00	100·00

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

OCCUPATIONS OF PERSONS EMPLOYED IN FACTORIES.

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

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

Sex distribution in factories. The average numbers of males and females employed in factories, and their proportions to the male and female populations for the years 1911 to 1920-21 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.
1911 ..	73,573	1,118	38,375	579	111,948	848
1912 ..	77,565	1,145	38,543	567	116,108	856
1913 ..	80,054	1,151	38,690	554	118,744	852
1914 ..	79,772	1,119	38,627	543	118,399	832
1915 ..	75,971	1,097	37,863	522	113,834	798
1916-17 ..	74,924	1,123	42,046	574	116,970	836
1917-18 ..	76,654	1,142	41,587	562	118,241	838
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

Males formed 65·7 per cent. in 1911 and 68·5 per cent. in 1920-21 of the total persons employed. The increase during the period 1911 to 1920-21 in the number of males employed was 22,806, or 31 per cent., and in the number of females employed 5,989, or 15·6 per cent.

Of the total females in factories 72·0 per cent. are engaged in the textile and clothing industries, and 10·7 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, 1920-21.

Industry.	Number Employed.		Females per 100 Males.
	Males.	Females.	
Biscuit	882	558	63·27
Jam, pickle, and sauce	1,191	907	76·15
Confectionery	1,505	1,603	106·51
Tobacco, &c.	1,223	763	62·39
Woollen mills	1,536	1,806	117·58
Clothing, tailoring, &c.	2,106	7,089	336·61
Dressmaking, millinery	333	8,780	2,636·64
Underclothing	338	5,300	1,568·05
Hats, caps, &c.	709	880	124·12
Hosiery	535	3,167	591·96
Waterproof clothing	57	132	231·58
Boots and shoes	5,630	3,582	63·62
Printing, &c.	5,458	1,500	27·48
Bookbinding, stationery, &c.	667	646	96·85
Fancy-box, &c.	222	747	336·49
Rope, twine	618	370	59·87
Sail, tent.. .. .	95	74	77·89
Ammunition	167	164	98·20
Match	171	456	266·67
Fancy leather	461	420	91·11
Rubber goods	1,939	718	37·03
All other factories	70,536	4,702	6·67
Total	96,379	44,364	46·03

A very favorable feature of factory statistics in the past few years has been the small proportion of children, especially girls, engaged in factories. Of the male and female employees, boys and girls under 16 represented only 4·11 and 6·39 per cent. respectively in 1920-21, as against 6·05 and 11·47 per cent. in 1904. The number of children employed in factories and their

Child labour
in factories.

proportions to the total employees are given in the subjoined table for the years 1911 to 1920-21 :—

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.
1911 ..	2,623	1,937	4,560	3·57	5·05	4·07
1912 ..	2,652	1,740	4,392	3·42	4·51	3·78
1913 ..	2,743	1,840	4,583	3·43	4·76	3·86
1914 ..	2,898	1,816	4,714	3·63	4·70	3·98
1915 ..	3,355	2,197	5,552	4·42	5·80	4·88
1916-17 ..	3,072	2,301	5,373	4·10	5·47	4·59
1917-18 ..	3,195	2,447	5,642	4·17	5·88	4·77
1918-19 ..	3,137	2,389	5,526	3·85	5·83	4·52
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

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 1911 to 1920-21 :—

MACHINERY IN FACTORIES.

Year.	Number of Factories equipped with Machinery.	Value of Machinery and Plant.	Horse-power of Engines.
		£	
1911	3,474	8,336,373	79,515
1912	3,653	9,095,134	89,290
1913	3,990	10,022,429	105,224
1914	4,106	10,727,526	110,055
1915	4,089	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

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, 1911 TO 1920-21.

Year.	Number of Factories using—					
	Steam.	Gas.	Electricity.	Oil.	Water, Wind, or Horses.	Manual Labour.
1911	1,147	811	1,164	255	97	1,652
1912	1,134	821	1,327	269	102	1,610
1913	1,114	883	1,579	335	79	1,623
1914	1,040	858	1,782	348	78	1,544
1915	961	824	1,915	330	59	1,324
1916-17 ..	931	800	2,142	311	42	1,219
1917-18 ..	896	784	2,365	285	41	1,256
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

Year.	Actual Horse-power of Engines.				
	Steam.	Gas.	Electricity.	Oil.	Total.
1911	54,282	11,862	11,764	1,607	79,515
1912	59,262	13,745	14,505	1,778	89,290
1913	67,262	16,759	18,732	2,471	105,224
1914	67,649	17,432	22,584	2,390	110,055
1915	71,223	17,935	26,385	2,272	117,815
1916-17 ..	81,611	18,651	34,348	2,375	136,985
1917-18 ..	89,561	19,045	38,246	2,243	149,095
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

Although steam is the principal motive power, and was used to supply 57 per cent. of the total mechanical power employed in factories in 1920-21, a remarkable development is shown in the use of electricity, which in 1911 was used by 1,164, and in 1920-21 by 3,128 factories, the actual horse-power increasing from 11,764 to 56,602 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.
1911 ..	796,957	68,458	6,560,778	1,484,826	148 19 3	55 11 4	103 1 2	40 13 6
1912 ..	917,125	85,793	7,471,488	1,627,838	165 9 1	70 1 10	111 0 8	44 6 6
1913 ..	1,097,574	109,381	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	1,364,289	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	12,552,217	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	3,398,275	298 19 7	124 15 2	185 12 4	82 5 11

Owing to the lack of data, a comparison of the wages of males and females is not possible prior to 1910. 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 1920-21, £21,377,216, represents an average payment for all employees of £159 8s. 4d., which is an increase of £23 17s. 11d. on the average wage for 1919-20, of £38 18s. 11d. on that for 1918-19, of £48 13s. on that for 1917-18, of £53 10s. 10d. on that for 1916-17, of £57 13s. 4d. on that for 1915, of £60 18s. 4d. on that for 1914, of £64 13s. 7d. on that for 1913, of £68 4s. 4d. on that for 1912, of £75 18s. 4d. on that for 1911, and of £81 4s. 4d. on that for 1910. Concurrent with this increase there was a slight change in the relative proportions of male and female workers during the ten years, the percentages of male to total employees being 67 in 1920-21, 66 in 1912, 1913, 1914, 1915, and 1919-20, 65 in 1911 and 1918-19, 64 in 1910 and 1917-18, and 63 in 1916-17. The above average wage for 1920-21 (£159 8s. 4d.) 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.

Cost and value
of production
in factories.

The cost of production and the value of the output in each class of manufacturing industry during the year 1920-21 are given in the subjoined statement:—

FACTORY COSTS AND OUTPUT, 1920-21.

Class of Industry.	Cost of—			Value of Output.
	Raw Materials Used.	Fuel, Light, and Power Used.	Salaries and Wages Paid.	
	£	£	£	£
Treating raw material, product of pastoral pursuits, &c. . .	4,117,710	89,507	732,432	5,586,657
Treating oils and fats, animal, vegetable, &c. . .	1,017,962	45,561	142,673	1,432,360
Processes in stone, clay, glass, &c. . .	495,527	319,754	977,691	2,454,069
Working in wood . . .	2,394,495	37,446	1,673,041	5,128,861
Metal works, machinery, &c. . .	6,620,417	336,253	4,340,464	13,327,370
Connected with food and drink, &c. . .	27,064,634	519,098	2,953,232	34,604,156
Clothing and textile fabrics, &c. . .	12,664,750	174,185	4,718,656	21,512,682
Books, paper, printing, &c. . .	3,109,053	87,853	1,698,257	6,431,936
Musical instruments, &c. . .	58,928	1,336	64,857	155,070
Arms and explosives . . .	293,788	9,127	102,558	450,729
Vehicles, saddlery, harness, &c. . .	1,043,080	26,643	886,508	2,387,577
Ship and boat building and repairing . . .	153,438	8,667	199,892	435,530
Furniture, upholstery, and bedding . . .	1,048,103	15,929	564,458	1,929,098
Drugs, chemicals, and by-products . . .	1,859,234	49,546	418,686	2,750,221
Surgical and other scientific instruments . . .	23,527	760	25,931	67,556
Jewellery, time-pieces, and plated-ware . . .	309,087	5,883	199,749	662,021
Heat, light, and power . . .	1,070,130	390,227	1,032,679	3,511,261
Leatherware, n.e.i. . .	482,265	3,302	133,347	743,572
Minor wares, n.e.i. . .	1,575,297	63,019	512,105	2,437,568
Total . . .	65,401,425	2,184,096	21,377,216	106,008,294

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, 1920-21.

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.	73·71	1·60	13·11	11·58
Treating oils and fats, animal, vegetable, &c.	71·07	3·18	9·96	15·79
Processes in stone, clay, glass, &c.	20·19	13·03	39·84	26·94
Working in wood	46·69	0·73	32·62	19·96
Metal works, machinery, &c.	49·67	2·53	32·57	15·23
Connected with food and drink, &c.	78·21	1·50	8·53	11·76
Clothing and textile fabrics, &c.	58·87	0·81	21·93	18·39
Books, paper, printing, &c.	48·35	1·36	26·41	23·88
Musical instruments, &c.	38·00	0·86	41·82	19·32
Arms and explosives	65·18	2·03	22·75	10·04
Vehicles, saddlery, harness, &c.	43·69	1·12	37·13	18·06
Ship and boat building and repairing	35·23	1·99	45·90	16·88
Furniture, upholstery, and bedding	54·33	0·83	29·26	15·58
Drugs, chemicals, and by-products	67·60	1·80	15·23	15·37
Surgical and other scientific instruments	34·83	1·13.	38·39	25·65
Jewellery, time-pieces, and plated-ware	46·69	0·89	30·17	22·25
Heat, light, and power	30·48	11·11	29·41	29·00
Leatherware, n.e.i.	64·86	0·44	17·93	16·77
Minor wares, n.e.i.	64·62	2·59	21·01	11·78
Total	61·69	2·06	20·17	16·08

There are considerable variations in the proportions which the cost of materials and the expenditure on wages bear to the total output in the different classes of industries. These are, of course, due to the difference in the treatment required to present the raw material in its manufactured form. Thus in brickworks, &c., the cost of wages represents 40 per cent. and that of raw materials 20 per cent. of the value of the finished article, whilst in the industries connected with food and drink the expenditure on wages amounts to 9 per cent. and that on raw materials to over 78 per cent. of the value of the output.

Cost of
production,
1911 to
1920-21.

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 1911 to 1920-21 :—

**COST OF PRODUCTION AND VALUE OF OUTPUT OF
FACTORIES, 1911 to 1920-21.**

Year.	Cost of Production.				Total Value of Output.
	Materials.	Fuel, Light, and Power.	Salaries and Wages.	All other Expenditure, Interest, and Profit.	
	£	£	£	£	£
1911	25,029,525	637,497	8,911,019	7,169,822	41,747,863
1912	27,002,302	683,376	10,102,244	7,622,851	45,410,773
1913	28,465,699	739,835	10,714,336	8,016,777	47,936,647
1914	28,986,694	804,325	11,099,940	8,549,026	49,439,985
1915	30,723,743	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	80,195,677
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

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

**PROPORTION OF OUTLAY TO OUTPUT OF FACTORIES,
1911 to 1920-21.**

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

The ratio of salaries and wages to the value of the output of factories was 18·7 per cent. on the average of the past five years, as against 22·0

per cent. in the period 1911-15. The cost of materials was 63·2 per cent. of the value of output in the period 1916-17 to 1920-21 as compared with 59·4 per cent. in the years 1911-15. 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 4s. 9d. in every £100 of the total output value in the period 1916-17 to 1920-21, as against £17 0s. 11d. in the preceding five-year period.

Capital
invested in
manufacturing
plant and
premises.

In the following statement the amount of capital invested in machinery and plant and land and buildings used in connexion with the various classes of manufacturing industries is shown for the year 1920-21 :—

VALUE OF MACHINERY AND PLANT AND LAND AND BUILDINGS CONNECTED WITH FACTORIES, 1920-21.

Class of Industry.	Value of Machinery and Plant.	Value of Land and Buildings.
	£	£
Treating raw material, product of pastoral pursuits, &c.	588,490	687,540
Treating oils and fats, animal, vegetable, &c.	194,045	162,165
Processes in stone, clay, glass, &c.	690,145	637,005
Working in wood	886,610	606,460
Metal works, machinery, &c.	2,490,400	2,331,610
Connected with food and drink, &c.	3,819,015	3,793,630
Clothing and textile fabrics, &c.	2,107,270	3,438,815
Books, paper, printing, &c.	1,445,000	1,282,675
Musical instruments, &c.	20,315	88,195
Arms and explosives	207,450	190,095
Vehicles, saddlery, harness, &c.	268,965	905,415
Ship and boat building and repairing	106,360	253,270
Furniture, upholstery, and bedding	134,990	532,895
Drugs, chemicals, and by-products	411,915	527,540
Surgical and other scientific instruments	9,170	32,850
Jewellery, time-pieces, and plated-ware	51,975	187,720
Heat, light, and power	4,243,670	1,181,805
Leatherware, n.e.i.	34,095	125,965
Minor wares, n.e.i.	469,505	341,700
Total	18,179,385	17,313,350

The capital invested in plant, buildings, &c., used in connexion with three classes of industries—heat, light and power; food and drink; and metal works and machinery—amounted to £17,866,130, 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, 1911 TO 1920-21.

Year.						Value of Machinery and Plant.	Value of Land and Buildings.
						£	£
1911	..	..	..	..	..	8,336,373	9,921,516
1912	..	..	..	..	..	9,095,134	10,362,661
1913	..	..	..	..	..	10,022,429	10,753,309
1914	..	..	..	..	..	10,727,526	11,248,120
1915	..	..	..	..	..	11,068,949	11,460,123
1916-17	..	..	..	..	..	11,732,062	12,052,227
1917-18	..	..	..	..	..	12,612,797	12,847,485
1918-19	..	..	..	..	..	13,645,220	13,673,515
1919-20	..	..	..	..	..	15,846,935	14,957,585
1920-21	..	..	..	..	..	18,179,385	17,313,350

It will be seen from these figures that the value of machinery and plant more than doubled between 1911 and 1920-21, whilst that of the land and buildings showed an increase of £7,391,834, or 75 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 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, 1911 TO 1920.

Year.			Number of Employees.	Number of Accidents.	Percentage of Accidents to Number of Employees.
1911	..	..	88,694	337	·379
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

Manufactures— The foregoing tables do not include particulars relating to
Penal work of various kinds done by the Penal Department at
Department. Pentridge. At this establishment the manufacture of clothing, brushware, boots, mats, blankets, flannel, underclothing, bread, &c., and printing are carried on. The estimated value of the output for 1920-21 was £34,564, and that of the materials used was £26,484. The articles produced are used principally by Government Departments.

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

VALUE OF VICTORIAN PRODUCTION, 1916-17 to 1920-21.

Produce.	Value in—				
	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.
<i>Cultivation.</i>	£	£	£	£	£
Wheat	10,232,488	7,547,510	5,994,469	5,726,667	14,307,377
Oats	828,929	965,973	1,175,882	1,848,903	1,295,229
Barley, malting ..	158,735	207,275	272,567	304,377	263,963
" other	140,746	166,104	188,489	173,196	183,389
Maize	163,638	243,766	190,522	336,920	186,529
Other Cereals ..	49,592	60,961	49,915	58,207	49,532
Grass and Clover					
Seed	4,446	7,445	5,405	5,606	8,570
Potatoes	550,086	519,605	1,079,496	1,328,640	586,458
Onions	118,423	141,343	236,451	274,375	131,104
Other Root Crops	9,892	10,640	16,813	14,148	13,151
Hay	2,033,990	2,801,158	4,622,523	8,304,475	5,259,863
Straw	78,302	52,424	71,263	68,893	75,015
Green Forage* ..	149,001	167,709	368,205	449,010	397,620
Tobacco	840	943	6,513	16,240	3,800
Grapes, not made into wine, raisins, &c.	23,454	11,268	26,674	42,025	21,010
Raisins, ordinary ..	41,832	40,811	79,930	138,899	84,533
" sultanas	185,616	150,712	237,788	494,037	263,772
Currents	91,355	92,803	139,880	139,153	157,298
Wine	146,549	90,008	202,396	347,370	333,346
Hops	4,875	4,190	3,654	10,365	14,988
Other Crops	64,821	62,450	79,526	71,859	57,027
Fruit grown for sale in orchards and gardens	602,584	765,405	893,108	1,274,715	1,054,491
Fruit in private orchards and gar- dens	7,680	6,620	14,895	13,810	15,250
Market Gardens ..	268,650	284,050	405,790	442,155	427,035
Total	15,956,524	14,401,173	16,362,104	21,884,045	25,190,350

* Exclusive of area under sown grasses.

VALUE OF VICTORIAN PRODUCTION, 1916-17 TO 1920-21—continued:

Produce.	Value in—				
	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.
<i>Dairying and Pastoral.</i>	£	£	£	£	£
Milk consumed in natural state ..	1,646,520	1,755,620	2,034,510	2,424,050	2,622,010
Butter made ..	4,224,420	4,229,310	4,868,670	4,945,480	7,043,950
Cheese made ..	223,040	197,750	257,880	344,210	189,070
Cream made (not for butter) ..	26,840	25,690	29,290	32,970	76,560
Condensed, Concentrated, and Powdered Milk ..	777,810	1,005,580	1,331,240	1,516,000	1,885,030
Horses ..	262,020	70,880	97,640	..	..
Cattle ..	4,774,610	5,270,940	5,383,660	4,856,100	5,269,650
Pigs ..	825,450	1,002,250	884,280	2,782,290	1,250,680
Sheep (without wool) ..	3,928,860	3,641,630	3,288,330	1,139,960	1,750,220
Wool ..	5,927,814	6,410,077	7,621,410	7,908,010	4,729,400
Total ..	22,617,384	23,609,727	25,796,910	25,949,070	24,816,620
<i>Mining.</i>					
Gold ..	1,090,194	857,500	674,655	575,260	648,969
Coal ..	216,875	345,830	367,640	406,620	523,919
Stone from Quarries (including limestone) ..	125,106	171,990	189,770	800,100	383,002
Other Metals and Minerals ..	104,212	124,910	110,260	48,150	46,755
Total ..	1,536,387	1,500,230	1,342,325	1,830,130	1,607,645
<i>Forest Produce.</i>					
Timber (Forest Saw-mills only) ..	297,660	355,430	503,470	693,995	905,720
Firewood (estimated) ..	521,770	567,910	604,650	790,140	923,200
Bark for Tanning ..	117,230	116,460	120,300	153,260	125,830
Total ..	936,660	1,039,800	1,228,420	1,637,395	1,954,750
<i>Miscellaneous.</i>					
Honey and Beeswax ..	30,504	80,473	37,639	35,930	45,846
Poultry production (estimated) ..	1,714,770	2,160,650	2,738,620	3,579,230	4,545,620
Rabbits and Hares ..	110,770	266,490	210,130	913,220	401,690
Fish ..	121,634	137,423	172,977	181,760	167,340
Total ..	1,977,678	2,645,036	3,159,366	4,710,140	5,159,996
Total Value of Primary Products ..	43,024,633	43,195,966	47,889,125	55,510,780	58,729,361
Manufacturing—Added Value* ..	21,678,039	23,976,732	26,880,485	34,259,060	38,330,232
Grand Total ..	64,702,672	67,172,698	74,769,610	89,769,840	97,059,593

* 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 production in the year 1920-21 under the heading "Cultivation" was the highest on record. The value of dairying and pastoral production was lower, and that of mining production was higher in that year than in the preceding one. There has

been a marked improvement in the value of forest produce in recent years, this having advanced from £790,040 in 1911 to £1,954,750 in 1920-21.

The total value of primary production in 1920-21 was £58,729,361, or £3,218,581 more, and that of manufactures (added value) was £38,330,232, or £4,071,172 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,
1916-17 to 1920-21.**

Produce.	Value of Produce per head in—				
	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cultivation ..	11 8 0	10 4 2	11 8 9	14 12 7	16 11 6
Dairying and Pastoral	16 3 2	16 14 8	18 0 7	17 7 0	16 6 7
Mining ..	1 1 11	1 1 3	0 18 9	0 17 9	1 1 2
Forest ..	0 13 5	0 14 9	0 17 2	1 1 11	1 5 9
Miscellaneous ..	1 8 3	1 17 6	2 4 2	3 3 0	3 7 10
Total Primary Produce ..	30 14 9	30 12 4	33 9 5	37 2 3	38 12 10
Manufactures ..	15 9 9	16 19 10	18 15 9	22 18 1	25 4 5
Grand Total	46 4 6	47 12 2	52 5 2	60 0 4	63 17 3

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 63 per cent. higher in 1920-21 than in 1916-17.