

## PRODUCTION.

## LAND SETTLEMENT, ETC.

The return for 1907 received from the Lands Department shows that of the total area of the State (56,245,760 acres) 27,417,091 acres are held privately, 23,145,979 acres being alienated in fee simple, and 4,271,112 acres in process of alienation. Crown lands total 28,828,669 acres, and comprise roads in connexion with lands alienated and in process of alienation, 1,653,314 acres; agricultural college and water reserves, 443,960 acres; State forests and timber reserves, 4,648,596 acres; permanently reserved for public purposes, 1,592,400 acres; other reserves, 600,691 acres; unsold land in towns, &c., 1,460,023 acres; in occupation under grazing area leases, 3,402,536 acres; Mallee pastoral leases, 1,305,914 acres; all other licences and leases, 858,806 acres.

Private and Crown lands.

The present system of disposing of the Crown land of Victoria dates from the passing of the *Land Act* 1884 and the *Mallee Pastoral Leases Act* 1883, which, with subsequent amendments, were consolidated by the *Land Act* 1890. This Act was in turn amended by the *Land Acts* 1891, 1898, 1900, and 1900 (No. 2); and by the *Settlement on Lands Act* 1893, and the *Mallee Lands Act* 1896. These Acts were all consolidated into the *Land Act* 1901, which, again, has been amended by the *Land Acts* of 1903, 1904, and 1905.

Land Acts.

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

Lands available for occupation

lands of the Crown which are now available for selection, excluding available Mallee lands, are divided into the following classes:—

LANDS AVAILABLE FOR OCCUPATION 31ST DECEMBER, 1907.

County.	Classification.				
	First.	Second.	Third.	Auri-ferous.	Pastoral.
	acres.	acres.	acres.	acres.	acres.
Buln Buln .. .. .	10,105	21,934	45,173	407	..
Croajingolong .. .. .	..	..	500,820	14,150	562,700
Dargo .. .. .	..	..	70,440	96,600	246,100
Tambo .. .. .	..	..	216,930	3,800	370,460
Tanjil .. .. .	..	..	73,000	69,700	360,000
Wonnangatta .. .. .	..	320	120,299	..	946,400
Bogong .. .. .	1,199	8,769	145,813	141,665	221,300
Benambra .. .. .	..	..	142,711	90,577	420,780
Delatite .. .. .	638	24,317	187,992	69,883	180,300
Moirs .. .. .	..	..	5,585	..	..
Anglesey .. .. .	..	3,722	41,588	9,870	..
Bourke .. .. .	..	3,620	..	..	..
Dalhousie .. .. .	20	795	4,372	8,323	..
Evelyn .. .. .	706	23,570	..	9,590	..
Mornington .. .. .	..	5,178	56,220	..	..
Bendigo .. .. .	..	975	3,046	17,098	..
Rodney .. .. .	..	474	2,326	3,300	..
Borung .. .. .	427	1,351	41,290	19,711	5,147
Gladstone .. .. .	138	1,822	3,598	78,378	..
Lowan .. .. .	180	380	51,123	..	11,880
Kara Kara .. .. .	39	3,140	1,915	25,630	..
Talbot .. .. .	94	855	374	80,840	..
Tatchera .. .. .	..	70	..	..	..
Heytesbury .. .. .	..	1,050	170,094	..	..
Polwarth .. .. .	80	11,795	36,540	..	..
Grant .. .. .	..	75	27,919	21,000	..
Grenville .. .. .	..	40	..	26,700	..
Ripon .. .. .	..	40	11,235	9,694	..
Normanby .. .. .	..	486	79,059	..	..
Dundas .. .. .	425	40	28,815	..	..
Villiers .. .. .	..	..	238	..	..
Follett .. .. .	..	147	16,739	..	..
Total .. .. .	14,541	114,965	2,079,164	791,916	3,325,057

NOTE.—The figures in this table are exclusive of 2,228 acres of swamp or reclaimed lands and 17,380 acres of lands that may be sold by auction.

In addition there are 6,517,178 acres of Mallee land. The leases of these lands expired in 1903, and since that time the areas are held principally on grazing licences renewable annually—the Government being entitled to resume possession at any time, and thus they are classed amongst those lands available for occupation. The total area of land available is, therefore, 12,862,429 acres.

The *Land Act* 1903 introduced important amendments in regard to the classification of unalienated Crown lands. It is provided that any such land may, before or after being classified, be made available for selection. Before being made available a plan of the projected subdivision shall be prepared, and a provisional valuation and classification indicated thereon, specifying the rates of licence-fee, rent or purchase money payable therefor. On the completion of a permanent survey of an allotment the value may be determined either before or after an application to select it has been

granted by a Classification Board, and the licence-fee, rent, and purchase money shall be fixed to accord with the value so determined, and shall be substituted for the rates which would otherwise have been payable under the provisions of the Land Act of 1901. It is also provided that the Governor in Council may, if at any time it appears that the value of any unalienated land is greater than the value as fixed by the provisions of the Land Act of 1901, increase the rates of the licence-fees, rent or purchase-money payable in respect thereof.

The *Land Act* 1904 deals principally with procedure.

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

Crown lands of the first class, of which there are now 14,541 acres available for selection, are situated principally in the county of Buln Buln, and consist for the most part of good chocolate soil of volcanic origin, and the grey soil of the coal-bearing country. These areas are heavily timbered. The second class land is fairly distributed throughout the State, and comprises silurian and granite ranges, and lower lands of tertiary formation. A large portion of this land has chiefly a grazing value, though parts, comprising creek flats and gullies, are suitable for cultivation; but a large proportion is specially suitable for vineyards and orchards. The area of this class available is 114,965 acres. The area of third class lands, which, like the second class lands, are to be found in almost every county in the State, is very extensive, amounting to 2,079,164 acres available for selection.

Agricultural  
and grazing  
lands.

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

A grazing lease may be obtained of an area not exceeding 200, 640, or 1,280 acres of first, second, or third class lands respectively, for any term expiring not later than the 29th December, 1920, when the land, together with all improvements—to be allowed for at a valuation limited to 10s., 7s. 6d., or 5s. per acre for the three classes respectively—reverts to the Crown. The annual rent of a grazing area is not less than 3d., 2d., or 1d. per acre according to the value of land. The lessee of a grazing area may select thereout an agricultural or grazing allotment.

Persons desirous of selecting and obtaining the freehold may do so by either taking up a grazing area lease and selecting thereout, as just described, or by obtaining direct, without first obtaining a grazing area lease, an agricultural or grazing allotment. The purchase money is fixed at not less than 20s., 15s., or 10s., per acre, according to the value of the land; and is payable by even annual instalments, extending, in the case of a residential selector, over a period of 20 or 40 years, at his option; but, in the case of a non-residential selector

Agricultural  
and grazing  
allotments.

over a period of 20 years only. The land is occupied during the first six years under *licence*, and during the remainder of the term under lease. During the period of the licence the land must be kept free from vermin, enclosed with a fence, and certain improvements made. After the expiration of the six years' licence, the selector, if all conditions have been complied with, can either purchase his holding by paying up the balance of the purchase money, the six years' instalments (licence-fees) already paid being credited as part payment, or obtain a lease extending over 14 or 34 years, as the case may be, at the same annual rental, which is also credited to the selector as part payment of the fee-simple.

Perpetual  
leases.

Instead of selecting by way of licence and lease, by which system the freehold is obtained, a person may acquire a similar area of agricultural and grazing lands under perpetual lease. The annual rental is 4 per cent. of the unimproved value of the land, which is fixed at £1, 15s., or 10s. per acre for first, second, or third class lands respectively till 1909. The rent is subject to revision every ten years, but must not exceed 4 per cent. of the unimproved value of the land. Residence on or within five miles of the land for six months during the first year, and eight months during each of the four following years, is necessary; but if one-fourth of the allotment be cultivated during the first two years, and one-half before the end of the fourth year, the residence covenant will not be enforced.

Pastoral  
lands.

The total area of the pastoral lands now available for occupation is 3,325,057 acres, situated in the counties of Wonnangatta, Croajingolong, Benambra, Tambo, Tanjil, Dargo, Bogong, Delatite, Lowan, and Borung. A large portion is difficult of access, being in high altitudes, where cultivation is impossible and grazing impracticable except during the summer months.

Swamp or  
reclaimed  
lands.

The total area of swamp or reclaimed lands amounts to 2,228 acres. The most important of these are situated at Koo-wee-rup, Moe, and Condah, which have been reclaimed at considerable cost to the Crown. These lands are divided into allotments not exceeding 160 acres. When the value of an allotment has been determined, it may be disposed of in one of four ways, viz., under a 21 years' lease at public auction; under perpetual lease, at a rental of 4 per cent. on the value of the land; under a conditional purchase lease, payment extending over 31½ years by 63 half-yearly instalments, including 4½ per cent. interest on the balance of the unpaid purchase-money; or by public auction, on terms similar to those explained in the following paragraph.

Lands for  
sale by  
auction.

Country lands which may be sold by auction (not including swamp or reclaimed lands) comprise 17,380 acres. One-eighth of the purchase money must be paid as a deposit, the balance being payable in not more than twenty half-yearly instalments with interest at 4 per cent. per annum. Isolated portions of Crown lands

not exceeding 50 acres, or any portion not exceeding 3 acres required as a site for a church or for any charitable purpose, may be sold at auction. There are stringent provisions prohibiting agreements which would prevent fair competition.

The "auriferous lands" comprise 791,916 acres, and are distributed over twenty counties in various parts of the State. Any portion of these lands which is found to be non-auriferous, or which can be alienated without injury to mining interests, may be transferred to a class or classes under which it may be selected. This class of land is, for the most part, suitable for fruit culture and grazing. Annual licences are issued for areas not exceeding 20 acres, on payment of a yearly licence-fee of 5s. for areas of 3 acres or under, 10s. for areas from 3 to 10 acres, and 1s. per acre for areas over 10 acres. The licensee has the right to use the surface of the land only; cannot assign or sublet without permission; must either reside on or fence the land within four months, and cultivate one-fifth of the area. He must post notices on the land, indicating that it is auriferous; and miners have free access to any part of the land not occupied by buildings. Holders of miners' rights, issued under the Mines Acts 1890 and 1897, are entitled to occupy for the purpose of residence or business a maximum area of one acre or a lesser area fixed by local mining by-laws. The fee is £5 per annum for a business licence, and 2s. 6d. for a miner's right, and a habitable dwelling must be erected on the area within four months. After being in possession for two and a half years, and having erected buildings or other improvements, the holder may apply to purchase his allotment at a price to be determined by the Board of Land and Works.

Auriferous lands.

Grazing licences to enter with cattle or sheep upon reserves or other Crown lands may be issued annually for any period up to seven years, subject to cancellation at any time during the period. Any fencing erected by a licensee may be removed by him.

Annual grazing licences.

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

Other leases, purchases, &amp;c.

The "mallee country"—so named from the scrub found growing there—occupies about 11,000,000 acres of the north-west portion of the State. The soil is light chocolate and sandy loam, and, in its virgin state, is covered with mallee scrub, interspersed with plains lightly timbered with box, she-oak, and pines. Since the introduction of the "mallee roller" and the "stump-jump" plough, the scrub can be cleared off at a moderate cost. With the extension of railway facilities and by the utilization of some of the surplus waters of

Mallee lands.

the Murray for irrigating, there will be great scope for successful settlement in this country. There are now 6,517,178 acres included in the general list of unalienated lands available for occupation. The terms of purchase by licence and lease are now very similar to those in respect of agricultural and grazing allotments previously described, viz., for 1st, 2nd, and 3rd class land, not less than £1, 15s. and 10s. respectively, payable during either 20 or 40 years. Larger areas may be held, however, the maximum being 640 acres, 1,000 acres and 1,280 acres respectively. In the case of Mallee Perpetual Leases the rental must not exceed  $1\frac{1}{4}$  per cent. of the unimproved value, and if one-fourth of the area be cultivated within four years and half by end of sixth year, or improvements effected to the extent of 10s., 7s. 6d. or 5s. per acre, according to the classification, the residence is unnecessary.

Alienation  
of land,  
1900 to 1907.

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

Pastoral  
occupation  
of Crown  
Lands.

The pastoral occupation of Crown lands on 31st December, 1907, was as follows:—

Number of Licences and Leases	...	...	24,003
Area (acres)	...	...	16,565,917
Annual Rental	...	...	£58,648

“Transfer of  
Land Act.”

The “Torrens System,” whereby persons acquiring possession of land may receive a clear title, was introduced into Victoria in 1862. The system was originated previously in South Australia by the late Sir R. R. Torrens, and has been the means of simplifying procedure in connexion with the transferring of land; gives a title to the transferee free of any latent defect; and cheapens the cost of dealing in real estate by reason of the simplicity of the procedure. All land parted with by the Crown since 1862 is under the operation of the Transfer of Land Act, and the Crown grant issues through the Titles Office; but to bring under the Act land that was parted with prior to that year, application must be made accompanied by strict proofs of the applicant’s interest in the property. During 1907 there were 695 applications to bring under the Act land amounting to 66,810 acres in extent, and to £838,961 in value, whilst the land actually brought under the Act during the year by application amounted to 63,512 acres in extent, valued at £782,222. Up to the end of 1907, there had been brought under the Act 2,438,003 acres valued at £49,857,449. The number of certificates of title issued in 1907 was 11,713.

When application is made to bring land under the Transfer of Land Act, a contribution of  $\frac{1}{2}$ d. in the £1 on the value of land is levied on the applicant to assure and indemnify the Government in granting a clear title against all the world, as there may be a latent interest of some other person in the property, whom the Government must recompense out of this fund for the loss of such interest. Since 1884-5 the assurance fund has been reduced by £75,073 which amount was advanced towards the purchase of land adjoining the Titles Office, and on which the fund receives 4 per cent. per annum from the general revenue. The amount paid up to the 30th June, 1907, as compensation and for judgments recovered, including costs, is £6,546, representing 32 claims.

Assurance fund.

From the period of the first settlement of the State to the end of 1907, the amount realized by the sale of Crown lands was £32,145,354, or at the rate of £1 7s. 11d. per acre. It must, however, be remembered that payment of a considerable portion of this amount extended over a series of years without interest, and upon very easy terms.

Total amount realized by sale of lands.

Chiefly with a view to providing an outlet for the unemployed labour of the colony, an Act (the *Settlement on Lands Act 1893*, No. 1311) was passed on the 31st August, 1893, providing for the establishment of three descriptions of rural settlements, viz.:—Village Communities, Homestead Associations, and Labour Colonies. For the Village Communities certain lands were set apart and divided into allotments of from 1 acre to 20 acres in extent, to occupy which for periods of three years permits are granted to approved applicants. An applicant must not be under the age of eighteen, nor the owner in fee simple of 2 acres or upwards, nor the lessee of a pastoral allotment or grazing area, nor a licensee under sections 42 or 49 of the *Land Act 1890*. During the period over which the permit extends the occupant pays a rental of 3d. per acre per annum, or if he occupy Mallee land, 1d. per acre per annum, and on the expiration of that period he is granted a lease for twenty years, during the currency of which he is required to pay half-yearly, in advance, a sum equal to the fortieth part of the price set upon the allotment, which is generally £1 per acre, except in special cases when the price is considerably higher; he has also to repay, in equal yearly instalments extending over the currency of his lease, any moneys which have been advanced to him, and to pay the cost of surveying his allotment in ten half-yearly instalments extending over the first five years thereof. The lessee is bound to bring one-tenth of his land under cultivation within two years of the date of his lease, and one-fifth within four years of such date; and is, moreover, to put on the land permanent improvements to the value of £1 per acre within six years of such date. All conditions having been complied with, the lessee is entitled to receive a grant in fee of the land he occupies, at any time after six years from the date of lease.

Village settlement.

Homestead  
Associations and  
Village  
Communities.

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

The area originally made available for Village Communities and Homestead Associations was 156,020 acres in 85 different localities in the State. A large portion of this area was, however, found to be unsuitable for Village Settlement purposes, and has been withdrawn from the operation of the Act. After the Act had been in operation for some time, it was generally recognised that the area which a settler could acquire under Part I. of the Settlement on Lands Act, viz., 20 acres, was too small, in many cases, to make a living on, and it was decided to allow settlers to acquire additional area under Conditional Purchase Leases, the value of which, together with original holding, should not exceed £200. This was provided for in the *Land Act* 1901 (Secs. 344-346), and settlers have largely availed themselves of the privilege. The area now occupied is 50,273 acres, and this is divided among 1,692 settlers, giving an average of 28 acres each. At the time of the last report (July, 1908), there were 1,546 settlers actually residing, and there were 146 not residing, but improving, making a total of 1,692 in occupation. Including wives and families, the total persons numbered 7,628. On 30th June, the stock numbered 9,807 bullocks, cows, and calves, 2,343 horses, 22,918 fowls, 2,190 pigs, which, together with other stock (goats, sheep, &c.) were valued at £72,636. The area under cultivation was 24,033 acres, and the total value of improvements effected was £267,385.

The numbers specified above do not include a considerable number of settlers who have surrendered their Village Settlement leases and obtained licences in lieu thereof, under Section 47 of the *Land Act* 1901.

The total amount of monetary aid advanced to settlers was £67,379, and no advances have been made since 1903. At 30th June, 1908, £29,887 of the amount advanced had been repaid by the settlers.

Closer  
Settlement  
Act 1898.

A system by which the Government was enabled to purchase private lands for closer settlement from persons willing to part with them at a fair price, was introduced in 1898, by Part III. of the *Land Act* of that year. That part, with several subsequent amendments of minor importance, became Part IV. of the *Consolidated Act* of 1901, since superseded by the *Closer Settlement Act* of 1904. After favorable report and valuation being obtained, the Minister was empowered to enter into a provisional contract for the purchase of land, copies of which contract and report were to be laid before Parliament; and if the Legislative Assembly, by resolution, declared it expedient to acquire such land, a Bill for the purchase thereof was introduced. The price to be paid by settlers of the land so acquired was so fixed as to cover cost of purchase, survey, and subdivision, value of land absorbed by roads and reserves, cost of



constructing roads, cost of clearing, draining, fencing, and other improvements which the Board of Land and Works might effect prior to disposal as, farm allotments, and any other incidental expenses. Any person aged 21 (not holder of rural land valued at £1,250, or who would not thereby become holder of land exceeding such value) could be granted one farm allotment under conditional purchase lease. The purchase money, with interest at  $4\frac{1}{2}$  per cent., had to be paid by 63, or a lesser number of, half-yearly instalments, two of which were required to accompany the application. The conditional purchase lease issued was for a term not exceeding  $31\frac{1}{2}$  years, and contained, so far as consistent, the usual conditions of perpetual leases, and also the following:—(a) Improvements to the value of 10s. per acre; or, if Board so determined, to value of 10 per cent. of the purchase money, before end of third year; and to the same extent, in addition, before the end of the sixth year; (b) Personal residence or by wife or child over eighteen years of age for eight months during each of first six years; (c) Not to transfer, assign, mortgage, or sublet within first six years; and any other conditions prescribed by the regulations. The fee-simple could be acquired after the first six years, if conditions complied with, on payment of balance of principal. Forfeiture for non-payment of an instalment, could be prevented by payment thereof, with a penalty of 5 per cent., within three months, or of 10 per cent. within six months. Any tenant of land acquired by the Crown from his landlord could be granted a prior right to conditional purchase of any area not exceeding £1,250 in value, or £2,000 if there were a homestead. Power was given to close unused roads, and portions of the land acquired could be used for experimental farms.

Under the authority of the Act of 1898, the following purchases were made:—

Estates  
purchased  
under Act  
of 1898.

- (1) The Wando Vale Estate, containing 10,446 acres, situated in the County of Dundas, purchased on the 23rd March, 1900, for £63,984.
- (2) The Walmer Estate, 13,769 acres, in the County of Borung, purchased on the 23rd October, 1900, for £44,750.
- (3) Brunswick Lands, 91 acres, in the County of Bourke, purchased on the 7th November, 1900, for £2,644.
- (4) The Whitfield Estate, 4,246 acres, in the County of Delatite, purchased on the 1st November, 1900, for £36,095.
- (5) The Eurack Estate, 5,108 acres, in the County of Grenville, purchased on the 13th November, 1901, for £53,640.

The total of the purchase money and the incidental expenses, amounting to £211,095, represents part of a loan of £400,000 authorized by Acts No. 1602 and No. 1749 for the purposes of closer settlement. The vendors of the Whitfield and Eurack estates accepted £56,095 in Government 3 per cent. stock, and the balance in cash, the total cash payment over the five estates being £153,245.

Closer  
Settlement  
Act 1904.

On 30th November, 1904, an important Act was passed further providing for the acquisition and disposal of land for closer settlement—this Act, the Land Act of 1901, and other Acts amending the same being now treated as the land legislation of the State. The Act of 1904 is administered by a Board consisting of three persons appointed by the Governor in Council, intrusted with power to acquire, either by agreement or compulsorily, blocks of private land in any part of the State for the purposes of closer settlement. Such land as may be acquired by the Board is to be purchased by money the proceeds of the sale of debentures or stock under this Act; or, with the consent of the Treasurer, of Victorian Government Stock. The Governor in Council during the first five years of the operation of the Act may for the purposes of the Act increase the amount of the Victorian Government Stock by a sum not exceeding £500,000 in any one financial year; or, instead of increasing the Victorian Government Stock, may issue debentures for the whole or any portion of such sum. The principal and interest on all stock and debentures issued is to be a charge on the Closer Settlement Fund created from all moneys received by the Board, and the fund heretofore known as the Farm Settlements Fund transferred to the Board.

Acquisition  
and  
Adminis-  
trator.

The Minister administering the Act may authorize the inspection of private land, and the Board shall affix its value when deemed suitable. If the Minister agrees with the Board's valuation the land may be acquired either by auction or other sale of the estate, or by purchase or exchange of land equivalent at a price not exceeding the Board's valuation, or by compulsory acquisition by resolution passed by both Houses of Parliament. Where money has been lent on land, unless with the consent of the mortgagee, no less sum shall be paid as purchase money for such land than the amount of money so lent with interest up to time of purchase. Difference of opinion as to the value of any land desired by the Board is to be referred to a Compensation Court for determination.

The Board may dispose of all lands thus acquired on conditional purchase lease as farm allotments, or as allotments for workmen's homes, or as allotments for agricultural labourers at fixed prices. The farm allotments to consist of an area of land not exceeding £1,500 in value (except in cases of homestead allotments when the value of land held may be increased to £4,000), the workmen's homes allotments not to exceed £100 in value, and the agricultural labourers' allotments not to exceed £200 in value. No lease of an allotment shall be granted to any person who is already the holder of land of the value of £1,500 (township land excepted), or who would thereby become the holder of land exceeding the value of £1,500, and not more than one allotment is to be held by one lessee. Conditional purchase leases are to be issued for such a term of years as may be agreed upon by the lessee and the Board, and provision is made for payment of the value of the allotment, and interest at a rate of not less than £4 10s. per cent. per annum, by not more than 63 half-yearly instalments.

The leases provide for the destruction of vermin, the eradication of noxious weeds, for fencing and its maintenance, and other improvements of a permanent character; personal residence on the estate; and that the lessee shall not transfer, assign, mortgage, sublet, or part with possession of the whole or any part of the allotment within the first six years of the lease, special provision being made in cases of death or insolvency. A Crown grant may be acquired at any time after twelve years on payment of the balance of purchase money. In the case of workmen's home allotments, the lessee must, within four months, be in actual residential occupation of the allotment; and within one year from the date of the lease, fence the allotment and erect a dwelling house of the value of at least £50, and not more than one dwelling house and one place of business shall be erected upon any one allotment. The condition regarding improvements to be done on agricultural labourers' allotments is that the lessee must within one year erect a dwelling house of a value of £30 upon the allotment, and within two years fence the allotment. Advances out of the fund may be made by the Board to lessees of workmen's homes and agricultural labourers' allotments. Such advances, with interest at 5 per cent., are made repayable by equal half-yearly instalments extending over a period not exceeding sixteen years. In lieu of such advance, and subject to similar conditions, the Board may cause dwelling houses and other improvements to be erected at a cost not exceeding £250.

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

Provision is also contained whereby a lessee under the original Act (which did not contain this and other concessions) can surrender his lease and obtain a new one with the benefits and privileges of the amended Acts.

The Board may also set aside and reserve portions of any estate for special application by persons resident in Great Britain or Ireland, or any other country.

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

The Board is also authorized to enter into an agreement with any municipality to advance funds to the Council to carry out road-works or channelling to or on any estate acquired for closer settlement.

Estates  
purchased.

Up to the end of the year 1904, no land had been acquired under the authority of the Act of that year; but up to date (June, 1908) the following purchases have been made:—

Estate.	Area.	Situation.	Amount Paid.	No. of Allotments.
	acres.		£	
Wyuna ...	23,016	In the Goulburn Valley ...	120,834	141
Springvale ...	3,396	In Kiewa River Valley ...	25,895	20
Memsie ...	10,028	On River Loddon ...	57,158	43
Overnewton ...	11,336	Keilor Plains ...	71,492	75
Richmondvale	1,280	Near Traralgon ...	11,000	12
Restdown ...	17,894	On River Campaspe ...	60,391	55
Strathkellar ...	10,227	Near Hamilton ...	72,084	63
Bona Vista ...	2,060	Near Warragul ...	28,832	39
Werribee Park	23,214	Near Werribee ...	301,782	being subdivided
Lara ...	8,329	Near Lara ...	45,825	34
Willows ...	400	Near Traralgon ...	5,131	4
Greenvale ...	304	Near Geelong ...	7,298	6
Ercildoune ...	1,200	Near Burrumbeet ...	12,199	11
Tandarra ...	4,558	Near Bendigo ...	21,082	20
Dura ...	337	Near Port Fairy ...	3,200	8
Exford ...	8,054	Near Melton ...	64,039	54
Colbinabbin ...	19,164	Near Rushworth ...	110,198	68
Pirron Yaloak	1,050	Near Colac ...	23,686	16
Numurkah ...	2,360	Adjoining Numurkah ...	18,900	18
Allambee ...	5,023	Near Warragul ...	31,744	32
Keayang ...	1,494	Near Terang ...	14,965	12
Staughton Vale	9,830	Near Bacchus Marsh ...	66,465	50
Werneth ...	6,450	Near Cressy ...	30,637	21
Hogan's ...	444	Near Neerim ...	6,197	9
Balure ...	183	Near Condah ...	1,464	10
Inverary ...	1,260	Near Condah ...	7,547	24
Wein Gurk	3,021	Near Swan Hill ...	8,684	13
Spring	398	Near Condah ...	2,259	8

Nine of the properties, viz., The Willows, Greenvale, Ercildoune, Dura, Springs, Balure, Wein Wein Gurk, Inverary, and Hogan's, embracing an area of 7,547 acres, were acquired under the provisions of section 6 of the Act, which enables the Board, with the approval of the Governor in Council, to ratify and adopt any provisional agreement made between several intending purchasers and the owner of an estate, if satisfied that the agreement is a *bonâ fide* one, and the terms fair and reasonable.

Altogether, the Board has forty-five properties, with an area of 213,830 acres, subdivided into 1,106 farm allotments and 549 workmen's homes allotments, of which sixty-seven of the former and 122 of the latter remain unsold.

The sum of £246,151 has been repaid to the Closer Settlement Fund up to 30th June, 1908, and of this amount £118,443 has been transferred from that fund to revenue to meet interest due to stockholders: £85,501 has been drawn from the same fund for redemption and cancellation of stock, and for capital expenditure, the balance to the credit of the fund on 30th June, 1908, being £21,711. The balance of unredeemed stock is now £1,441,531.

Werribee Park Estate (23,214 acres), is to be made available in March, 1910, by which time an area of over 1,000 acres will probably be placed under irrigable conditions. The whole of the area is practically free from stone, and with the aid of artificial manures, responds readily to cultivation.

Konong Wootong Estate (10,038 acres), is the only area so far acquired under the compulsory clauses of the Act, and it is expected that it will be subdivided and made available in about two years' time.

The following statement summarizes what has been done by the Government of Victoria in acquiring and subdividing land for the purposes of closer settlement and in putting settlers thereon up to the 30th June, 1908, with information for the years ending 31st December, 1903 and 1906.

Closer Settlement  
1903, 1906,  
and 1908.

CLOSER SETTLEMENT, 1903, 1906, AND 1908.

	At 31st December.		At 30th June.
	1903.	1906.	1908.
<b>Estates Acquired—</b>			
Number ... ..	5	36	45
Area ... acres	33,774	190,036	213,830
Cost ... £	214,064	1,359,590	1,523,205
<b>Made Available and Occupied—</b>			
Number of Holdings ...	289	1,014	1,655
Area ... acres	33,774	119,876	188,787
Resident Population ...	887	3,265	5,600
Area in course of preparation or occupation ... acres	...	...	23,214
Number of Allotments open for Application ... ..	...	...	189

The cost per acre of the estates acquired averaged £6 6s. 9d. at the close of 1903, £7 3s. 1d. at the close of 1906, and £7 2s. 6d. at the close of the financial year 1907-8.

The land made available represents provision for 1,655 families, the area of the allotments averaging 117 acres at the close of 1903, 118 acres at the close of 1906, and 114 acres at the close of the financial year 1907-8.

Production  
on Closer  
Settlement  
Estates.

The next table summarizes the extent of production on estates in working order:—

PRODUCTION ON CLOSER SETTLEMENT ESTATES: 1904-5 TO 1907-8.

				1904-5.	1906-7.	1907-8.
Number of estates	..	..	..	4	18	25
Area of estates	..	..	.. acres	33,571	117,482	166,434
Area under crop	..	..	.. "	8,238	19,085	34,167
Area in fallow and sown grasses	..	..	.. "	2,773	13,585	13,017
Hands employed, male	..	..	.. No.	270	728	1,025
Hands employed, female	..	..	.. "	160	388	593
Area under cereals	..	..	.. acres	7,567	14,120	22,964
Area under root crops	..	..	.. "	132	423	435
Produce—						
Wheat	..	..	..	139,300	120,939	139,665
Oats	..	..	.. { bushels		88,789	111,105
Other cereals	..	..	..		17,312	19,366
Hay	..	..	.. tons	2,298	5,511	9,072
Stock—						
Horses	..	..	.. No.	885	2,593	3,624
Cattle	..	..	.. "	4,212	10,245	14,257
Sheep	..	..	.. "	11,511	35,686	46,570
Pigs	..	..	.. "	1,692	1,585	1,768
Butter	..	..	.. lbs.	7,402	27,158	68,869
Hams and bacon	..	..	.. "	14,966	28,418	30,233
Wool	..	..	.. "	61,949	152,474	252,047
Stock slaughtered	..	..	.. No.	1,701	2,216	4,111

Small im-  
proved  
holdings.

An Act was passed in 1906 which empowers the Government to acquire land in rural districts and as close as possible to centres of population, to enable persons to enter into the keeping of live stock, poultry, bees, or the growing of vegetables, &c. Under the provisions of the Act, the Government may spend £150,000 per annum in the purchase of properties for the purpose, and in assisting settlers thereon with the necessary improvements.

In a Pamphlet for *Intending Settlers*, issued by direction of the Hon. the Minister of Lands, it is stated that:—

“ Each allotment will contain land to the value of £200 exclusive of cost of survey, clearing, draining, and making roads thereto. In addition to this, £150 may be advanced to enable the settler to effect, under proper supervision, the necessary improvements, such as buildings, fencing, cultivation, and the purchase of live stock and implements.

“ Settlers must be over 21 years, and either natural born or naturalized British subjects. Every settler must be a probationary tenant of his block for a term not less than six, and not exceeding

eighteen months, and may be employed during that period, under qualified foremen, in improving the holding, for which he may be advanced 20s. per week for the first six months, 15s. per week for the second six months, and 10s. per week for the third six months. From these weekly advances 5 per cent. interest on the value of the holding and the amount advanced for improvements will be deducted. At the end of six, twelve, or eighteen months, the probationary tenant may select the block, obtaining 31½ years to pay for the land, sixteen years to pay for the cost of improvements, and three years to pay for the cost of implements and live stock, with 5 per cent. interest added in each case. Residence is insisted on. At the end of six years the settler may transfer his holding with the approval of the Minister of Lands, and at the end of twelve years the whole of the unpaid balance on land and improvements can be tendered, and the holding made freehold property."

The following statement summarizes what has been done to the 31st May, 1908, in acquiring and subdividing land for the purposes of small improved holdings:—

PARTICULARS RELATING TO SMALL IMPROVED HOLDINGS AT  
31ST MAY, 1908.

Estates Acquired—						
Number	...	...	...	...	...	12
Area	...	...	...	...	acres	2,861
Cost	...	...	...	...	£	55,341
Estates made available and occupied—						
Number	...	...	...	...	...	11
Holdings	...	...	...	...	...	250
Area	...	...	...	...	acres	2,822
Resident Population (settlers and their families)	...	...	...	...	...	1,500
Area in course of preparation for occupation	...	...	...	...	acres	39

Under the original Act, 91 acres were purchased at Brunswick, 4 miles from Melbourne, for £2,644, and after providing for roads and public reserves, it was subdivided into 56 workmen's homes allotments, on which workmen might devote their spare time and labour to create for themselves comfortable homes under cheerful and healthy conditions. The allotments were made available for application on 4th February, 1901, under certain conditions, of which residence on the allotment and the effecting of improvements of a stated value were compulsory. Two bridges have been erected by the Department, water mains have been laid down, a public hall and a fire

Workmen's  
homes and  
agricultural  
labourers'  
allotments.

station have been erected by the lessees, which, together with the homes built by the settlers, have changed the general appearance of the district.

Since the disposal of the Brunswick Estate, the Government has purchased the Dal Campbell Estate (45 acres), and the Cadman's Estate (18 acres), adjoining the original Brunswick property, and has subdivided them into 96 allotments. The Phoenix Estate (23 acres), also in the Town of Brunswick, has been subdivided into 47 allotments. All the allotments have been disposed of, and the properties have been reticulated with water mains, and provided with road conveniences.

At Footscray, 31 acres have been secured, subdivided into 97 allotments of  $\frac{1}{4}$ -acre each, and disposed of.

Portion of the Penders Grove Estate (233 acres) in the Town of Northcote, has so far been subdivided into 149 allotments, a number of which are at present available for application.

Glen Huntly Estate (74 acres), has also been subdivided, and the 63 allotments provided have been disposed of; additional allotments will shortly be made available. Special arrangements were made in regard to this estate, whereby lessees could secure an advance up to £250 to assist them in effecting improvements, and building homes for themselves of a high standard, on large allotments of land. The success of this subdivision is phenomenal, houses of an up-to-date pattern, and with every modern convenience have been erected, so that it now forms the nucleus of a model suburb.

Six Crown lands properties are in the hands of the Board, comprising a total of 2,690 acres, and these have been dealt with as follow:—

At Warrnambool, 46 acres were subdivided and made available on 17th June, 1903, as 28 workmen's homes allotments. At Bacchus Marsh, the old police paddock (13 acres), was subdivided and disposed of on 5th November, 1903, to local working men in 1-acre allotments. At Leongatha, 53 acres were subdivided into five small farm allotments on 27th November, 1903. At Mortlake, 2,394 acres were subdivided into 13 farm and 15 agricultural labourers' allotments, and disposed of on 18th April, 1905. All these allotments have been taken up and are being satisfactorily worked by the lessees in occupation.

At Geelong, fronting the Breakwater-road, 3 acres have been subdivided into 10 allotments, and homes have been erected by the State for immediate occupation. All have been disposed of, and the lessees are effecting further improvements.

The Common at Ballarat, comprising 225 acres, has also been placed under the control of the Board, and has been subdivided into 21 allotments of about 10 acres each; 18 of them have been taken up, and on these the lessees are engaged in effecting the necessary improvements.



WATER SUPPLY AND IRRIGATION.

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

Victorian  
Water-  
works.

WATERWORKS—CAPITAL EXPENDITURE OR STATE ADVANCES, AT  
30TH JUNE, 1907.

Controlling Bodies.	Purposes of Supply.	Storage Capacity of Reservoirs.	Capital Expenditure or State Advances.
State Rivers and Water Supply Commission—		Gallons.	£
Coliban System ... ..	Domestic and Mining	8,825,037,000	1,227,550
Geelong ... ..	Domestic ... ..	570,780,000	456,700
Broken River ... ..	Stock, Domestic, &c. ... ..	...	14,853
Mallee Supply ... ..	" " ... ..	2,106,000,000	162,988
		Cubic feet.	
		Acre feet.	
Kerang Lakes ... ..	" " ... ..	91,830	10,008
Goulburn River ... ..	Irrigation, &c. ... ..	218,090	716,003
Kow Swamp ... ..	" " ... ..	40,860	187,779
Loddon River ... ..	" " ... ..	14,000	156,408
Irrigation and Water Supply Districts (19) ... ..	" " ... ..	...	806,932
First Mildura Irrigation and Water Supply Trust ... ..	" " ... ..	...	58,700
		Gallons.	
Waterworks Trusts (84) ... ..	Stock, Domestic, &c. ... ..	1,917,087,500	1,406,510
Municipal Corporations (32) ... ..	" " ... ..	1,643,091,000	683,909
Melbourne and Metropolitan Board of Works ... ..	Domestic ... ..	6,508,000,000	3,793,389
Municipal and other control—on Gold-fields ... ..	Mining and Domestic ... ..	463,100,000	55,860
Abolished Irrigation and Water Supply Trusts (8) ... ..	Irrigation, &c. ... ..	...	31,952
Miscellaneous Expenditure ... ..	... ..	...	108,183
Total ... ..	... ..	...	9,877,724

Of the expenditure given in the case of the Melbourne waterworks, only £1,688,663 are State moneys, being the unredeemed balance of the outstanding debt taken over by the Melbourne and Metropolitan Board of Works on the 1st July, 1891. Further particulars relating to the Melbourne and Metropolitan Board of Works will be found on page 251, Part V., of this work.

Advances and expenditure for waterworks.

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

### CAPITAL EXPENDITURE AND LOANS FOR WATERWORKS.

	Loan Advances by State.	Interest Capitalized.	Free State Grants.	Capital Written Off.	Payments to Redemption.	Capital Sum Standing at Debit, 30th June, 1907.
	£	£	£	£	£	£
State Works .. ..	..	..	2,799*	..	..	2,932,289
Irrigation and Water Supply Districts (19) .. ..	791,528	..	15,404	540,404	5,591	245,533
First Mildura Irrigation and Water Supply Trust .. ..	58,700	..	..	..	..	58,700
Waterworks Trusts (84) .. ..	1,323,927	6,870	82,583	335,664	62,100	933,033
Municipal Corporations (23) .. ..	674,366	43,633	..	165,870	83,667	468,462
(9) .. ..	9,543	346	..	..	9,889	..
Melbourne and Metropolitan Board of Works .. ..	2,389,934	..	..	..	701,271	1,688,663
Gold-fields' Reservoirs .. ..	..	..	..	..	..	55,860
Abolished Trusts (8) .. ..	31,709	..	243	31,679	30	..
Miscellaneous .. ..	..	..	..	..	..	108,183
Total .. ..	5,279,707	50,849	101,029	1,073,617	862,543	6,490,723

\* 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 £342,773 have also been written off the liabilities to the State of what were originally Irrigation and Water Supply Trusts. Of these trusts, nineteen, which are now Irrigation and Water Supply Districts vested in the State Rivers and Water Supply Commission, were relieved to the extent of £261,363 in their arrears of interest, four, which are now Waterworks Trusts, were relieved of £66,617, and eight abolished trusts of £14,793. Thus the total amount actually written off the liabilities of the Trusts (Irrigation and Waterworks) and Corporations is £1,416,390. Interest outstanding at 30th June, 1907, amounted to £49,866, viz.. £17,729 against the First Mildura Trust, £22,351 against Waterworks Trusts, and £9,786 against Municipal Corporations.

### STATE RIVERS AND WATER SUPPLY COMMISSION.

The Water Act 1905.

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

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

The various waterworks and districts vested in the Commission, their capital cost or capital debit at the 30th June, 1907, are set forth in the following statement:—

**WATERWORKS VESTED IN THE STATE RIVERS AND WATER SUPPLY COMMISSION.**

(a) <i>Free Head-works.</i>	Capital Cost at 30th June, 1907.
	£
Broken River Works .. .. .	14,853
Goulburn River Works and Waranga* Reservoir .. .. .	716,003
Kow Swamp Works .. .. .	187,779
Loddon River Works .. .. .	156,408

\* This work is not yet completed or handed over to the Commission.

WATERWORKS VESTED IN THE STATE RIVERS AND WATER SUPPLY COMMISSION.—*continued.*

					Capital Cost at 30th June, 1907.
					£
(a) <i>Free Head-works</i> — <i>continued.</i>					
Lake Lonsdale Reservoir .. .. .	..	..	..	..	50,326
Lower Wimmera Compensation Works .. .. .	..	..	..	..	8,752
Long Lake Pumping Works .. .. .	..	..	..	..	27,898
Kerang North-west Lakes Works .. .. .	..	..	..	..	10,008
Total—Free Head-works .. .. .					1,172,027
					Capital Debit at 30th June, 1907.
					£
(b) <i>Other State Works.</i>					
Coliban System of Waterworks .. .. .	..	..	..	..	1,227,550
Geelong Water Supply Works * .. .. .	..	..	..	..	456,700
Glenorchy Works .. .. .	..	..	..	..	10,294
Donald Weir .. .. .	..	..	..	..	1,890
Mallee Distribution Works .. .. .	..	..	..	..	53,458
Long Lake Works .. .. .	..	..	..	..	10,370
Irrigation and Water Supply Districts.	Total Advances.	Capital written off by Acts Nos. 1625 and 1651.	Paid in Redemption to Treasury.	Balance at Debit.	
	£	£	£	£	
Bacchus Marsh .. .. .	14,406	8,906	243	5,257	
Benjeroop and Murrabit .. .. .	12,936	7,200	64	5,672	
Boort East .. .. .	21,567	14,866	184	6,517	
Boort North .. .. .	6,978	4,867	52	2,059	
Campaspe .. .. .	62,642	52,685	305	9,652	
Cohuna .. .. .	151,213	93,968	512	56,733	
Dry Lake .. .. .	1,704	686	299	719	
Gunbower West .. .. .	5,889	..	..	5,889	
Kerang East .. .. .	14,025	6,984	18	7,023	
Kerang South .. .. .	633	..	14	619	
Koondrook and Myall .. .. .	15,469	12,080	53	3,336	
Leaghur and Meering .. .. .	5,043	2,543	78	2,422	
Macorna North .. .. .	18,557	8,082	81	10,394	
Marquis Hill .. .. .	14,477	9,076	2	5,399	
Rodney .. .. .	225,078	149,949	2,902	72,227	
Swan Hill .. .. .	25,259	19,799	201	5,259	
Tragowel Plains .. .. .	159,848	124,534	444	34,870	
Twelve-Mile .. .. .	5,050	3,250	28	1,772	
Wandella .. .. .	30,754	20,929	111	9,714	
Total .. .. .	791,528	540,404	5,591	245,533	245,533

Total—Other State Works .. 2,005,795

\* Under the provisions of the *Geelong Municipal Waterworks Act 1907*, the control of these works has since passed to the Geelong Municipal Waterworks Trust.

The receipts and disbursements by the State Rivers and Water Supply Commission during the year ended the 30th June, 1907, were as follow:—

## STATEMENT OF RECEIPTS AND EXPENDITURE, 1906-7.

Works.	Receipts.	Expenditure.			Excess.	
		Annual Votes, including Proportion of Head Office Expenses.	Deduct Expenditure on Capital Works.	Net Expenditure on Management and Maintenance.	Revenue over Expenditure.	Expenditure over Revenue.
<i>Earning Revenue.</i>	£	£	£	£	£	£
Coliban .. ..	37,223	16,634	4,969	11,665	25,558	..
Geelong .. ..	15,158	4,319	690	3,629	11,529	..
Goulburn .. ..	108	1,477	..	1,477	..	1,369
Loddon River ..	12	337	..	337	..	325
Kow Swamp ..	180	3,525	..	3,525	..	3,345
Broken River ..	7	293	..	293	..	286
North-West Lakes ..	65	269	..	269	..	204
Mallee—						
Lake Lonsdale ..	138	219	..	219	..	81
Distributary Channels (Sea Lake) ..	1,312	3,999	..	3,999	..	2,687
Long Lake .. ..	4,157*	2,477	..	2,477	1,680	..
Lower Wimmera ..	..	148	..	148	..	148
Irrigation and Water Supply Districts ..	30,175	24,926	3,210	21,716	8,459	..
Licences, Diversions, Pumping .. ..	306	..	..	..	306	..
Miscellaneous ..	6	..	..	..	6	..
<b>Total ..</b>	<b>88,847</b>	<b>58,623</b>	<b>8,869</b>	<b>49,754</b>	<b>39,093</b>	<b>..</b>
<i>Not Earning Revenue.</i>						
River Gauging and Surveys ... ..	..	2,154	..	2,154	..	2,154
New Projects ... ..	..	793	..	793	..	793
Loan Works—Services on account of, defrayed from vote ...	..	759	..	759	..	759
<b>Grand Total ...</b>	<b>88,847</b>	<b>62,329</b>	<b>8,869</b>	<b>53,460</b>	<b>35,387</b>	<b>..</b>

\* Including £2,348 rate made by Water Supply Department, and interest thereon.

The extent to which the different crops were watered, and the actual areas irrigated in the different districts of the State during the year 1906-7, are set forth in the next statement. Areas irrigated.

## IRRIGATION—WATERINGS AND AREAS, 1906-7.

Districts.	Waterings in Acres.							Actual Area Irrigated.
	Cereals.	Lucerne and other Permanent Fodder Crops.	Sorghum and other Annual Fodder Crops.	Pastures.	Vineyards, Orchards, and Gardens.	Fallows, &c.	Total.	
<i>Supplied from Goulburn State Works.</i>								
Rodney .. .. .	66	16,840	261	6,981	5,197	1,561	30,906	23,103
Echuca and Waranga .. .. .	..	5,565	154	4,316	177	228	10,440	7,956
Total .. .. .	66	22,405	415	11,297	5,374	1,789	41,346	31,059
<i>Supplied from Kow Swamp State Works.</i>								
Dry Lake .. .. .	..	..	..	600	12	..	612	604
Gunbower West .. .. .	130	1,003	301	1,420	26	..	2,880	1,801
Kerang East .. .. .	747	108	1,572	2,580	20	12	5,039	3,575
Macorna North .. .. .	478	80	1,753	7,859	..	..	10,170	7,484
Marquis Hill .. .. .	173	142	143	2,523	..	..	2,981	2,172
South Kerang .. .. .	10	285	164	524	6	..	989	622
Wandella (portion of) .. .. .	328	718	320	2,217	4	23	3,610	2,672
Total .. .. .	1,866	2,336	4,253	17,723	68	35	26,281	18,980
<i>Supplied from Loddon State Works.</i>								
Wandella (portion of) .. .. .	440	956	425	2,956	5	32	4,814	3,563
East Boort .. .. .	374	58	79	1,128	30	..	1,669	1,284
Leaghur and Meering .. .. .	202	14	74	775	16	..	1,081	986
North Boort .. .. .	165	45	..	296	4	..	510	510
Tragowel Plains .. .. .	3,606	754	720	5,595	111	74	10,860	9,223
Twelve-Mile .. .. .	379	28	180	580	1	..	1,168	1,053
Total .. .. .	5,166	1,855	1,478	11,330	167	106	20,102	16,619
<i>Not supplied from State Works.</i>								
Bacchus Marsh .. .. .	..	17	..	..	..	..	17	17
Benjeroop and Murrabit .. .. .	678	466	87	243	52	9	1,535	1,331
Campaspe .. .. .	..	60	..	40	..	..	100	100
Cohuna .. .. .	1,006	5,819	3,350	8,381	806	38	19,400	13,019
Koodrook and Myall .. .. .	200	348	234	1,729	29	..	2,540	2,053
Swan Hill .. .. .	1,033	5,466	79	2,064	82	12	8,736	5,075
Western Wimmera .. .. .	..	57	41	41	719	1	859	..*
Total .. .. .	2,917	12,233	3,791	12,498	1,688	60	33,187	21,595
<i>Lands supplied from Kerang North-west Lakes .. .. .</i>								
.. .. .	834	256	246	3,927	..	10	5,273	5,263
<i>Lands supplied directly from Kow Swamp State Works .. .. .</i>								
.. .. .	173	..	..	2,233	4	..	2,415	2,415
First Mildura .. .. .	1,042	2,288	..	..	28,640	..	31,970	7,189
Grand Totals .. .. .	12,069	41,373	10,183	59,008	35,941	2,000	160,574	103,070

NOTE.—In the Coliban district, which is not included above, there were irrigated 800 acres of orchards, 700 acres of fodder crops, and 350 acres of culinary vegetables, &c.

\* Not stated.

A comparison of the last column with that immediately preceding it will reveal the average number of waterings to which the total area irrigated in each district was subjected. Thus the number of waterings range from 1.0 to 1.7 for the districts given, except Mildura, where the average number of waterings was 4.4.

In the following table, the depths of water supplied in some of the districts for certain crops are shown :—

DEPTHS OF WATERINGS APPLIED TO CERTAIN CROPS.

District.	Crop.	Depth of Water Applied. (One watering.)		
		Max. inches.	Min. inches.	Mean inches.
Rodney ... ..	Lucerne ... ..	8·4	3·6	5 5
Cohuna ... ..	" ... ..	9·0	4·0	5·4
Swan Hill ... ..	" ... ..	14·0	8·4	10·2
Macorna North ... ..	Sorghum ... ..	7·1	5·6	6·1

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

WATERWORKS TRUSTS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1907.

Waterworks Trusts.	Cost of Works at 30th June, 1907. defrayed from—		Capital Indebtedness.				Interest Out- standing at 30th June, 1907.
			In- creased by Interest Capital- ized.	Reduced by—		At 30th June, 1907.	
				Free State Grant.	Loan Advances made by State.		
	£	£	£	£	£	£	£
Alexandra .. ..	..	3,359	..	..	109	3,250	65
Avenel .. ..	..	1,684	..	..	149	1,535	30
Avoca .. ..	2,662	8,709	..	2,494	320	5,895	353
Bairnsdale .. ..	..	40,439	..	23,439	316	16,684	331
Ballan .. ..	..	1,100	..	..	227	873	17
Benalla .. ..	..	15,579	..	..	2,697	12,882	256
Bet Bet Shire .. ..	1,384	5,694	..	..	1,093	4,601	91
Birchip .. ..	819	5,235	..	..	160	5,075	190
Boort .. ..	28	1,150	..	150	35	965	39
Bright .. ..	..	2,990	..	..	272	2,718	54
Carisbrook .. ..	..	8,400	..	2,400	224	5,776	115
Carrum .. ..	..	25,732	..	7,732	50	17,950	2,029
Charlton .. ..	2,769	7,877	..	887	22	6,968	376
Cobram .. ..	..	4,433	..	..	17	4,416	88
Dandenong .. ..	..	19,129	..	5,128	394	13,607	201
Daylesford Borough .. ..	..	24,207	2,793	3,139	1,278	22,583	448
Donald .. ..	3,058	8,166	..	1,166	253	6,747	134
Echuca Borough .. ..	..	13,150	..	..	1,297	11,853	477
Elmore .. ..	..	4,000	..	..	319	3,681	73
Euroa .. ..	..	17,242	..	..	1,132	16,110	320
Gisborne .. ..	..	4,668	..	..	838	3,830	76
Hamilton .. ..	..	36,900	..	..	1,159	35,741	709
Healesville .. ..	..	4,661	..	..	454	4,207	83
Heathcote .. ..	..	7,394	..	..	357	7,037	140
Horsham Borough .. ..	..	17,713	..	7,712	444	9,557	190
Kara Kara Shire .. ..	1,522	8,203	..	..	274	7,929	157
Kerang .. ..	88	4,000	..	..	96	3,904	157
Kerang Shire .. ..	213	1,200	..	..	37	1,163	23
Kilmore .. ..	..	14,148	..	..	1,771	12,377	247
Koroit .. ..	..	5,502	..	2,047	202	3,253	65
Korumburra .. ..	..	11,492	..	..	733	10,759	..
Kowree .. ..	292	2,707	..	..	101	2,606	52

WATERWORKS TRUSTS—CAPITAL INDEBTEDNESS AND INTEREST  
OUTSTANDING, 30TH JUNE, 1907—*continued.*

Waterworks Trusts.	Cost of Works at 30th June, 1907, defrayed from—		Capital Indebtedness.				Interest Out- standing at 30th June, 1907.
	Free State Grant.	Loan Advances made by State.	In- creased by Interest Capital- ized.	Reduced by—		At 30th June, 1907.	
				Amounts Written Off.	Payments to Re- demption.		
	£	£	£	£	£	£	
Kyabram .. .. .		507			98	409	8
Kyneton Shire .. .. .		26,680			10,113	16,567	331
Lancefield .. .. .		7,083			378	6,705	133
Lawloit .. .. .	1,302	12,095			451	11,644	231
Leongatha .. .. .		7,086			21	7,065	138
Lilydale .. .. .		5,785			30	5,755	141
Loddon United* .. .. .	4,122	21,334		1,717		19,617	3,411
Longwood .. .. .		2,400		550	69	1,781	35
Lowan Shire .. .. .	1,258	11,680			437	11,243	223
Macedon .. .. .		2,600			160	2,440	48
Mansfield .. .. .		7,931			708	7,223	143
Maryborough .. .. .		76,257		9,200	2,609	64,448	
Mooroopna .. .. .		3,053		1,400	67	1,586	59
Murchison .. .. .		2,800			41	2,759	55
Nagambie .. .. .		2,775			337	2,438	48
Nhill .. .. .	799	10,068		2,482	245	7,341	440
Numurkah Shire .. .. .	1,278	23,684		1,376	2,478	19,830	392
Omoo .. .. .		3,982			326	3,656	147
Pyramid Hill .. .. .		437				437	92
Riddell's Creek .. .. .		3,500		497	109	2,894	57
Rochester .. .. .		1,300			120	1,180	23
Romsey .. .. .		4,700			843	3,857	77
Rushworth .. .. .		4,500			72	4,428	88
Rutherford .. .. .		16,485			545	15,940	316
Seymour .. .. .		27,959			1,447	26,512	526
Shepparton Urban .. .. .	24	19,530		2,416	1,463	15,651	313
Shepparton Shire .. .. .	110	17,125		1,376	1,038	14,709	292
St. Arnaud Borough .. .. .	57	44,800		15,077	985	28,738	571
St. Arnaud Shire .. .. .	1,691	3,098	4,077		1,085	6,090	121
Stawell Shire .. .. .	545	1,370		250	1,120		
Sunbury .. .. .		15,983				15,983	997
Swan Hill .. .. .	231	3,988			97	3,891	78
Swan Hill Shire† .. .. .	6,421	36,043		36,043			
Tallangatta .. .. .		52				52	
Tatura .. .. .		2,847		650	260	1,937	38
Tungamah Shire .. .. .	4,130	12,241			484	11,757	233
United Echuca and Waranga .. .. .	14,968	70,369		34,748	1,964	33,657	669
Upper Macedon .. .. .		2,290			284	2,006	40
Violet Town .. .. .		4,350			139	4,211	84
Wangaratta .. .. .		9,888			105	9,783	194
Warracknabeal .. .. .	262	4,116			417	3,699	73
Warrambool .. .. .		33,500			1,265	37,235	1,496
Western Wimmera .. .. .	9,335	213,943		132,835	3,809	77,299	1,537
Wimmera United .. .. .	19,813	143,537		36,392	4,162	107,983	
Winchelsea Shire .. .. .		4,420			150	4,270	85
Wodonga .. .. .		7,722			287	7,435	148
Woodend .. .. .		7,663			2,083	5,580	111
Wycheproof .. .. .	1,500	10,481		700	825	8,956	176
Yarram .. .. .		2,082			5	2,077	35
Yarrawonga Urban .. .. .	1,897	8,800			1,294	7,506	149
Yatchaw .. .. .		6,262		1,061	172	4,429	88
Yea .. .. .		3,885			73	3,812	75
Total .. .. .	82,583	1,323,927	6,870	335,664	62,100	933,033	22,351

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

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



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

The trusts mentioned above have been relieved of 25 per cent. of their original liabilities to the State, and in addition, of £66,617 arrears of interest. The amount of interest outstanding represents about seven months' interest on the capital outstanding.

The following return furnishes full particulars of the receipts and expenditure of the Waterworks Trusts during the year ended 31st December, 1907:—

WATERWORKS TRUSTS—RECEIPTS AND EXPENDITURE, 1907.

Waterworks Trusts.	Receipts from—				Expenditure on—				
	Water Rates.	Sale of Water.	Other Sources.	Total.	Maintenance and Management.	Salaries and Wages.	Interest and Redemption.	Other Services.	Total.
Alexandra .. ..	£ 526	£ 7	£ 4	£ 537	£ 218	£ 205	£ 155	£ ..	£ 638
Avenel .. ..	197	..	4	201	144	107	69	3	323
Avoca .. ..	157	..	..	157	12	..	..	..	12
Bairnsdale .. ..	1,526	104	14	1,644	780	362	703	39	1,884
Ballan .. ..	272	4	3	279	121	31	39	16	207
Benalla .. ..	1,378	394	18	1,790	244	584	583	..	1,411
Bet Bet Shire .. ..	335	..	..	335	8	51	208	15	282
Birchip .. ..	801	..	† 478	1,279	401	57	342	74	874
Boort .. ..	242	24	..	266	225	11	22	4	262
Bright .. ..	172	106	1	279	63	42	123	5	293
Carisbrook .. ..	377	15	8	400	21	90	261	26	398
Carrum .. ..	1,415	..	19	1,434	607	105	500	4	1,216
Charlton .. ..	535	28	13	576	151	94	250	41	536
Cobram .. ..	402	1	..	403	19	109	198	2	328
Cobdenong .. ..	629	22	9	660	140	136	457	3	736
Dayleford Borough .. ..	1,170	557	150	1,877	667	103	1,021	9	1,800
Donald .. ..	459	253	10	722	307	182	305	8	802
Echuca Borough .. ..	1,753	..	23	1,776	930	468	325	95	1,818
Elmore .. ..	240	150	38	428	175	113	166	1	455
Euroa .. ..	708	179	5	892	38	108	709	3	858
Gisborne .. ..	339	..	4	343	43	48	173	..	264
Hamilton .. ..	2,182	304	41	2,587	140	345	1,616	45	2,146
Healesville .. ..	248	151	19	418	188	48	190	14	440
Heathcote .. ..	354	184	9	547	47	92	318	2	459
Horsham Borough .. ..	1,622	..	114	1,736	868	478	433	4	1,783
Kara Kara Shire .. ..	824	..	16	840	183	15	474	12	684
Kerang .. ..	886	..	1	887	428	219	182	8	837
Kerang Shire* .. ..	..	..	..	..	..	..	..	..	..
Kilmore .. ..	532	380	3	915	47	242	598	6	893
Koroit .. ..	398	79	..	477	84	138	192	3	417
Korumburra .. ..	571	302	82	955	55	151	696	21	923
Kowree .. ..	345	..	3	348	50	54	118	..	222
Kyabram .. ..	270	91	7	368	168	75	18	43	304
Kyneton Shire .. ..	1,273	853	18	2,144	81	285	1,587	3	1,956
Lancefield .. ..	256	106	..	362	12	40	303	1	356
Lawloit .. ..	1,179	..	10	1,189	171	262	532	45	1,010
Leongatha .. ..	609	25	20	654	47	78	347	8	480
Lilydale .. ..	309	79	1	389	24	91	190	4	309

\* This trust is inoperative.

† Principally contributions from municipal councils towards maintenance and interest on and redemption of loans.

WATERWORKS TRUSTS—RECEIPTS AND EXPENDITURE, 1907—  
*continued.*

Waterworks Trusts.	Receipts from—				Expenditure on—				
	Water Rates.	Sale of Water.	Other Sources.	Total.	Maintenance and Management.	Salaries and Wages.	Interest and Redemption.	Other Services.	Total.
	£	£	£	£	£	£	£	£	£
Loddon United†	2,337	150	258	2,745	436	157	1,700	71	2,364
Longwood ..	194	..	..	194	15	28	81	2	126
Lowan Shire ..	1,434	..	22	1,456	220	307	509	59	1,095
Macedon ..	153	..	..	155	29	37	110	5	181
Mansfield ..	482	202	3	687	258	144	327	1	730
Maryborough ..	2,400	912	29	3,341	319	304	2,915	33	3,571
Mooroopna ..	298	52	1	351	111	170	87	7	375
Murchison ..	236	125	1	362	157	133	70	9	369
Nagambie ..	301	28	..	329	53	100	110	9	272
Nhill ..	1,111	..	114	1,225	534	50	791	18	1,393
Numurkah Shire	2,152	324	44	2,520	589	545	964	40	2,138
Omoo ..	308	..	14	322	128	31	165	2	326
Pyramid Hill ..	38	..	..	38	13	..	26	..	39
Riddell's Creek ..	240	..	1	241	45	34	131	13	223
Rochester ..	452	18	..	470	178	194	64	23	449
Romsey ..	226	57	2	285	16	79	175	..	270
Rushworth ..	601	..	1	602	206	148	200	20	574
Rutherglen ..	1,572	25	16	1,613	562	225	726	2	1,515
Seymour ..	559	1,093	38	1,690	117	182	1,199	10	1,508
Shepparton Urban ..	1,554	387	35	1,976	800	425	708	30	1,963
Shepparton Shire ..	1,271	4	..	1,275	306	217	675	23	1,221
St. Arnaud Borough ..	1,794	93	252	2,139	744	125	1,300	6	2,175
St. Arnaud Shire ..	492	..	8	500	155	44	276	10	485
Stawell Shire*	..	..	..	..	..	..	..	..	..
Sunbury ..	254	545	148	947	256	88	762	5	1,111
Swan Hill ..	611	14	14	639	231	218	176	3	628
Swan Hill Shire†	..	..	..	..	..	..	..	..	..
Tallangatta‡	..	..	..	..	..	..	..	..	..
Tatura ..	334	75	5	414	208	157	88	2	455
Tungamah Shire ..	1,430	103	11	1,549	423	414	532	12	1,381
United Echuca and Waranga ..	2,923	735	3	3,661	1,536	369	1,026	57	2,988
Upper Macedon ..	201	..	28	229	22	34	86	3	145
Violet Town ..	234	..	7	241	33	51	190	..	274
Wangaratta ..	1,115	287	37	1,439	444	357	449	..	1,250
Warracknabeal ..	936	119	20	1,075	715	140	167	11	1,033
Warrambool ..	2,390	359	167	2,916	1,983	545	800	71	3,399
Western Wimmera ..	5,797	2,989	99	8,885	4,972	629	3,496	..	9,097
Wimmera United ..	9,765	899	677	11,341	5,675	..	5,067	60	10,802
Winchelsea Shire ..	337	..	1	338	57	73	193	2	325
Woodonga ..	426	189	8	623	23	135	336	2	496
Woodend ..	238	386	27	651	515	203	252	16	986
Wycheproof ..	783	70	114	967	214	148	398	6	766
Yarram ..	194	..	1	195	42	27	51	3	123
Yarrawonga Urban ..	567	195	..	762	170	250	340	..	760
Yatchaw ..	290	..	..	290	6	45	200	10	261
Yea ..	254	215	6	475	113	188	172	..	473
Total ..	74,775	15,113	3,359	93,247	31,536	13,420	42,483	1,223	88,671

\* This trust is inoperative.

† The property of this trust has been taken possession of by the State Rivers and Water Supply Commission, as provided by section 273 of the *Water Act* 1905.

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

§ Principally contributions from municipal councils towards maintenance and interest on and redemption of loans.

|| Included in maintenance and management.

§ This trust had no ordinary revenue and expenditure in 1907.

Of the waterworks controlled by Municipalities, the most important are those at Ballarat, vested in the Ballarat Water Commission, and having reservoirs with a storage capacity of nearly 842 million gallons. Other important reservoirs in this group are those supplying Beechworth, Clunes, and Talbot, the respective storage capacities being 191, 225, and 200 million gallons. The following return shows the financial position existing between the State and corporations on account of these Waterworks:—

Municipal  
Water-  
works.

WATERWORKS OF MUNICIPAL CORPORATIONS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1907.

Local Bodies.	Cost of Works to 30th June, 1907, defrayed from Loan Advances made by State.	Capital Indebtedness.				Interest outstanding at 30th June, 1907.
		Increased by Interest capitalized	Reduced by—		At 30th June, 1907.	
			Amounts written off.	Payments to Redemption.		
	£	£	£	£	£	£
Arapiles Shire ..	3,600	..	..	894	2,706	54
Ararat Borough ..	49,196	..	18,266	1,244	29,686	585
Ballarat Water Commission ..	309,300	41,869	2,111	35,852	313,206	7,227
Beechworth Shire ..	29,676	1,256	5,958	3,864	21,110	..
Bet Bet Shire ..	1,000	..	985	15	..	..
Birchip Shire ..	2,669	..	..	256	2,413	36
Borong Shire ..	9,059	..	..	983	8,076	121
Castle Donnington Shire ..	4,160	..	..	467	3,693	..
Chiltern Shire ..	4,500	508	508	687	3,813	76
Clunes Borough Water Commission ..	70,195	..	62,395	291	7,509	149
Creswick Borough ..	3,500	..	..	3,500	..	78
Dimboola Shire ..	2,566	..	..	267	2,299	35
Dunolly Borough ..	2,190	..	..	798	1,392	28
Inglewood Borough ..	5,149	..	..	1,525	3,624	117
Karkaroc Shire ..	15,088	..	..	1,028	14,060	212
Kerang Shire ..	2,313	..	..	173	2,140	33
Korong Shire ..	1,564	..	..	393	1,171	23
Ripon Shire ..	3,000	..	..	1,287	1,713	34
Stawell Borough ..	108,506	..	61,661	3,527	43,318	860
Talbot Borough ..	15,000	..	13,986	50	964	19
Tarnagulla Borough ..	800	..	..	140	660	13
Wimmera Shire ..	28,890	..	..	26,196	2,694	53
Wycheproof Shire ..	2,445	..	..	230	2,215	33
Total ..	674,366	43,633	165,870	83,667	468,462	9,786

The *Geelong Municipal Waterworks Act 1907*, providing for the constitution of a Municipal Waterworks Trust for the supply of water to Geelong and district, and for other purposes, was assented to on the 16th December, 1907. Particulars relating to the Geelong Waterworks will be found on pages 577, 580 and 581.

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

As well as the above £9,889 (including £346 capitalized interest) were paid to redemption by other municipal corporations, the balance of their liabilities to the State being transferred to Waterworks Trusts.

Abolished  
Trusts.

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

IRRIGATION AND WATER SUPPLY TRUSTS ABOLISHED AND LIABILITIES  
CANCELLED.

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

\* £30 paid to Redemption Fund by Trust.

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

Mildura  
irrigation  
scheme.

A full account of the history of the Mildura Settlement from its inception will be found in the *Victorian Year Book, 1904*. A short account of the scheme is as follows:—

In 1884, a Royal Commission was appointed to consider the question of the Conservation of Water in Victoria, and Mildura was chosen as the site for an irrigation colony, and in 1887, 250,000 acres of land there were set apart for the experiment.

Two blocks of about 25,000 acres each were made available, upon the ordinary conditions for resumption and entry for mining, to the Messrs. Chaffey Bros. Irrigation works and improvements gave rights to grants in fee simple, in these blocks, as well as in the remaining 200,000 acres, which, after three years, the licensees

would be entitled to occupy, and sell, or dispose of, in parcels of not more than 80 acres for fruit-growing, or 160 acres for growing other products. No person was to have more than one block, and the licensees were not themselves to retain more than 5,000 acres of cultivated and irrigated land out of that granted to them in fee simple. Every parcel should have a sufficient water-right to run with the title as a perpetual easement, and a licence to divert water from the Murray, sufficient for the purposes of the Settlement, was granted for 25 years. In return, the licensees covenanted to expend £300,000 in irrigation works within twenty years, in accordance with general plans approved by the Government.

On the 30th September, 1887, the licensees assigned all their interests and rights to the Chaffey Brothers Company Limited. In December following, the Mildura Irrigation Company was formed.

By extensive advertising in Great Britain, many of the very best class of settlers were induced to emigrate and invest their capital. In 1892, the settlers complained of the non-performance by the licensees of their covenants. In March, 1893, the Chief Engineer of Water Supply visited the Settlement, and made extensive inquiries into these complaints, and into the state of affairs generally. His report revealing an unsatisfactory state of affairs, the First Mildura Irrigation Trust, consisting of six Commissioners and two Auditors, to be elected by the occupiers and owners of rateable land, was constituted, by Act of Parliament, in 1895. All the irrigation lands, works, and approaches were vested in them, and the terms of holding were revised in favour generally of the settlers.

In 1896, a Royal Commission was appointed to inquire into and report upon the condition and prospects of the Settlement. It found that the principal causes of failure were the grave errors made in laying out the Settlement, and in the provision made for the supply of water for irrigation; the non-fulfilment of the obligations undertaken in the agreement, whereby the reasonable expectations of the settlers were disappointed; and the hopeless financial mismanagement of the company. It was decided to raise a loan to meet pressing necessities, and an overdraft was guaranteed by the Treasurer, the Chief Engineer of the Water Supply Department deciding what works required to be carried out. From time to time the Government has granted further assistance, until on 30th June, 1907, the total amount advanced was £58,700, which, together with interest accumulated to that date, £17,729, represents the total indebtedness of the Trust to the Government.

A railway line has also been constructed, connecting Mildura with the Metropolis, and was opened for traffic towards the close of 1903.

The success of the Settlement is now assured, and healthy progress is visible everywhere. Its products are consumed in Victoria in large quantities, and the other States of the Commonwealth are good customers for the canned and dried fruits. The following

Exports of  
canned and  
dried  
fruits.

tables show that Victoria is building up an export trade in canned and dried fruits, most of which are raised at Mildura:—

EXPORTS OF CANNED AND DRIED FRUITS PRODUCED IN VICTORIA,  
1896 TO 1907.

Year.	Canned Fruits.	Dried Fruits.	
		Raisins.	Other.
	£	£	£
1896 .. .. .	3,904	835	1,777
1897 .. .. .	6,849	1,147	4,510
1898 .. .. .	5,823	7,388	6,674
1899 .. .. .	9,672	7,524	8,286
1900 .. .. .	20,396	10,150	5,121
1901 .. .. .	31,015	15,095	4,963
1902 .. .. .	30,223	23,730	20,519
1903 .. .. .	30,799	48,137	8,631
1904 .. .. .	31,666	59,276	11,216
1905 .. .. .	36,427	47,131	9,677
1906 .. .. .	39,804	47,114	9,662
1907 .. .. .	48,718	123,679	18,257

DETAILS OF EXPORTS OF CANNED AND DRIED FRUITS PRODUCED  
IN VICTORIA, 1907.

Country to which Exported.	Canned Fruits— Value.	Dried Fruits.			
		Raisins.		Other.	
		Quantity.	Value.	Quantity.	Value.
	£	lbs.	£	lbs.	£
New South Wales ..	16,387	2,128,610	44,762	205,875	4,905
Queensland ..	7,327	811,432	17,963	279,485	7,500
South Australia ..	832	59,431	1,379	17,901	390
Western Australia ..	7,934	225,986	5,616	108,077	2,718
Tasmania ..	2,322	268,809	6,446	91,986	2,281
Other Countries ..	13,916	3,389,595	47,513	15,234	463
Total ..	48,718	6,883,863	123,679	718,558	18,257

The trade with the other States is rapidly growing, the value of the exports amounting to £128,762 in 1907, as against £77,383 in 1903, £85,049 in 1904, £87,391 in 1905, and £91,177 in 1906. The oversea trade also shows a good increase, having risen from £5,403 in 1906 to £61,892 in 1907.

The following figures, showing the population of the settlement since 1891, are a fair indication of its prosperity.

Population  
of Mildura.

POPULATION OF MILDURA, 1891 TO 1907.

1891 April (Census) ..	2,321	1904 September ..	4,100
1896 September ..	2,000	1907 " ..	4,355
1901 March (Census) ..	3,325		

The following is a statement of the revenue and expenditure of the Mildura Irrigation Trust during the year ended 30th June, 1907:—

Revenue and expenditure of Mildura Irrigation Trust.

REVENUE AND EXPENDITURE OF FIRST MILDURA IRRIGATION TRUST, 1906-7.

Revenue.		Expenditure.	
	£		£
Arrears, Horticultural Assessment .. ..	4,801	Expenditure on Pumping Stations .. ..	9,276
Current Rates, Horticultural Assessment .. ..	10,510	Expenditure on Town Supply .. ..	856
Arrears, Town Assessment .. ..	186	Distribution of Water .. ..	3,122
Current Rates, Town Assessment .. ..	708	Interest .. ..	1,999
Miscellaneous .. ..	734	Other Expenditure .. ..	2,786
<b>Total .. ..</b>	<b>16,939</b>	<b>Total .. ..</b>	<b>18,039</b>

The following table shows the average yearly amount of rainfall deduced from all available records to December, 1907, and the rainfall during 1905, 1906, and 1907, in each of the 26 basins or regions constituting the State of Victoria:—

Meteorology.

RAINFALL—YEARLY RECORDS AND AVERAGES.

Name of Basin.	Rainfall.			
	Yearly Average, to Dec., 1907.	During 1905.	During 1906.	During 1907.
Glenelg and Wannon Rivers .. ..	Inches. 27·69	Inches. 27·76	Inches. 32·33	Inches. 24·54
Fitzroy, Eumerella, and Merrie Rivers .. ..	29·92	32·12	32·69	28·12
Hopkins River and Mt. Emu Creek .. ..	25·71	25·84	29·45	23·10
Mt. Elephant and Lake Corangamite .. ..	25·07	23·06	29·15	23·66
Otway Forest .. ..	37·87	36·62	40·24	34·26
Moorabool and Barwon Rivers .. ..	25·38	24·03	28·97	23·80
Werribee and Saltwater Rivers .. ..	24·65	25·76	24·99	20·20
Yarra River and Dandenong Creek .. ..	36·04	38·53	35·65	31·45
Koo-wee-rup Swamp .. ..	35·91	35·49	35·18	31·67
South Gippsland .. ..	40·73	41·00	40·82	36·06
Latrobe and Thomson Rivers .. ..	36·52	36·58	37·15	34·55
Macallister and Avon Rivers .. ..	23·69	26·58	25·47	17·46
Mitchell River .. ..	28·95	34·48	27·65	19·10
Tambo and Nicholson Rivers .. ..	26·42	33·13	28·49	17·54
Snowy River .. ..	33·65	42·83	28·64	23·59
Murray River .. ..	20·34	18·86	28·24	15·26
Mitta Mitta and Kiewa Rivers .. ..	36·03	35·42	46·94	27·05
Ovens River .. ..	37·14	35·94	49·73	29·62
Goulburn River .. ..	26·22	25·62	33·40	21·69
Campaspe River .. ..	24·49	22·43	31·65	20·57
Loddon River .. ..	18·83	17·43	23·48	15·10
Avon and Richardson Rivers .. ..	15·87	16·01	19·58	14·16
Avoca River .. ..	16·99	15·77	20·22	13·68
Western Wimmera .. ..	21·67	19·32	25·15	18·53
Eastern Wimmera .. ..	19·42	20·88	27·55	18·59
Mallee Country .. ..	13·29	13·25	16·03	11·16
<b>Weighted Averages .. ..</b>	<b>24·52</b>	<b>24·97</b>	<b>28·26</b>	<b>20·51</b>

The rainfall recorded for each quarter in 1907, and the quarterly averages up to 1907, deduced from all available records, are as follow:—

RAINFALL—QUARTERLY RECORDS AND AVERAGES.

Name of Basin.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.	
	Amount, 1907.	Average to 1907.	Amount, 1907.	Average to 1907.	Amount, 1907.	Average to 1907.	Amount, 1907.	Average to 1907.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
Glenelg and Wannon Rivers ..	2.14	3.60	7.76	8.67	9.30	9.27	5.34	6.15
Fitzroy, Eumerella, and Merrie Rivers ..	2.13	4.18	9.26	9.39	9.65	10.03	7.08	6.32
Hopkins River and Mt. Emu Creek ..	2.30	4.13	7.20	7.79	7.00	7.61	6.60	6.18
Mt. Elephant and Lake Corangamite ..	2.43	4.39	6.60	7.32	7.10	7.32	7.53	6.04
Otway Forest ..	3.45	6.30	9.47	11.75	11.35	11.76	9.99	8.06
Moorabool and Barwon Rivers ..	1.97	4.43	7.09	7.25	6.85	7.21	7.89	6.49
Werribee and Saltwater Rivers ..	2.43	4.71	5.43	6.70	4.61	6.37	7.73	6.87
Yarra River and Dandenong Creek ..	3.40	6.92	7.91	10.05	8.59	9.55	11.55	9.62
Koo-wee-rup Swamp ..	3.06	6.92	7.47	10.24	10.19	9.89	10.95	8.86
South Gippsland ..	3.31	7.27	10.24	11.61	11.91	11.82	10.60	10.03
Latrobe and Thomson Rivers ..	3.27	7.09	8.64	9.69	11.58	10.26	11.06	9.48
Macallister and Avon Rivers ..	2.02	5.05	5.48	5.94	4.03	5.49	5.93	7.21
Mitchell River ..	2.90	6.97	6.74	7.77	3.10	6.65	6.36	7.56
Tambo and Nicholson Rivers ..	2.92	6.54	5.46	6.19	3.00	5.75	6.16	7.94
Snowy River ..	4.18	7.45	8.95	9.31	3.73	8.16	6.73	8.73
Murray River ..	3.09	3.78	3.84	5.89	4.61	5.76	4.78	4.91
Mitta Mitta and Kiewa Rivers ..	3.76	6.25	6.46	10.36	8.60	10.74	8.23	8.68
Ovens River ..	3.54	6.04	8.21	11.07	9.67	11.44	8.20	8.59
Goulburn River ..	2.78	4.18	5.76	7.76	6.94	7.90	6.21	6.38
Campaspe River ..	2.70	3.69	5.70	7.32	6.52	7.59	5.65	5.89
Loddon River ..	2.05	3.04	3.41	5.87	4.76	5.35	4.88	4.57
Avon and Richardson Rivers ..	1.32	2.33	4.37	5.22	5.03	4.59	3.44	3.73
Avoca River ..	1.60	2.41	4.02	5.43	4.25	5.05	3.81	4.10
Western Wimmera ..	1.75	2.84	7.43	7.13	6.28	6.63	3.07	5.07
Eastern Wimmera ..	1.49	2.14	6.36	6.54	6.69	6.41	4.05	4.33
Mallee country ..	0.86	1.90	3.63	4.47	3.42	3.90	2.85	3.02
State ..	2.25	4.14	6.12	7.32	6.31	7.11	5.83	5.95

RAINFALL IN REGIONS, DURING EACH QUARTER, 1905, 1906, AND 1907.

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

Regions.	First Quarter.			Second Quarter.			Third Quarter.		
	1905.	1906.	1907.	1905.	1906.	1907.	1905.	1906.	1907.
	%	%	%	%	%	%	%	%	%
Western Districts ..	-38	-16	-45	+3	+6	-7	+20	+28	-3
Cape Otway Forest ..	-50	-48	-45	-14	-9	-19	+20	+24	-3
Counties surrounding Port Phillip Bay ..	-28	-14	-53	-7	-18	-18	+21	+16	-8
South Gippsland ..	-26	-8	-54	-9	-22	-12	+22	+13	*
Basins of the Latrobe, Macallister, and Mitchell Rivers ..	-15	+13	-57	-16	-47	-11	+4	+4	-16
Basins of the Tambo and Snowy Rivers ..	+1	+35	-49	-29	-73	-7	-4	-34	-51
All Northern Areas between the Ranges and the Murray, East of the Campaspe River ..	-41	+22	-38	-3	+9	-29	+21	+30	-16
All Northern Areas between the Ranges and the Murray, West of the Campaspe River ..	-35	+3	-38	+11	+21	-16	+2	+34	-3



RAINFALL IN REGIONS, DURING EACH QUARTER, 1905, 1906, AND 1907—continued.

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

Regions.	Fourth Quarter.			Year.		
	1905.	1906.	1907.	1905.	1906.	1907.
Western Districts .. .. .	— 8	+ 32	+ 7	%	+ 15	— 8
Cape Otway Forest .. .. .	— 3	+ 26	+ 24	— 10	†	— 10
Counties surrounding Port Phillip Bay	+ 12	+ 25	+ 20	+ 1	+ 2	— 12
South Gippsland .. .. .	+ 26	+ 39	+ 6	+ 5	+ 4	— 11
Basins of the Latrobe, Macallister, and Mitchell Rivers	+ 45	+ 32	— 4	+ 4	— 4	— 20
Basins of the Tambo and Snowy Rivers	+ 97	+ 33	— 23	+ 13	— 15	— 32
All Northern Areas between the Ranges and the Murray, East of the Campaspe River	— 19	+ 52	— 4	— 8	+ 27	— 21
All Northern Areas between the Ranges and the Murray, West of the Campaspe River	— 18	+ 21	— 11	— 5	+ 22	— 14

\* Very slightly above average. † Very slightly below average.

AVERAGES AND EXTREMES OF CLIMATIC ELEMENTS FOR THE SEASONS AND FOR THE METEOROLOGICAL YEAR DEDUCED FROM ALL RECORDS OBTAINED IN PAST YEARS AT THE MELBOURNE OBSERVATORY.

Meteorological Elements.	Spring.	Summer.	Autumn.	Winter.	Year.	
<i>Averages.</i>						
Mean pressure of air in inches	29·891	29·840	30·005	29·999	29·934	
Monthly range of pressure of air—Inches .. .. .	0·895	0·798	0·802	0·983	0·869	
Mean temperature of air in shade—°Fahr. .. .. .	56·6	64·8	58·5	49·2	57·3	
Mean daily range of temperature of air in shade—°Fahr. .. .. .	18·8	21·4	17·6	14·2	18·0	
Mean percentage of humidity. Saturation = 100 .. .. .	70	65	73	78	71	
Mean rainfall in inches .. .. .	7·26	5·85	6·69	5·69	25·49	
Mean number of days of rain .. .. .	37	23	30	41	131	
Mean amount of spontaneous evaporation in inches .. .. .	10·04	17·01	7·60	3·67	38·32	
Mean daily amount of cloudiness—Scale 0 to 10 .. .. .	6·0	5·3	5·9	6·4	5·9	
Mean daily duration of sunshine	5 58	7 53	4 36	3 25	5 28	
Mean total of hours of sunshine	542	709	423	314	1,988	
Percentage number of hours during which the wind blew from the various points of the compass	North ..	16·46	8·11	16·75	30·44	17·94
	North-West ..	9·34	4·18	7·40	12·50	8·36
	West ..	15·16	10·68	13·14	13·90	13·22
	South-West ..	16·43	19·52	12·73	10·70	14·85
	South ..	17·96	26·10	15·48	6·90	16·61
	South-East ..	9·33	17·58	13·39	5·64	11·48
	East ..	3·91	5·19	5·82	3·88	4·70
Mean number of days of fog ..	North-East ..	9·28	6·68	12·71	13·54	10·50
	Calm ..	2·11	1·99	2·58	2·50	2·29
		1·2	0·7	5·0	9·6	16·5

AVERAGES AND EXTREMES OF CLIMATIC ELEMENTS, ETC—*continued.**Extremes.*

Pressure of air.	Inches.	Temperature of air in shade.	° Fahr.
Greatest monthly range ...	1·503	Greatest monthly range ...	69·1
Smallest " " ...	0·489	Smallest " " ...	23·4
Greatest yearly range ...	1·719	Greatest yearly range ...	82·6
Smallest " " ...	1·169	Smallest " " ...	66·0
Highest air pressure on record	30·678	Greatest mean daily range ...	27·8
Lowest " " " "	28·868	Smallest " " " " ...	7·7
		Highest temperature on record	111·2
		Lowest " " " "	27·0
Solar radiation—highest on record .. .. .		178·5	° Fahr.
Terrestrial radiation—lowest on record .. .. .		20·4	"
Greatest rainfall on record .. .. .		44·25	Inches.
Smallest rainfall on record .. .. .		15·61	"
Horizontal motion in miles .. .. .		81·118	
Mean hourly velocity of wind .. .. .		9·2	

The table below contains the values of the principal Meteorological elements for the whole year 1907, with the corresponding averages and extremes, based on the Observatory Records of 51 years:—

## METEOROLOGY, 1857 TO 1907.

Meteorological Elements.	Yearly Averages and Extremes.			
	Year 1907.	Average for 51 Years.	Extreme between which the Yearly Average Values have oscillated in 51 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ...	29·915	29·935	...	...
Highest " " " " ...	29·529	29·550	30·678	30·003
Lowest " " " " ...	29·303	29·174	29·902	28·868
Range (inches) ...	1·226	1·356	1·719	1·169
Mean temperature of air, in shade (° Fahr.)	56·7	57·4	58·7	56·1
Mean daily maximum ...	67·1	67·3	69·0	65·8
Mean daily minimum ...	49·1	49·3	51·2	47·2
Absolute maximum ...	105·3	105·4	111·2	96·6
Absolute minimum ...	30·2	30·7	33·9	27·0
Mean daily range ...	18·0	18·0	20·3	14·6
Absolute annual range ...	75·1	74·4	82·6	66·0
Solar Radiation (maximum) ...	160·0	161·3	178·5	108·6
Terrestrial Radiation (minimum) ..	23·3	24·9	46·2	20·4
Rainfall (in inches) ...	22·26	25·56	44·25	15·61
Number of wet days ...	102	131	165	102
Year's amount of free evaporation (in inches) ...	40·61	38·18	45·65	31·59
Percentage of humidity (saturation = 100) ...	70	72	...	...
Cloudiness (scale 10 = overcast, 0 = clear)	5·7	5·9	...	...
Duration of sunshine (number of hours)	1,988	1,957	...	...
Number of days of fog ...	7	16·2	...	...

## AGRICULTURAL EDUCATION.

An Act for the establishment of Agricultural Colleges was passed towards the close of 1884, and five areas were reserved as sites for colleges and experimental farms—at Dookie, Longerenong, Gunyah, Gunyah, Olangolah, and Bullarto. The total areas of these reserves amount to 13,392 acres. Particulars are as follow:—

Agricultural  
education.

AREAS OF AGRICULTURAL COLLEGE AND EXPERIMENTAL FARM LANDS,  
1907.

Name.	Area.	How Used.
	Acres.	
Dookie and Currawa ...	4,889	College and Experimental Farm
Longerenong (Jung Jung) ...	2,386	" " "
Gunyah Gunyah and Jumbuk ...	2,500	Let for grazing and cultivation
Olangolah ...	2,800	Not in use
Bullarto ...	817	Let for grazing
Total ...	13,392	

In order to carry out experiments, devised for the purpose of ascertaining the suitability of the Victorian climate and soil for various kinds of useful products and of obtaining data respecting the rotation of crops, but more especially for the instruction of students in agriculture, a block of 4,806 acres, subsequently increased by 40 acres, was reserved in 1874, at Dookie, situated in the County of Moira, in the North-Eastern District of Victoria, on which to found, under the direction of the Council of Agricultural Education, a State Experimental Farm.

Agricultural  
College,  
Dookie.

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

The College has accommodation for 100 students, and there were 76 in attendance in 1907. The charges per head per annum are £25 for maintenance, £1 5s. for medical attendance and medicines, and £1 15s. for books and other school materials, or £28 in all. No charge is made for instruction.

The farm is thoroughly equipped with up-to-date buildings, improvements and appliances, and recently a new brick dining hall and kitchen, with servery, store rooms, &c., stables for 40 horses, three new dormitories, horticultural building for practical demonstrations in fruit preserving, canning, &c., have been erected. A line of 4-inch pipes from the Broken River has been laid down, and water can now be pumped to the College reservoirs, ensuring permanency of supply. Besides the usual sports grounds there are rifle butts, both standard and miniature, on the estate.

The farm has 34½ acres under vines, and 20 acres under fruit trees, and in 1907 544 acres under cereals, hay, and green fodder. The live stock comprised 86 horses, 61 dairy cows, 118 other cattle, 1,400 sheep and 216 pigs. The produce of the farm for the year was valued at £5,230, and the receipts comprised £2,034 from fees, and £3,793 from sale of produce. The expenditure for the year, including that on buildings and maintenance, amounted to £17,302.

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

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

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

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

The ploughing, harvesting, and threshing are mainly carried out by the students under competent instructors. The students alone ploughed 1,000 acres last season, and cropped 600 acres, doing all the work.

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

Longere-  
nong  
Agricul-  
tural College.

The Longerenong Agricultural College and Farm, under the control of the Council of Agricultural Education, is situated about eight miles from Horsham, and three miles from Dooen railway station. It was re-opened as a college on the 1st November, 1906, and accommodates thirty-five resident students. Several non-resident students the sons of neighbouring farmers also attend the classes. The farm contains 2,386 acres of land, of which about 700 acres are only fit for grazing, being low-lying and subject to floods in winter, but the remainder is good wheat-growing land. About 500 acres are cropped each year, wheat being the staple crop, of which the average yield per acre for the season 1907-08 was 17¾ bushels.

The orchard, containing 28 acres—5 acres of which are planted with phyloxera-resistant vines—50 acres of lucerne, and about 10 acres of summer fodder-crops, are irrigated each season by water obtained from the Western Wimmera Waterworks Trust. Ten acres are devoted to experimental work in conjunction with the Department of Agriculture. Lamb-raising is one of the chief industries.

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

There are four silos on the farm, and the live stock in 1907 comprised 35 horses, 19 dairy cows, 35 other cattle, 1,500 sheep, and 25 pigs.

In 1907 the receipts comprised fees £557; sale of produce, &c., £1,435; the expenditure, including that on building and maintenance, amounted to £5,080.

#### GOVERNMENT EXPERIMENTAL FARMING.

In addition to the experimental farming carried on in connexion with the Dookie and Longerenong Agricultural Colleges, the Government has experimental farms at Wyuna, Rutherglen, and Whitfield. The Wyuna Irrigation Farm has an area of 540 acres, of which 256 acres are under crop (chiefly green fodder). The produce of this farm in 1907 was valued at £900; the receipts comprised £446 from sale of produce; and the expenditure for the year amounted to £2,708.

Wyuna  
Irrigation  
Farm.

The Government Tobacco Experimental Farm is situated at Whitfield, and has an area of 113 acres, but owing to the fact that drainage operations were not completed in time to allow for clearing and cultivation, experimental work in tobacco growing has been restricted. Plants have been grown of seven varieties and distributed throughout the State, and large quantities of seed sent to intending growers.

Government  
Tobacco  
Experimental  
Farm.

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

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

The crop of three (3) acres on the farm, consisting chiefly of pipe tobaccos, is looking well. Experiments with fungicides on the disease known as Blue Mould go to show that formalin treatments of the soil act beneficially. The area under cultivation in Victoria this season (1907-08), is the largest since 1896.

Government  
Viticultural  
Station.

The Government Viticultural Station is situated near Rutherglen, and has an area of 913 acres, and is being used as a viticultural station, model orchard, and experimental farm. The expenditure in connexion with the station, including buildings and maintenance, amounted to £4,713 in 1907.

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

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

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

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

Large areas are devoted to the permanent growth of resistant stocks for the production of cuttings. A considerable area of more suitable land for nursery purposes has been taken up on the banks of the Murray, at Wahgunyah. Here a large irrigation plant and calusing frames, cottages, &c., have been erected.

To practically prove the efficacy of resistant stocks, grafted vines have been planted on the very sites of phylloxerated vines that had to be uprooted. These are growing luxuriantly, and afford

striking testimony to their resistant value, as the vines by which they were originally surrounded are all dead as the result of the pest.

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

Mr. F. de Castilla is at present in Europe on behalf of the Department, and is selecting desirable varieties of both European and American vines for introduction into this State.

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

As a college for the sons of vine-growers the Viticultural Station did not become popular, but the buildings are now being filled with boys from the Neglected Children's Department, who are being trained in scientific and practical agriculture and viticulture, and are already supplying vigneron and farmers with skilled labour of a class now difficult to obtain.

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

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

Gonyah  
Gonyah,  
Olangolah,  
and Bullarto.

Endowment  
lands.

In addition to the college and farm lands provision was made, by the Act of 1884, to permanently reserve from sale an area of not more than 150,000 acres of Crown lands, and to vest it in trustees to be appointed, who should hold it in trust for the benefit of and by way of an endowment for State agricultural colleges and experimental farms. The land so reserved now amounts to 144,294 acres,

and is described in the following table. At present the areas are let for grazing and agricultural purposes:—

## ENDOWMENT AREAS.

Parish.	Acres.	Parish.	Acres.
Ararat .. .. .	1,100	Leeor .. .. .	125
Ardno .. .. .	210	Moyston .. .. .	242
Alexandra .. .. .	79	Moyston West .. .. .	319
Bellellen and Illawarra	750	Mullroo and Yelta .. .. .	28,600
Beveridge Island .. .. .	2,732	Meering .. .. .	690
Brankeet .. .. .	387	Myrree .. .. .	394
Berrigama .. .. .	199	Mooroopna .. .. .	98
Bealiba .. .. .	135	Milloo .. .. .	120
Bumbang .. .. .	10,000	Mirampiram .. .. .	99
Byawatha .. .. .	108	Moira .. .. .	136
Buckrabanyule .. .. .	220	Mologa .. .. .	107
Bringalbart .. .. .	79	Nurcoung .. .. .	230
Bangerang .. .. .	58	Pental Island .. .. .	17,350
Broadwater .. .. .	198	Pannoomiloo .. .. .	100
Carraragarmungee .. .. .	1,864	Peechember .. .. .	50
Cudgewa .. .. .	732	Purnim .. .. .	3,678
Colac Colac .. .. .	420	Quantong .. .. .	495
Corack East .. .. .	474	Quambatook .. .. .	380
Charam .. .. .	331	Turrumberry North .. .. .	615
Carchap .. .. .	99	Tullich .. .. .	460
Charlton East .. .. .	228	Terrick Terrick East and West	160
Dropmore and Ruffy .. .. .	454	Terrick Terrick East .. .. .	40
Dinyarrak .. .. .	359	Tallandoon .. .. .	116
Dartagook .. .. .	120	Tarwin .. .. .	167
Estcourt .. .. .	2,831	Turrumberry .. .. .	281
French Island .. .. .	340	Tallygaroopna .. .. .	430
Gooram Gong .. .. .	582	Tragowel .. .. .	250
Granya .. .. .	586	Toolongrook .. .. .	160
Gowangardie and Currawa	272	Wychitella .. .. .	1,015
Glenpatrick .. .. .	100	Walwa .. .. .	200
Glynwylln .. .. .	524	Windham .. .. .	452
Jumbuk .. .. .	2,641	Wabba .. .. .	335
Kunat Kunat .. .. .	700	Warrenbayne .. .. .	145
Karramomus and Tamleugh..	672	Wappan .. .. .	293
Kerrisdale .. .. .	148	Woorak .. .. .	630
Kaarimba .. .. .	429	Waratah .. .. .	148
Knowsley .. .. .	103	Wareek .. .. .	100
Knowsley East .. .. .	296	Warrenmang .. .. .	120
Korrak Korrak .. .. .	150	Wail .. .. .	240
Kinypanial .. .. .	80	Wonthaggi North .. .. .	2,535
Koonik Koonik .. .. .	37	Yarek .. .. .	569
Konnepra .. .. .	126	Yanac-a-Yanac .. .. .	168
Kerang .. .. .	90	Yeringa .. .. .	160
Lindsay Island .. .. .	42,000	Yeerung .. .. .	1,400
Laen .. .. .	887		
Longwood .. .. .	242	Total .. .. .	144,294
Lang Lang and Yallock .. .. .	4,780		

The total annual rental for endowment areas was £7,400.



### SCHOOL OF HORTICULTURE.

This school is situated in the Richmond Park. The site covers 33 acres of ground, and was originally part of the old police paddock. In 1890, the Government decided to start on this site an institution for the training of orchardists and small settlers, and during the past ten years much has been done to provide for teaching the regular and casual students, and those visitors calling in search of special information.

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

Class room instruction is given in horticultural science, vegetable pathology, botany, physical and commercial geography, entomology, measuring, levelling, designing, and plotting of homesteads, orchards, small farm and garden areas, and the most approved methods of raising and managing fruit trees and plants. Practical work includes the propagation and management of orchard trees, citrus, table grapes, bush fruits, harvesting, storing, packing, marketing, drying fruit, vegetable culture, clearing, grading, and trenching of land, management of soils, manures, and drainage. The principal and his assistant carry out this programme by affording lessons daily in the class room and field.

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

### AGRICULTURAL HIGH SCHOOLS.

Agricultural High Schools have been established recently at Warrnambool and Sale, and it is proposed to open others at Pallarat, Shepparton, and Wangaratta. During 1906-7 the expenditure on these schools, including buildings, amounted to £2,060, and provision has been made in the Appropriation Act of 1907-8 for £12,814. These schools are established under the following conditions:—

- (a) At least one-half of the cost of the necessary buildings and equipment shall be contributed by local subscriptions.
- (b) An area of land of not less than 20 acres, situated in a convenient position to the High School, shall be provided and vested in the Minister of Public Instruction.
- (c) At least 50 students paying prescribed fees shall be guaranteed before the proposal to establish an Agricultural High School is entertained.

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

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

#### AGRICULTURAL AND HORTICULTURAL SOCIETIES.

Agricultural  
and Horti-  
cultural  
Societies

Agricultural and Horticultural Societies, made up of voluntary membership, and having for their object the improvement of the agricultural, pastoral, and horticultural industries, exist throughout the State. Accounts of some of the more important societies will be found in previous issues of this work. Ninety-five agricultural societies furnished returns for the year 1907, and particulars are set out below.

#### AGRICULTURAL SOCIETIES, 1905, 1906, AND 1907.

Societies.	Area of Grounds.	Number of Members.	Government Grant.	Total Receipts (including Government Grant).	Total Expenditure.	Bank Overdraft.
	Acres.		£	£	£	£
Royal ... ..	37	1,783	...	10,576	8,157	9,264
Shepparton ... ..	23	420	52	2,772	2,666	1,025
Ballarat ... ..	11	342	66	1,676	1,682	291
Warracknabeal ... ..	6	285	350	1,614	1,580	755
Ovens and Murray ... ..	39	345	40	1,530	1,287	91
Bendigo ... ..	10	307	71	1,428	1,435	7
Benalla ... ..	12	228	26	1,354	1,364	...
Hamilton ... ..	21	253	41	1,059	1,284	434
Geelong ... ..	145	341	42	968	1,108	462
Villiers and Heytesbury ... ..	33	170	22	834	969	83
Colac ... ..	12	241	27	821	948	244
Korumburra ... ..	15	254	28	815	854	1,145
Others ... ..	1,249	11,880	1,395	31,354	32,026	7,967
Total, 1907 ... ..	1,613	16,849	2,160	56,801	55,360	21,768
Total, 1906 ... ..	1,590	16,131	1,778	55,378	64,054	24,346
Total, 1905 ... ..	1,517	15,601	1,881	51,945	51,345	17,548

The loan liability of these societies in 1907 amounted to £6,280, that of the Geelong society alone being £2,725. The Horticultural Societies furnishing returns for 1907 number 35, their membership being 3,206, the receipts for the year £3,481, including Government grant £229, the expenditure £3,387, bank overdraft £302, and loan liability £1,482.

#### DEPARTMENT OF AGRICULTURE.

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

#### INSPECTION OF ORCHARDS, NURSERIES, &C.

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

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

The fear of introducing either of the fruit flies, *Tephritis tryoni* and *Halterophora capitata*, has induced the Hon. the Minister of Agriculture to arrange for the more thorough examination of fruit from New South Wales, Queensland, and elsewhere. The fruit-fly question is a most 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.

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

#### GENERAL REMARKS ON LIVE STOCK DISEASES IN VICTORIA.

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

The inspection of meat products for export is carried out under stringent regulations, and by properly trained officers, and no meats are allowed to be canned unless they are of a perfectly wholesome character, and derived from animals free from disease. The

premises where canning of meat is conducted are rigorously inspected, and cleanliness is a factor insisted upon in the packing operations.

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

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

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

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

*Swine.*—Trichinosis (*Trichina Spiralis*) and "measles" (*Cysticercus Cellulosæ*), the hydatid stage of the tapeworm *Tænia Solium* of man, do not exist in Victoria. The conditions under which pigs are reared and kept in Victoria are conducive to their well-being and freedom from disease. The mildness of the climate and life in the open are the great factors insuring their healthfulness. Tubercle does not exist to a greater extent than 2 per cent. in Victorian swine.

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

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

## EXPERIMENTAL FIELD WORK IN 1906-7.

During 1906, the experimental field work, both in the Northern wheat-producing areas and in the Southern portions of the State has been put on a more concrete basis as regards continuity of the work.

Agreements have been made with some 30 farmers to set aside 10 acres for continuous experiment over a term of seven years. The seed, manures, and supervision are furnished by the Agricultural Department, which also provides an annual payment of £15 for the conduct of the work.

The experiment is an endeavour to solve the problem of increasing the average yield of wheat in the State, and at the same time to point out the way of permanent improvement in methods.

The fields were sown in 1905, and embraced a series of comparative manure trials, different depths of cultivation, sub-soiling, green manuring, the use of 40 varieties of wheat, and the growth of fodder crops.

The last year's results point to the confirmation of similar previous trials with manures, and emphasize the superiority of the superphosphate over other forms of phosphatic manures. The inutility (up to the present time) of the addition of nitrogenous and potassic fertilizers is further demonstrated.

As was expected, the first season's trials of deep cultivation indicated little beyond the fact that the extra cost of such treatment would be compensated for by the increased yield of grain. The results from the variety wheats were of especial interest and brought into prominence some twenty varieties imported from neighbouring States, the yields of which were greatly in excess of those hitherto in use by the wheat farmer.

The result of the fodder crops was disappointing, the absence of moisture preventing this class of farm produce from maturing normally. Without irrigation, green summer fodders must always be a precarious crop in localities with a 12 to 18-inch rainfall.

During 1906, three-fourths of the Northern fields were fallowed in three separate ways, ordinary bare fallow, rape fallow, and sub-soil fallow, the remainder of the fields were again sown with wheat varieties. The harvest returns of these varieties show that those which were prominent in yield in the previous season are again to the fore in that respect. Federation, Dart's Imperial, Australian Talavera, Jade, Sussex, Silver King, Tarragon, White Tuscan, Frampton and Marshall's No. 3 averaged over five bags a-piece, the maximum yield being Federation 43 bushels per acre. The seed wheat furnished by the farmers themselves averaged 16.8 bushels per acre, with a maximum crop of 32.1 bushels.

It may safely be claimed that some 25 new varieties are well worthy of introduction into our own wheat districts, as a result of the two seasons' work on the experimental fields. Especial attention will in the future be given to the selection of varieties carrying a high percentage of "strong" flour.

During the season 1906-7, the second series of experiments was conducted in twenty-three fields located in different parts of the Wimmera, the Mallee, and the Northern and North-Eastern plains. In these tests, thirty-eight varieties of wheat selected by the Department and one by the resident farmer were sown in adjoining plots of one-tenth of an acre each. The seed was graded, pickled with blue-stone, and sown during April and May, 1906, at the rate of 50 lbs. per acre. Superphosphate at the rate of 56 lbs. per acre was used uniformly on all varieties, and the results were as follow :—

WHEAT PRODUCED PER ACRE FROM EXPERIMENTAL FIELDS, 1906-7.

Variety of Wheat.	Yield per Acre in—					
	Mallee and Mallee Fringe. (9 Fields.)	Wimmera District. (6 Fields.)	Northern and North-Eastern Districts. (8 Fields.)	Victoria (23 Fields).		
				Maximum.	Minimum.	Average.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Federation .. ..	19.0	30.0	27.8	42.9	12.1	24.0
Dart's Imperial .. ..	15.1	26.9	22.3	38.1	7.1	20.4
Australian Talavera .. ..	15.6	23.8	23.6	39.0	9.1	20.3
Jade .. ..	14.8	26.8	22.0	36.7	9.2	20.1
Sussex .. ..	15.0	26.2	23.4	38.0	7.6	20.0
Silver King .. ..	14.6	26.7	21.5	36.0	8.5	19.8
Tarragon .. ..	14.3	24.8	24.4	40.0	9.7	19.7
White Tuscan .. ..	15.0	23.3	20.1	35.0	4.8	18.7
Frampton .. ..	13.1	24.4	20.9	33.8	6.5	18.4
Marshall's No. 3 .. ..	13.4	25.4	19.5	37.6	5.2	18.3
Farmer's Friend .. ..	14.5	22.7	18.1	28.3	8.0	17.9
Majestic .. ..	12.5	21.7	23.6	30.0	8.3	17.0
Hudson's Purple Straw .. ..	11.5	20.5	20.5	32.4	4.1	16.9
Fan .. ..	13.0	24.3	16.5	29.8	5.7	16.9
College Purple .. ..	10.9	21.6	19.5	32.1	5.1	16.7
Tardent's Blue .. ..	13.9	20.0	18.8	31.3	2.2	16.6
Steer's Purple Straw .. ..	13.2	21.6	16.8	28.0	6.0	16.4
Kubanka .. ..	12.7	19.4	18.2	34.3	4.2	16.2
Improved Steinwedel .. ..	11.7	15.3	19.7	28.0	7.6	15.8
John Brown .. ..	11.0	18.7	18.8	29.6	4.4	15.7
Bobs .. ..	9.4	17.6	19.2	29.5	3.5	15.0
Schneider .. ..	10.5	14.7	20.2	30.6	7.1	14.8
Smart's Pioneer .. ..	10.6	17.7	18.6	26.8	5.3	14.8
Warrick .. ..	13.5	13.6	17.0	23.6	9.4	14.8
Petatz Surprise .. ..	10.7	19.0	14.9	23.8	6.3	14.6
Newman's .. ..	11.9	19.5	13.9	27.1	6.1	14.1
King's Early .. ..	10.8	12.8	17.2	25.0	4.5	13.5
Manitoba .. ..	11.3	17.5	13.4	32.1	2.0	13.4
Nut Cut .. ..	10.7	12.5	16.8	24.0	6.0	13.3
Wilkinson's Purple Straw .. ..	11.3	13.6	15.3	24.5	7.6	13.2
Terkin .. ..	10.5	12.2	16.4	27.6	4.0	12.9
Cumberland .. ..	10.2	13.5	15.4	34.6	4.3	12.8
Outpost .. ..	10.2	13.4	15.2	24.3	5.6	12.6
Steinwedel .. ..	9.8	12.1	15.6	22.8	5.8	12.4
Gluyas .. ..	9.1	16.3	14.1	23.2	3.0	12.3
Boomerang .. ..	10.7	15.3	9.3	21.6	1.9	11.2
Waddy .. ..	8.2	11.8	8.9	16.6	3.5	9.1
Ranji .. ..	5.7	9.5	8.1	15.0	1.1	7.2
Seed Selected by Farmer .. ..	12.0	21.2	19.3	32.1	3.2	16.8

The results of the experiments during 1906-7 compared with those of 1905-6 indicate the superiority of the first-mentioned eight varieties, as seven of these also occupied places in a similar division in 1905-6, the only exception being Australian Talavera, which

improved from tenth in average yield in 1905-6 to third in 1906-7, while Hudson's Purple Straw, which was fifth in the former, fell to thirteenth in the latter season. The seed supplied by farmers—mostly Purple Straw and Dart's Imperial—shows a lower average than fourteen of the selected varieties. In 1906-7 the harvest returns of wheat in Victoria gave an average per acre of 8.6 bushels in the Mallee, 13.2 bushels in the Wimmera, and of 10.9 in the Northern and North-Eastern districts. If these averages be compared with the figures in the table above, it will be at once observed that the cultivation applied to the experimental plots gave by far the better return, especially in the farmers' own selection of seed. It is evident that if the example set by the supervisor for the Agricultural Department were followed by the farmers their harvest returns and profits would have been considerably increased. The very many varieties tested for experimental purposes returned an average per acre of 15.8 bushels against one of 10.8 bushels obtained by farmers in the same districts.

The continued success of the variety known as Federation afforded an opportunity in the season 1907 to test it upon the experimental fields against any variety chosen by the farmer. The result was again a demonstration of the prolific yielding properties of Federation, which excelled all wheats pitted against it by from 2 bushels to nearly 2 bags per acre. The season 1907 was the second in which the trials of subsoiling *versus* ordinary methods of cultivation, as well as rape fallow, were tested. It is instructive to note the following results:—

District.	Bushels per Acre.				
	Ordinary Bare Fallow.		Subsoil Fallow.		Rape Fallow.
	1905.	1907.	1905.	1907.	1905.
Mallee ... ..	15.4	11.1	14.0	10.7	9.5
Wimmera... ..	22.2	17.5	18.2	17.2	16.5
Northern Plains ...	20.1	12.1	22.3	12.8	12.5

It will be noted that in the Mallee and Wimmera the ordinary bare fallow has produced more wheat per acre than the subsoil fallow, but in the northern plains the subsoil fallow has exceeded the yield of wheat on the bare fallow each year. This was foreseen, and, to a large extent, it may be explained by the fact that the more tenacious clay subsoils of the northern plains having been broken up, a great amount of hitherto unutilized plant food has come into operation, and, moreover, the land is better drained by deep than by shallow cultivation. In connexion with the wheat industry generally, it is satisfactory to find that the solution of the problems associated with it has been systematically undertaken by the Field Branch of the Department of Agriculture.

It has been decided to erect a miniature flour milling plant for the regular testing of Victorian wheats on such a scale that the flour produced will be of sufficient quality and quantity to permit of baking tests being made by working bakers.

Areas of 50 acres at Longerenong Agricultural College, and 10 acres each at Dookie Agricultural College, Wyuna Government Farm, and Rutherglen Viticultural College, have already been sown with a number of pure varieties of wheat, as well as a large number of cross-bred varieties procured from Mr. Pye, from adjoining States, and from abroad. It is intended to initiate a regular system of breeding wheats for the Wimmera, Mallee, and Northern and North-Eastern districts.

A committee, known as the "Wheat Improvement Committee," consisting of the Director of Agriculture, Mr. Pye, Mr. McAlpine, and Mr. Lee, has control over the departmental efforts to bring about a permanent improvement in the State yield of wheat. While patience is necessary before results can be procured, it will be sufficient to know that all new varieties placed on the market will have previously been rigidly tested under field conditions before becoming available for distribution. So far as is known, the scheme outlined above is on a larger scale and has wider objectives than similar work in any country in the world.

Extensive experiments in the direction of the utilization of at present worthless Crown lands have been undertaken. At Stawell, worthless mining land has been made to produce up to 2½ tons of hay—with suitable manuring. At Munro, in sandy, stringy-bark country, the yield of wheat was satisfactory. Experiments in the, at present, large areas of unoccupied Crown land covered by heath at Portland have formed an important part of the work of the Field Branch. An area of 6 acres of representative heath land was cleared of scrub, ploughed, and limed, in July, 1907, and sown in the following spring with an acre each of rape, beet, potatoes, maize, sorghum, and millet. Various manurial dressings were given at the time of sowing. The following results emphasize what can be done with intelligent fertilization and a clear objective:—

Crop.	Super-phosphate.	Superphosphate and Sulphate of Ammonia.	No Manure.	Superphosphate, Sulphate of Ammonia, and Potash Sulphate.
	tons.	tons.	tons.	tons.
Rape ... ..	2·9	5·1	·7	4·1
Sugar Beet ... ..	5·7	5·4	4·5	7·3
Millet (green) ... ..	10·0	11·3	6·9	11·0
Maize (green) ... ..	2·9	3·0	*	*
Sorghum (green) ... ..	2·2	2·3	·6	*

\* Destroyed by animals.



The acre of potatoes, comprising thirteen varieties, showed highly satisfactory returns, both as regards yield and quality. The average yield of all varieties manured with superphosphate and sulphate of ammonia was 3 tons 6 cwts. per acre, whereas the average yield of all varieties upon unmanured land was 19 cwts. per acre. Moreover, upon the manured land, there were 2 cwts. of marketable tubers to every 1 cwt. of unmarketable; whereas on the unmanured land there were 3 cwts. of unmarketable tubers to every 1 cwt. of marketable. In view of the fact that there are enormous areas of land of similar character fronting the Victorian coast, the above figures are highly educative as to the potential value of what are at the present time called "barren lands."

Special attention has been given to the potato industry, and some 10 acres, embracing 30 imported varieties of tubers, were sown. The results from some varieties were highly satisfactory, and while the effect of artificial fertilization was not over marked, it was sufficient as a guide to future extension of this class of work.

Experiments in top-dressing backward cereal crops with nitrate of soda have been conducted with moderate success. It has been found that the imperfect conditions of drainage in many light sandy soils with clay subsoil near the surface, are responsible for many of the evils attendant on crops sown early on these soils. Deeper cultivation and subsoiling with the addition of lime are recommended as a remedy, but until facilities are provided for getting rid of the surplus moisture, crops are bound to remain backward in growth in the Spring.

Experiments are in progress to test the possibilities of improvement in the colour of hay crops. It is becoming noticeable that where Algerian oats are grown for hay purposes that if cut on the green side the fodder is slightly better, whereas if left till the grain has matured the hay has not the same attractive colour, although possibly of better quality.

To summarize the whole experimental work of the Department, it is progressive, and on lines which must ultimately bring about permanent success in the different lines of inquiry.

#### FORESTRY.

In the *Year Book* of 1903, an exhaustive paper setting out the history, present position, and aim of forestry in Victoria, and the value of Victorian timbers from a commercial point of view, from the pen of Mr. H. Mackay, was inserted, and this was amplified by the author for the 1904 volume. The writer sets out that the true aim of forestry is the preservation of the forests by wise use. Forest areas must be maintained in a timber-yielding condition, denuded areas must be re-planted, and open plains, niggard as regards natural vesture, planted with suitable trees. Above all, the sylvan wealth

with which nature has clothed hill, valley, and plain must be maintained and increased by correcting wasteful and inferior growth, and so regulating the yearly output of timber as to give the best yield possible without deterioration of the forest areas.

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

The licence system is now abolished in the greater part of Victoria, and strict control enforced over the operations of timber-getters.

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

The timbers of commercial value in Victoria number twenty, all species of the eucalyptus family. Blackwood is a very valuable commercial timber—it is an acacia (*a. melanoxylon*). It should be added, that large revenue is obtained from wattle bark, and the State has established a number of wattle plantations, also two plantations of *Valonia* oak for tanning products; that the State is now selling at remunerative rates pine timber from the plantations; and that tens of thousands of poplar cuttings are being set out annually to provide suitable timber for butter boxes in the future. It might also be worth mentioning that fruit, grown at Harcourt for export, is now packed in boxes made in Victoria, from the *insignis* pine timber grown in the State plantations. Alarmist statements to the effect that there is an increasing scarcity of commercial timber here are ill-founded, as there are ready for felling, trees of species which yield valuable sleeper material, and which are now going to waste, and supplies of hardwood are assured for many years to come.

There is a State nursery for raising trees for general distribution at Macedon, and State plantations near Geelong, Maryborough, and Creswick. Although the work is largely experimental, and mistakes have been made, yet the experience gained in the propagation and growing of Australian hardwoods, as well as exotic conifers, has been of great benefit to the community. Transplants are distributed to farmers, municipalities, and State schools, the former particularly benefiting by the planting of trees around their homesteads, the protection of homes from wind and weather adding greater comfort to the life indoors, and the shelter and shade afforded to live stock insuring healthier cattle and increased returns.

In addition to the four nurseries, there are thirteen plantation trial stations, having a total area of 9,676 acres. The persons employed in connexion with the State forests and nurseries comprise administrative and professional staff, 6; field staff, 56; and nursery staff, 17. The revenue from licences and royalties in 1907 amounted to £29,013.

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

The State has rendered substantial assistance to the various branches of the agricultural and pastoral industries during past years, and the succeeding 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:—

Agriculture, expenditure and revenue connected with.

EXPENDITURE AND REVENUE CONNECTED WITH AGRICULTURE, ETC.,  
1902-3 TO 1906-7.

	1902-3.	1903-4.	1904-5.	1905-6.	1906-7.
<i>Expenditure.</i>	£	£	£	£	£
Agricultural and Horticultural Societies, &c.	2,392	2,392	2,420	2,375	2,475
Seed Advances Act—Fees ...	110	67	9	23	67
Carriage of Agricultural Produce at reduced Rates—Allowance to Railway Department	6,521	48,000	46,280	41,787	25,000
State Forests and Nurseries	16,760	16,393	17,747	18,805	18,358
To promote the Agricultural, Dairying, Fruit, and Wine Industries	370	153	139	296	197
Exhibition Expenses ...	...	...	...	...	3,997
Milk and Dairy Supervision	...	...	...	...	5,103

EXPENDITURE AND REVENUE CONNECTED WITH AGRICULTURE, ETC. :  
1902-3 TO 1906-7—continued.

	1902-3.	1903-4.	1904-5.	1905-6.	1906-7.
<i>Expenditure—continued.</i>	£	£	£	£	£
Expenses in connexion with export of Dairy Produce, Fruits, Meat, Rabbits, and other produce	33,672	27,500	32,320	31,130	32,631
Development of Export Trade	...	1,679	1,711	2,920	5,050
Village Settlements ...	92	86	68	67	97
Labour Colonies ...	3,427	1,999	1,000	493	500
Viticultural Education and inspection of Vineyards	...	1,871	2,317	3,021	3,757
Eradication of Vine Diseases	...	...	30	...	...
Vegetation Diseases	3,804	4,147	4,202	4,257	4,297
Scab Prevention and Stock Diseases	5,358	7,417	7,190	7,319	6,790
Rabbit and Vermin Extermination	16,489	15,759	16,603	16,477	16,513
Rates on Mallee Blocks ...	153	182	541	...	...
Maffra Beet Sugar Company—Expenses in connexion with	486	454	215	214	219
Technical Agricultural Education, &c.	9,786	12,077	13,641	14,428	23,316
Publishing Agricultural Reports	3,990	2,739	2,011	2,250	2,293
Carrum Advances Act ...	...	...	512	...	...
Advances to Settlers on account of Losses by Bush Fires	...	...	...	3,486	1,568
Departmental and other Expenditure	7,457	7,465	8,851	10,890	11,852
Total ...	110,867	150,380	157,307	160,238	164,080
<i>Revenue.</i>					
Department of Agriculture ...	35,403	23,156	32,557	28,115	35,310

From the foregoing it will be seen that the State has rendered material assistance to all the producing industries connected with the land. As well as the expenditure shown, £7,745 have been expended from loan funds since 1901-2 and various sums have been advanced from loans and votes for the purpose of aiding closer settlement, for the resumption of mallee lands, and for relief to farmers on account of bush fires, flood losses, and purchase of seed wheat and fodder, which advances are gradually being repaid.

Land occupied and cultivation and live stock thereon.

Information relating to land occupied and cultivation and live stock thereon was collected in March, 1906. The land privately owned was summarized according to different sized holdings, and in

the instances where Crown lands were held in conjunction therewith it was distributed, regardless of its size, as held by the different occupiers of lands privately owned. The particulars are as follow:—

LAND OCCUPIED, AND CULTIVATION AND LIVE STOCK THEREON,  
MARCH, 1906.

Privately-owned Land.			Crown Land held in conjunction with that privately owned.	Total Area occupied.	Area under—	
Size of Holdings. (In acres.)	Number of Holdings.	Area occupied.			Cultivation.	Pasture.
		Acres.	Acres.	Acres.	Acres.	Acres.
1 to 100 ..	19,173	721,669	554,759	1,276,428	196,580	1,079,848
101 " 320 ..	16,121	3,459,291	937,727	4,397,018	789,330	3,607,688
321 " 640 ..	9,319	4,497,331	1,604,280	6,101,611	1,197,536	4,904,075
641 " 1,000 ..	3,876	3,164,404	1,063,166	4,227,570	735,263	3,492,307
1,001 " 2,500 ..	3,466	5,112,200	2,200,867	7,313,067	1,009,034	6,304,033
2,501 " 5,000 ..	617	2,106,732	1,996,797	4,103,529	180,884	3,922,645
5,001 " 10,000 ..	220	1,567,251	471,271	2,038,522	44,347	1,994,175
10,001 and upwards	195	4,134,067	176,916	4,310,983	43,521	4,267,462
Total ..	52,987	24,762,945	9,005,783	33,768,728	4,196,495	29,572,233
Live Stock on Holdings.						
	Horses.	Cattle.		Sheep.	Pigs.	
		Dairy Cows.	Other Cattle.			
1 to 100 ..	38,595	80,316	80,681	88,890	41,950	
101 " 320 ..	81,449	226,112	254,445	562,167	92,929	
321 " 640 ..	74,901	151,163	221,002	1,155,133	59,120	
641 " 1,000 ..	41,839	65,571	131,666	1,138,179	25,119	
1,001 " 2,500 ..	48,450	51,697	158,878	2,387,139	20,282	
2,501 " 5,000 ..	11,815	12,332	54,375	1,475,643	3,161	
5,001 " 10,000 ..	6,786	5,232	45,558	1,194,246	980	
10,001 and upwards	10,379	5,805	59,914	3,260,442	1,309	
Total ..	314,214	598,228	1,006,519	11,261,839	244,850	

The figures are exclusive of live stock travelling, and those in cities, towns, &c. ; also of 1,288 holdings containing 749,798 acres of Crown lands not held in conjunction with any private land, and on which there were 73,382 acres of cultivation, 4,057 horses, 20,707 cattle, 78,283 sheep, and 3,352 pigs. The position disclosed is that 48,489 occupiers of 11,842,695 acres of private land up to 1,000 acres each, also occupied 4,159,932 acres of Crown land—a total of 16,002,627 acres, and less than half of the total area in occupation. These occupiers, however, controlled 70 per cent. of the total cultivation, and possessed 75 per cent. of the horses, 87 per cent. of the dairy cows, 69 per cent. of other cattle, 90 per cent. of the pigs and 26 per cent. of the sheep. To clearly illustrate the uses of

which the land is put, percentages in each division, and the sheep carrying capacity of the area under pasture, are given in the following table:—

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

Size of Holdings of Private Land. (In Acres.)	Percentage in each Division to Total of—				Live Stock Grazed reduced to Equivalent in Sheep.	
	Area Occupied.	Area under Cultivation.	Area used for Pasture.	Equivalent in Sheep Grazed.	Total.	Per Acre used for Grazing.
1 to 100 ..	3·78	4·68	3·65	6·00	1,440,822	1·33
101 „ 320 ..	13·02	18·81	12·20	17·73	4,259,999	1·18
321 „ 640 ..	18·07	28·54	16·58	17·21	4,137,133	·84
641 „ 1,000 ..	12·52	17·52	11·81	11·40	2,739,991	·78
1,001 „ 2,500 ..	21·66	24·04	21·32	17·20	4,135,089	·66
2,501 „ 5,000 ..	12·15	4·31	13·27	8·30	1,994,035	·51
5,001 „ 10,000 ..	6·04	1·06	6·74	6·52	1,566,846	·79
10,001 and upwards	12·76	1·04	14·43	15·64	3,758,546	·88
Total ..	100·00	100·00	100·00	100·00	24,032,461	·81

Horses and cattle have been reduced to an equivalent in sheep on the assumption that one head of the former will eat as much as ten, and one of the latter as much as six sheep. In this return it may be seen that 47·39 per cent. of the land occupied was in areas not exceeding 1,000 acres, and, after supplying 70 per cent. of the cultivation, contained 52 per cent. of the live stock; whilst holdings of over 1,000 acres supplied 56 per cent. of the total area used for grazing, and only 48 per cent. of the stock. As many of the large areas are situated in the rich Western District, which is favoured with a good annual rainfall, it requires only the introduction of labour to utilize the capability of these lands to carry sheep at least equal to that carried by holdings of 320 acres or under. The figures show that there is sufficient land in use in Victoria to carry at least twelve

million more sheep than at present. Dairying is principally carried on in the small holdings, more than a third of the dairy cows being on holdings between 101 and 321 acres. Naturally, pigs also are most numerous in the same holdings, being found to be in about the same proportion as dairy cows—over one-third of their total in the State.

Particulars of land occupied, and the cultivation thereon, were for the second time tabulated in March, 1908, and the results are as follow :—

LAND OCCUPIED AND CULTIVATION THEREON, MARCH, 1908.

Privately-owned Land.			Crown Land held in conjunction with that privately-owned.	Total Area Occupied.	Area under—	
Size of Holdings (in acres).	Number of Holdings.	Area Occupied.			Cultivation.	Pasture.
		Acres.	Acres.	Acres.	Acres.	Acres.
1 to 100 ..	20,915	770,437	499,601	1,270,038	196,613	1,073,425
101 „ 320 ..	17,016	3,610,374	1,260,414	4,870,788	724,874	4,145,914
321 „ 640 ..	9,309	4,497,030	1,801,899	6,298,929	1,080,130	5,218,799
641 „ 1,000 ..	4,002	3,258,380	1,615,654	4,874,034	700,931	4,173,103
1,001 „ 2,500 ..	3,728	5,479,097	2,392,619	7,871,716	1,014,799	6,856,917
2,501 „ 5,000 ..	681	2,333,321	2,858,631	5,191,952	220,329	4,971,623
5,001 „ 10,000 ..	231	1,589,186	424,276	2,013,462	52,539	1,960,923
10,001 and upwards	183	3,636,320	123,223	3,759,543	42,006	3,717,537
<b>Total ..</b>	<b>56,065</b>	<b>25,174,145</b>	<b>10,976,317</b>	<b>36,150,462</b>	<b>4,032,221</b>	<b>32,118,241</b>

The figures in this table are exclusive of 1,162,930 acres of Crown land, of which there were 94,602 acres under cultivation, occupied not in conjunction with privately-owned land. Comparing the position with that in 1906, it is satisfactory to observe that in land privately owned, estates of over 10,000 acres have been reduced by twelve in number, and by 497,747, or 12 per cent. in acreage, while estates up to 320 acres have increased by 2,637 in number, and by 199,851 in acreage, also that the increase in the total number of holdings was 6 per cent., whilst that in land alienated was less than 2 per cent.

The following tables show the land in occupation in March, 1908, in districts, and the uses to which the land was put:—

LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA, MARCH, 1908.  
(Areas 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 ...	12,538	326,150	175,641	2,107,309	31,394	2,640,494
North Central ...	5,345	156,205	31,362	1,837,482	18,939	2,043,988
Western ...	9,584	268,341	195,871	5,950,792	129,318	6,544,322
Wimmera ...	5,547	1,228,641	544	4,086,208	64,267	5,378,660
Mallee ...	2,873	829,477	4,834	3,654,771	1,967,791	6,456,873
Northern ...	9,821	1,102,713	38,612	3,949,304	9,510	5,100,139
North-Eastern ...	4,533	121,644	4,408	3,349,609	339,591	3,815,252
Gippsland ...	7,557	93,652	644,199	3,583,291	1,012,522	5,333,664
Total ...	57,798	4,126,823	1,095,471	28,517,766	3,573,332	37,313,392
PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.						
Central ...	...	12.35	6.65	79.81	1.19	100.00
North Central ...	...	7.64	1.54	89.89	.93	100.00
Western ...	...	4.10	2.99	90.93	1.98	100.00
Wimmera ...	...	22.84	.01	75.95	1.20	100.00
Mallee ...	...	12.85	.07	56.60	30.48	100.00
Northern ...	...	21.62	.76	77.43	.19	100.00
North-Eastern ...	...	3.19	.11	87.79	8.91	100.00
Gippsland ...	...	1.76	12.08	67.18	18.98	100.00
Total ...	...	11.06	2.93	76.43	9.58	100.00
PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.						
Central ...	21.69	7.90	16.03	7.39	.88	7.08
North Central ...	9.25	3.79	2.86	6.44	.53	5.48
Western ...	16.58	6.50	17.88	20.87	3.62	17.54
Wimmera ...	9.60	29.77	.05	14.32	1.80	14.42
Mallee ...	4.97	20.10	.45	12.82	55.07	17.30
Northern ...	16.99	26.72	3.52	13.85	.27	13.67
North-Eastern ...	7.84	2.95	.40	11.75	9.50	10.22
Gippsland ...	13.08	2.27	58.81	12.56	28.33	14.29
Total ...	100.00	100.00	100.00	100.00	100.00	100.00

It will be seen from these tables that in the Wimmera, Northern, and Mallee districts, the greatest area under cultivation and the greatest proportion of cultivation to land occupied are found. About 22 per cent. of land occupied in the Wimmera and Northern districts is devoted to agriculture, and these districts supplied over 56 per



cent. of the cultivation in Victoria. In Gippsland, the Western, and North-Eastern districts, the land is very largely devoted to grazing; and in Gippsland attention has been given to the cultivation of grasses, as 59 per cent. of the sown grasses in the State is found to be there.

In the next table the distribution of cattle and sheep on pastoral lands in March, 1908, is given.

AREA OCCUPIED AND STOCK, 1908.

District.	Acres Occupied for		Number of		Stock— Equivalent of Sheep— per 100 acres used for Pasture.*
	Agriculture.	Pasture.	Cattle.	Sheep.	
Central ...	326,150	2,282,950	280,465	1,240,537	128
North Central ...	156,205	1,868,844	142,402	1,063,059	103
Western ...	268,341	6,146,663	367,270	5,084,284	119
Wimmera ...	1,228,641	4,085,752	61,844	2,386,678	68
Mallee ...	829,477	3,659,605	44,032	520,081	21
Northern ...	1,102,713	3,987,916	242,985	1,964,007	86
North-Eastern ...	121,644	3,354,017	257,974	849,522	71
Gippsland ...	93,652	4,227,490	445,835	1,038,566	88
Total ...	4,126,823	29,613,237	1,842,807	14,146,734	85

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

The area occupied does not include 3,573,332 acres regarded as mostly in an unproductive state, and horses grazing have not been allowed for in the stock. There has been a substantial increase in the number of sheep—there being 14,146,734 in March, 1908, as against 12,937,400 a year earlier. The increase is spread over all districts except the Northern, and the largest increases are in the Western (465,299), Gippsland (259,105), and Wimmera (143,379) districts. The practice among farmers to combine sheep-farming with agriculture is growing in the State with very satisfactory results. In the Mallee, the number of sheep compared with the previous year shows an increase of 20 per cent., and it is among the small holders that the substantial increase has taken place.

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

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

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

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

Persons Following Pastoral and Dairying Pursuits.	Employers of Labour.		In Business on their own account, but not employing labour.		Receiving Salary or Wages.		Relatives Assisting.		Not at work for more than a week prior to Census.		
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
Grazier, Pastoralist, Stock Breeder, and Relative Assisting	2,242	177	2,422	303	—	—	1,159	1,062	—	—	
Station Manager, Overseer, Clerk	—	—	—	—	593	4	1	7	39	—	
Stock Rider, Drover, Shearer, Shepherd, Pastoral Labourer	47	—	100	—	4,540	7	5	—	248	—	
Dairy Farmer, and Relative Assisting	2,205	276	3,007	756	—	—	3,263	4,456	—	—	
Dairy Assistant, Milker	—	—	—	—	3,194	386	—	—	32	3	
Poultry Farmer	19	8	132	79	17	3	16	41	1	—	
Stock and Brands Department Officer	—	—	—	—	18	—	—	—	—	—	
Others, including Pig Farmers	3	1	10	—	34	—	2	—	2	—	
<b>Total</b>	<b>4,516</b>	<b>462</b>	<b>5,671</b>	<b>1,138</b>	<b>8,396</b>	<b>400</b>	<b>4,446</b>	<b>5,566</b>	<b>322</b>	<b>3</b>	
Total Males .. .. .					23,351						
Total Females .. .. .					7,569						
Grand Total .. .. .					30,920						

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

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

**RETURN OF PERSONS ENGAGED IN AGRICULTURAL PURSUITS, 1901.**

Persons Following Agricultural Pursuits.	Employers of Labour.		In Business on their own account, but not employing labour.		Receiving Salary or Wages.		Relatives Assisting.		Not at work for more than a week prior to Census.		
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
Farmer and Relative Assisting	13,267	1,090	15,096	1,693	—	—	16,361	13,238	—	—	
Farm Manager, Overseer	—	—	—	—	359	6	—	—	3	—	
Farm Servant, Agricultural Labourer	—	—	—	—	20,204	599	—	—	966	5	
Market Gardener	859	19	1,647	32	1,518	9	576	132	22	—	
Fruit Grower, Orchardist	493	44	868	91	700	43	465	172	14	—	
Hop, Cotton, Tea, Coffee Grower	10	2	7	—	48	48	9	2	—	—	
Tobacco Grower	10	—	25	—	24	—	1	—	—	—	
Vine Grower, Vigneron	174	18	72	8	1,131	6	86	39	6	—	
Sugar Planter	1	—	—	—	—	—	—	—	—	—	
Horticulturist, Gardener	237	7	571	17	2,132	7	107	39	214	—	
Agricultural Department Officer	—	—	—	—	41	—	—	—	—	—	
Others, Threshing Machine Owners and Workers, &c.	20	1	26	—	72	2	4	3	103	—	
<b>Total</b>	<b>15,071</b>	<b>1,190</b>	<b>18,312</b>	<b>1,841</b>	<b>26,229</b>	<b>720</b>	<b>17,609</b>	<b>13,625</b>	<b>1,318</b>	<b>5</b>	
Total Males .. .. .					78,539						
Total Females .. .. .					17,381						
Grand Total .. .. .					95,920						

Particulars are gathered by the collectors of agricultural statistics each year of the number of persons ordinarily employed upon the land occupied. For the last five years the particulars are as follow :—

NUMBER OF PERSONS EMPLOYED UPON FARMING, DAIRYING, AND PASTORAL HOLDINGS, 1903 TO 1907.

Year.	Males.	Females.	Total.
1903 ... ..	87,322	48,561	135,883
1904 ... ..	90,396	51,933	142,329
1905 ... ..	91,336	50,982	142,318
1906 ... ..	92,652	51,993	144,645
1907 ... ..	93,981	51,905	145,886

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

In the following return will be found particulars showing the rates of wages paid (with rations) upon farms and pastoral holdings during 1907-8. The information has been furnished by the occupiers of holdings :—

Wages—  
agricultural  
and  
pastoral.

WAGES, AGRICULTURAL AND PASTORAL, 1907-8.

Occupations.	Range.	Prevailing Rate.
Ploughmen .. ..	15s. to 30s. per week ..	20s. per week
Farm labourers .. ..	10s. to 30s. " ..	20s. "
Threshing machine hands .. ..	6d. to 1s. per hour ..	6d. per hour
Harvest hands .. ..	4s. to 8s. per day ..	5s. per day
Milkers .. ..	6s. to 20s. per week ..	15s. per week
Maize pickers (without rations)	4½d. to 7d. per bag ..	5d. per bag
Hop pickers " "	3d. to 6d. per bushel ..	4d. per bushel
Married couples .. ..	20s. to 40s. per week ..	30s. per week
Female servants .. ..	5s. to 20s. " ..	10s. "
Men cooks .. ..	10s. to 50s. " ..	20s. "
Stockmen .. ..	£39 to £78 per annum ..	£52 per annum
Boundary riders .. ..	£39 to £80 " ..	£52 "
Shepherds .. ..	£26 to £70 " ..	£39 "
Hut keepers .. ..	£20 to £72 " ..	£39 "

WAGES, AGRICULTURAL AND PASTORAL, 1907-8—*continued.*

Occupations.	Range.	Prevailing Rate.
Generally useful men ..	8s. to 36s. per week ..	20s. per week
Sheep washers ..	17s. 6d. to 36s. ,, ..	20s. ,,
Shearers, hand* ..	15s. to 25s. per 100 sheep	20s. per 100 sheep
„ machine* ..	14s. to 24s. 3d. ,, ..	20s. ,,
Bush carpenters ..	20s. to 60s. per week ..	30s. per week
Gardeners, market ..	10s. to 50s. ,, ..	20s. ,,
„ orchard ..	10s. to 40s. ,, ..	20s. ,,
Vineyard hands ..	6s. to 25s. ,, ..	20s. ,,

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

In the following table will be found figures showing the land under cultivation in the years ended March, 1905 to 1908:—

## CULTIVATION OF PRINCIPAL CROPS, 1904-5 TO 1907-8.

Crop.	Year Ended March.			
	1905.	1906.	1907.	1908.
	Acres.	Acres.	Acres.	Acres.
Wheat ... ..	2,277,537	2,070,517	2,031,893	1,847,121
Other Grain Crops ...	415,292	378,987	458,451	487,721
Root Crops ... ..	52,038	52,125	62,150	60,078
Hay ... ..	452,459	591,771	621,139	682,194
Green Forage ... ..	29,902	34,041	36,502	59,897
Vines ... ..	28,016	26,402	25,855	26,465
Orchards ... ..	52,751	52,274	54,021	54,111
Market Gardens ..	7,904	7,333	7,906	9,022
All other Crops ... ..	5,886	6,512	5,669	5,914
Land in Fallow ... ..	853,829	1,049,915	990,967	894,300
Total Cultivation ...	4,175,614	4,269,877	4,294,553	4,126,823

The area under cultivation, exclusive of permanent and artificial grasses, increased from 50 acres sown down with wheat in 1836 to 4,126,823 acres, which were under crops of various kinds and in fallow in 1907-8. The first returns of oats, maize, potato, and

tobacco crops were obtained in 1838, barley and rye in 1839, hay in 1841, green forage and vines in 1842, peas and beans in 1849, mangel-wurzel, carrots, parsnips, turnips, and onions in 1855-6, garden and orchard produce in 1856-7, and chicory, grass and clover seeds, and hops in 1867-8. Returns of land sown with artificial grass were first procured in 1855-6, and since that year steady progress has been made. The area of land in fallow has also been increasing since 1858-9, and in latter years the increase has been very marked, though a slight decline is shown in the last two seasons as compared with the land in fallow in March, 1906.

For the twelve years—1896-7 to 1907-8—the total area under cultivation, its proportion to the area of the State—56,245,760 acres—and the yearly increases or decreases, actual and centesimal, were as follow :—

AREA UNDER CULTIVATION, 1896-7 TO 1907-8.

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

The land under cultivation, including land in fallow, but excluding land under artificial grasses, in 1896-7, was 2,925,416 acres, and in 1907-8, 4,126,823—an increase of 1,201,407 acres in the twelve years, or 41 per cent. The increase has been fairly and almost constantly maintained. There are, however, three years, including last season, in which a slight reduction appears. The area of land actually under crops of various kinds in 1907-8 was 3,232,523 acres.

Agricultural  
production.

In the following return will be found a statement of the production from cultivated lands for the past three years:—

AGRICULTURAL PRODUCTION, 1905-6 TO 1907-8.

Produce.	Year ended March.		
	1906.	1907.	1908.
Wheat ... .. bushels	23,417,670	22,618,043	12,100,780
Other Grain ... .. „	9,229,879	11,113,463	7,005,248
Root Crops ... .. tons	163,757	216,622	175,704
Hay ... .. „	864,177	881,276	682,370
Vines ... .. cwt. of grapes	498,590	752,826	535,804
Green Forage ... .. £	85,103	91,255	149,742
Orchards ... .. £	379,424	486,085	421,210
Market Gardens ... .. £	183,225	197,650	225,550
Other Agricultural Produce £	84,946	85,423	182,120

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

Wheat.

Wheat was first grown in Victoria in 1836, and there was a general increase in the area under cultivation up to 1899-1900, when 2,165,693 acres were harvested. In the following two seasons there was a decline in the area, but after this an increase, until, in 1904-5, the area under wheat was 2,277,537 acres, the largest recorded, the return from which was 21,092,139 bushels—an average of 9.26 bushels per acre. In 1907-8, the area under wheat was 1,847,121 acres, which yielded 12,100,780 bushels, or 6.55 bushels per acre. The wheat crop in 1907-8 was the poorest during the last five years.

An estimate of the area under wheat was made on 5th August, 1907, and an estimate of the wheat yield on 3rd December following. The following were the results:—

Estimated area under wheat for grain ...	1,953,000 acres
"  "          hay ...	180,000 "
Total ...	2,133,000 acres
Estimated produce of grain ... ..	12,840,750 bushels
Average per acre ... ..	6.57 "

The results showed that the estimated area and yield were only slightly over-stated, principally on account of a greater area than was anticipated having been cut for hay. The estimated average yield was as accurate as could be desired.

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

WHEAT YIELDS FOR THE SEASONS ENDED MARCH, 1906 TO 1908, IN COUNTIES.

Districts and Counties.	Year ended March.								
	Area.			Produce.			Average per Acre.		
	1906.	1907.	1908.	1906.	1907.	1908.	1906.	1907.	1908.
Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushls.	Bushls.	Bushls.	
<b>Central—</b>									
Bourke ..	2,712	2,568	1,544	51,763	41,065	19,483	19.09	15.99	12.62
Grant ..	8,784	11,500	7,509	192,215	206,587	84,904	21.88	17.96	11.31
Mornington ..	150	58	41	1,457	850	770	9.71	14.66	18.78
Evelyn ..	144	136	92	2,739	2,357	2,094	19.02	17.33	22.76
<b>North-Central—</b>									
Anglesey ..	1,375	1,224	694	25,040	13,164	5,870	18.21	10.75	8.46
Dalhousie ..	5,257	3,704	1,928	106,266	44,592	28,208	20.21	12.04	14.63
Talbot ..	19,903	17,804	10,039	399,648	281,115	136,005	20.08	15.79	13.55
<b>Western—</b>									
Grenville ..	3,673	4,907	5,098	72,416	92,296	90,051	19.72	18.47	17.66
Polywarth ..	89	40	..	1,619	329	..	18.19	8.23	..
Heytesbury ..	21	80	8	332	521	206	15.81	17.37	25.75
Hampden ..	1,328	1,391	3,294	19,230	19,629	51,153	14.48	14.11	15.53
Ripon ..	60,168	68,087	60,280	998,484	1,018,873	907,197	16.59	14.96	15.05
Villiers ..	937	880	1,139	16,286	14,889	19,169	17.88	16.92	16.83
Normanby ..	794	745	555	14,931	12,298	10,879	18.81	16.51	19.60
Dundas ..	2,603	1,866	1,255	45,503	26,756	21,281	16.71	14.34	16.96
Follett ..	941	681	379	16,273	9,629	8,638	17.29	15.26	22.79
<b>Wimmera—</b>									
Lowan ..	162,585	164,440	172,564	2,020,407	1,763,348	1,723,401	12.43	10.72	9.99
Boring ..	309,884	317,055	307,529	4,216,774	4,445,954	3,025,286	13.61	14.02	9.84
Kara Kara ..	119,140	111,710	107,375	1,738,093	1,635,021	1,077,558	14.59	14.64	10.04
<b>Mallee—</b>									
Millewa ..	..	..	..	..	..	..	..	..	..
Weeah ..	22,105	25,105	25,691	166,566	231,263	159,943	7.54	9.21	6.23
Karkaroo ..	321,511	326,998	318,792	1,856,110	2,666,564	800,131	5.77	8.15	2.51
Tatchera ..	312,380	286,138	269,058	1,664,361	2,576,608	273,695	5.33	9.00	1.02
<b>Northern—</b>									
Gunbower ..	40,000	33,543	23,738	427,831	354,722	87,200	10.70	10.58	3.67
Gladstone ..	104,475	102,807	104,285	1,405,429	1,483,018	796,239	13.45	14.43	7.64
Bendigo ..	100,966	103,257	91,673	1,527,351	1,501,076	576,712	15.13	14.54	6.29
Rodney ..	128,048	123,107	95,712	1,968,618	1,278,327	701,089	15.37	10.38	7.32
Moiira ..	295,402	279,123	207,557	3,754,598	2,509,387	1,163,864	12.71	8.99	5.61
<b>North-Eastern—</b>									
Delatite ..	10,877	8,744	6,580	163,874	67,554	94,359	15.06	7.73	14.34
Bogong ..	29,667	29,962	21,433	417,983	231,592	211,805	14.09	7.73	9.88
Benambra ..	795	681	142	14,510	11,380	2,249	18.25	16.71	15.84
Wonnangatta ..	32	27	4	682	269	86	21.31	9.96	21.50
<b>Gippsland—</b>									
Croajingolong ..	77	65	38	1,269	1,076	589	16.48	16.55	15.50
Tambo ..	50	22	..	997	521	..	19.94	23.68	..
Dargo ..	22	..	..	750	..	..	34.09	..	..
Tanjil ..	3,448	3,306	1,045	105,239	72,983	19,763	30.52	22.08	18.91
Bulu Bulu ..	174	142	50	4,026	2,430	903	23.14	17.11	18.06
<b>Total ..</b>	<b>2,070,517</b>	<b>2,081,893</b>	<b>1,847,121</b>	<b>23,417,670</b>	<b>22,618,043</b>	<b>12,100,780</b>	<b>11.31</b>	<b>11.13</b>	<b>6.55</b>

It will be observed that the area harvested for wheat last season was 184,772 acres less than in the previous one, and 223,396 acres less than in 1905-6. The falling-off last season was principally in

the counties of Moira and Rodney. The total and average production, as the result of a most exceptional season, showed a more serious reduction, especially in the principal wheat-producing counties.

The principal districts where wheat is grown are the Wimmera, comprising the counties of Lowan, Borung, and Kara Kara; the Mallee, comprising those of Weeah, Karkaroc, and Tatchera; and the northern, comprising Gunbower, Gladstone, Bendigo, Rodney, and Moira. Of the total wheat harvested in 1907-8, that in the counties enumerated was 1,723,974 acres, or 93 per cent. of the total, producing 10,385,118 bushels, or 86 per cent. of the total in the State. The other districts are, however, not to be regarded as unsuitable for wheat growing, as though providing only a small proportion of the area and produce in 1907-8, the average per acre was more than double that in the counties mentioned.

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

#### WHEAT-GROWING COUNTIES: AREA AND PRODUCTION.

District and County.	Area of County.	First Cultivation Recorded.			Largest Cultivation Recorded.			Cultivation for 1907-8.	
		Year.	Area.	Average Yield Per Acre.	Year.	Area.	Average Yield Per Acre.	Area.	Average Yield Per Acre.
			Acres.	Bushels.		Acres.	Bushels.	Acres.	Bushels.
Western Dist.—									
Ripon ..	1,125,760	1855-6	40	35.62	1906-7	68,087	14.96	60,280	15.05
Wimmera Dist.—									
Lowan ..	3,181,440	1871-2	232	16.69	1892-3	257,685	8.58	172,564	9.99
Borung ..	2,740,480	1871-2	4,590	15.59	1903-4	424,224	13.67	307,529	9.84
Kara Kara ..	1,472,640	1871-2	7,987	14.34	1899-00	125,345	9.68	107,375	10.04
Mallee Dist.—									
Weeah ..	2,562,560	1891-2	40	21.00	1907-8	25,691	6.23	25,691	6.23
Karkaroc ..	3,797,120	1879-80	233	10.87	1902-3	371,069	2.22	318,792	2.51
Tatchera ..	2,138,240	1871-2	2	12.00	1904-5	342,022	3.35	269,058	1.02
Northern Dist.—									
Gunbower ..	862,720	1871-2	181	13.36	1880-1	75,114	9.29	23,738	3.67
Gladstone ..	1,153,280	1869-70	7,988	17.46	1904-5	107,534	12.36	104,285	7.64
Bendigo ..	1,247,360	1869-70	21,038	16.26	1904-5	110,926	13.44	91,673	6.29
Rodney ..	1,087,360	1855-6	63	26.66	1898-9	132,273	13.92	95,712	7.32
Moira ..	1,936,560	1871-2	14,936	15.93	1904-5	323,811	10.87	207,557	5.61



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

AVERAGE YIELD OF WHEAT PER ACRE IN WHEAT-GROWING COUNTIES, 1898-9 TO 1907-8.

District and County.	Average Yield of Wheat per Acre (in Bushels) during Year ended March.									
	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Western District—										
Ripon .. .. .	15.57	19.17	16.75	18.13	9.60	15.32	16.57	16.59	14.96	15.05
Wimmera District—										
Lowan .. .. .	8.88	5.90	7.43	8.53	3.21	13.47	11.32	12.43	10.72	9.99
Borong .. .. .	10.15	6.41	8.83	7.22	.47	13.67	11.03	13.61	14.02	9.84
Kara Kara .. ..	11.29	9.68	10.10	10.19	1.38	15.97	12.50	14.59	14.64	10.04
Mallee District—										
Weeah .. .. .	7.70	4.70	9.80	5.65	.46	12.39	7.24	7.54	9.21	6.23
Karkaroo .. .. .	3.33	2.93	6.41	3.77	.22	10.76	3.30	5.77	8.15	2.51
Tatchera .. .. .	4.48	5.19	4.83	3.22	.10	11.99	3.35	5.33	9.00	1.02
Northern District—										
Gumbower .. .. .	5.80	6.33	9.56	3.93	.27	14.54	8.77	10.70	10.58	3.67
Gladstone .. ..	12.27	8.95	9.79	8.49	1.25	16.68	12.36	13.45	14.43	7.64
Bendigo .. .. .	12.90	10.26	12.31	8.35	1.40	18.54	13.44	15.13	14.54	6.29
Rodney .. .. .	13.92	11.07	13.04	10.82	4.37	17.40	12.40	15.37	10.38	7.32
Moira .. .. .	9.77	8.68	11.70	9.27	1.15	17.18	10.87	12.71	8.99	5.61

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

WHEAT CULTIVATION IN CENTRAL AND NORTH-CENTRAL COUNTIES.

District and County.	Area of County.	First Cultivation Recorded.		
		Year.	Area.	Average Yield Per Acre.
	Acres.		Acres.	Bushels.
Central District—				
Bourke .. .. .	1,101,440	1855-6	13,606	25.03
Grant .. .. .	1,173,760	1855-6	12,072	25.65
Mornington .. ..	1,040,000	1855-6	943	29.57
Evelyn .. .. .	750,080	1855-6	1,124	31.43
North-Central District—				
Anglesey .. .. .	1,054,080	1855-6	129	28.77
Dalhousie .. .. .	838,400	1855-6	3,113	26.67
Talbot .. .. .	1,037,440	1855-6	445	33.68

District and County.	Largest Cultivation Recorded.		Cultivation in 1906-7.		Cultivation in 1907-8.		
	Year.	Area.	Area.	Average Yield Per Acre.	Area.	Average Yield Per Acre.	
		Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Central District—							
Bourke .. .. .	1861-2	30,263	17.12	2,568	15.99	1,544	12.62
Grant .. .. .	1861-2	35,349	15.86	11,500	17.96	7,509	11.31
Mornington .. ..	1860-1	3,153	14.03	58	14.66	41	18.73
Evelyn .. .. .	1859-60	1,789	15.43	136	17.33	92	22.76
North-Central District—							
Anglesey .. .. .	1874-5	4,146	12.96	1,224	10.75	694	8.46
Dalhousie .. .. .	1869-70	25,124	21.47	3,704	12.04	1,923	14.63
Talbot .. .. .	1871-2	76,555	13.81	17,804	15.79	10,039	13.55

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

## WHEAT RETURNS, 1896-7 TO 1907-8.

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

In 1902-3 wheat was grown on about 17,100 holdings, in 1903-4 on 17,400 holdings, in 1904-5 on 18,000 holdings, in 1905-6 on 18,362 holdings, in 1906-7 on 18,077 holdings, and in 1907-8 on 16,303 holdings. The decline in the yield and the average per acre, which is observed during the two seasons prior to 1903-4, was due to the severity of the seasons experienced all over the wheat-growing districts of the State. In 1903-4 the yield was the highest ever recorded, although the area under crop was not so large as in the previous year. The yield in 1905-6, 23,417,670 bushels, and that in 1906-7, 22,618,043 bushels, come next to that of 1903-4; but in 1907-8, as the result of an adverse season, it again fell to the level of that in 1901-2. In addition to 1,847,121 acres harvested for grain, there were also 210,927 acres of wheat cut for hay, so that the total area sown with wheat in 1907-8 was 2,058,048 acres; from information received from growers, it is estimated that the corresponding area for the season 1908-9 is 2,085,200 acres, or an increase of 27,000 acres, the increases being principally in the northern district. The standard weight of wheat is reckoned to be 60 lbs. to the bushel, but the actual weight of a bushel of Victorian wheat, according to the standard fixed by the Chamber of Commerce, was 62½ lbs. in 1899-1900, 1900-1, and 1901-2; 61 lbs. in 1902-3; 60½ lbs. in 1903-4; 61½ lbs. in 1904-5; 63 lbs. in 1905-6; 62¼ lbs. in 1906-7; and 62½ lbs. in 1907-8.

Population  
and bread  
stuffs.

The following table shows, for 1898, and each subsequent year to 1906, the mean population of Victoria; the stocks of old wheat and flour on hand at the beginning of each year; the quantity of wheat grown; the quantity (after deducting imports) of wheat, flour, and biscuit exported; and the breadstuffs left over and available for

home consumption. In addition to that required for food consumption, a quantity is required for seed purposes, equal, on an average, to three-quarters of a bushel per acre. Reliable information in regard to wheat imported across the border from New South Wales and South Australia is not now available, and this makes it impossible to state the particulars since 1906 :—

POPULATION AND WHEAT RETURNS, 1898 TO 1906.

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

\* Net import.

The manner in which the breadstuffs available for home consumption have been disposed of in each of the eight years ended in 1905 is as follows :—

Disposition of breadstuffs.

DISPOSAL OF BREADSTUFFS, 1898 TO 1905.

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

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

Stocks of  
wheat and  
flour.

As previously mentioned, there is now no reliable information of the wheat imported through border stations, and this makes it difficult to accurately account for the disposal of that harvested in 1907-8, but it is estimated that about 8,000,000 bushels are required locally for food and seed, which will leave over 4,000,000 bushels of Victorian wheat for export during the year. Information as to the stocks of wheat and flour on hand on 30th June, 1908, has been received from holders, and is as follows:—

#### WHEAT AND FLOUR ON HAND, 30TH JUNE, 1908.

Where Located.	Quantity in Bushels.		
	Wheat.	Flour (equivalent in Wheat).	Total.
Railway Stations and in transit ...	178,949	22,100	201,049
Sites leased from Railways ...	2,610,904	101,400	2,712,304
Mills and Stores (other than on Railways)	2,014,868	1,221,900	3,236,768
Farms ... ..	1,317,025	...	1,317,025
<b>Total ... ..</b>	<b>6,121,746</b>	<b>1,345,400</b>	<b>7,467,146</b>

Wheat  
production  
of world.

The wheat crop of the world, according to the yearly statement of the United States Agricultural Department, except in the case of Australasia, was as follows in the last three years:—

#### WHEAT PRODUCTION OF THE WORLD, 1905 TO 1907.

Continent.	1905.	1906.	1907.
	Bushels.	Bushels.	Bushels.
Australasia ... ..	63,659,000	75,320,000	71,706,000
Europe ... ..	1,803,132,000	1,825,936,000	1,613,168,000
Asia ... ..	423,152,000	449,681,000	445,586,000
Africa ... ..	45,795,000	53,039,000	51,626,000
America, North ... ..	813,420,000	874,966,000	740,939,000
"    South ... ..	169,834,000	151,694,000	178,636,000
<b>Total ... ..</b>	<b>3,318,992,000</b>	<b>3,430,636,000</b>	<b>3,101,661,000</b>

Oats.

In 1907-8 the land under oats in Victoria was 398,749 acres, from which a yield of 5,201,408 bushels was obtained, giving an

average of 13.04 bushels to the acre. The following return shows the harvest results for this crop for the last twelve years:—

OATS GROWN, 1896-7 TO 1907-8.

Year Ended March.		Area under Crop.		Gross Produce.	Average per Acre.
		Acres.		Bushels.	Bushels.
1897	.. ..	419,460		6,816,951	16.25
1898	.. ..	294,183		4,809,479	16.35
1899	.. ..	266,159		5,523,419	20.75
1900	.. ..	271,280		6,116,046	22.55
1901	.. ..	362,689		9,582,332	26.42
1902	.. ..	329,150		6,724,900	20.43
1903	.. ..	433,489		4,402,982	10.16
1904	.. ..	433,638		13,434,952	30.98
1905	.. ..	344,019		6,203,429	18.03
1906	.. ..	312,052		7,232,425	23.18
1907	.. ..	380,493		8,845,654	23.25
1908	.. ..	398,749		5,201,408	13.04

In addition to the area shown for the last season, there were also 460,192 acres of oats cut for hay, so that the total area under oaten crop was 858,941 acres in 1907-8. In August, 1908, it was estimated that the area under this crop for 1908-9 is 869,600 acres, or an increase of over 10,000 acres.

The area under barley was 63,074 acres in 1907-8, 41,940 acres being under malting barley, and 21,134 acres under other barley. There is a remarkable fluctuation in the area of land sown under barley, which seems strange, seeing that the market for this product is uniformly good. The following shows the returns for the last twelve years. It will be noticed that the average per acre in 1905-6 is the best for the period covered by the table:—

CULTIVATION OF BARLEY, 1896-7 TO 1907-8.

Year ended March.	Area under Crop.		Gross Produce.		Average per Acre.		
	Malting.	Other.	Malting.	Other.	Malting.	Other.	Total.
	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1897	53,421	8,952	641,406	174,199	12.01	19.45	13.08
1898	26,118	11,087	502,411	256,043	19.24	23.09	20.39
1899	33,584	14,275	776,785	335,782	23.13	23.52	23.25
1900	65,970	13,603	1,197,948	268,140	18.16	19.71	18.42
1901	49,723	9,130	1,003,477	212,001	20.18	23.22	20.65
1902	25,480	6,943	527,564	166,287	20.71	23.95	21.40
1903	26,436	11,280	394,877	166,267	14.94	14.74	14.88
1904	33,586	14,174	878,721	339,282	26.17	23.80	25.50
1905	30,799	15,290	575,505	298,594	18.69	19.53	18.97
1906	26,279	14,659	645,456	416,683	24.56	28.43	25.95
1907	30,052	22,764	674,043	581,399	22.43	25.54	23.77
1908	41,940	21,134	747,315	311,980	17.82	14.76	16.79

## Potatoes.

The greatest area of land planted with potatoes was 57,334 acres in 1891-2; the next being 56,383 acres in 1894-5. The highest yield was 204,155 tons in 1890-1, the next 200,523 tons in 1891-2. The area planted in 1907-8 was 54,149 acres, and the produce 135,110 tons, or  $2\frac{1}{2}$  tons per acre. The following table shows the potato returns for the last twelve years:—

POTATOES GROWN, 1896-7 TO 1907-8.

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

## Hay.

Statistics of the hay crop were collected as far back as 1841, when 450 acres returned 900 tons. From that date onward there has been a steady increase in the crop cut for hay. The greatest area under hay was in 1903, when 733,353 acres were cut for 1,233,063 tons; next in 1907, with 682,194 acres for 682,370 tons, which produce has been exceeded five times in the last ten years, and which gives the lowest average since 1895, when it was under 17 cwt. per acre. The quantity of straw returned for the season 1907-8 was 107,079 tons. The following is a return of the hay crop for the last twelve years:—

HAY RETURNS, 1896 TO 1907.

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

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

The five principal crops.

AREA, PRODUCTION, AND AVERAGES PER HEAD OF POPULATION OF FIVE PRINCIPAL CROPS, 1899-1900 TO 1907-8.

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

AREA, PRODUCTION, AND AVERAGES PER HEAD OF POPULATION OF  
FIVE PRINCIPAL CROPS, 1899-1900 TO 1907-8—*continued.*

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

The next table compares last season's yields of the principal crops with the averages of the preceding ten years.

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

Crop.	Yield per Acre.	
	Average of Ten Years, 1897-8 to 1906-7.	1907-8.
Wheat ... .. bushels	8·64	6·55
Oats ... .. "	21·26	13·04
Barley—Malting ... .. "	20·62	17·82
„ Other ... .. "	23·16	14·76
„ Total ... .. "	21·32	16·79
Potatoes ... .. tons	2·93	2·50
Hay—Wheaten ... .. "	1·16	·82
„ Oaten ... .. "	1·42	1·08
„ Total ... .. "	1·33	1·00

The all round reduction per acre in the production of principal crops is entirely due to an exceptionally unfavorable season.

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

PERCENTAGE OF AREA IN EACH DISTRICT TO TOTAL AREA UNDER EACH  
OF THE PRINCIPAL CROPS, 1907-8.

District.	Percentage in each District of Area under—						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
Central .. ..	·50	7·90	38·73	39·35	21·32	35·20	3·17
North-Central .. ..	·69	8·38	9·06	22·81	10·00	4·93	1·63
Western .. ..	3·90	8·40	14·36	19·85	13·41	7·45	4·21
Wimmera .. ..	31·80	24·15	1·48	·66	16·26	3·07	47·73
Mallee .. ..	33·22	14·63	4·33	..	2·53	7·43	13·83
Northern .. ..	28·31	30·93	25·36	·08	23·38	14·67	28·33
North-Eastern .. ..	1·52	3·47	1·09	4·26	7·20	10·34	·92
Gippsland .. ..	·06	2·14	5·59	12·99	5·90	16·91	·18

NOTE.—For counties contained in each district, see table on page 623.

This statement shows that during last season 93 per cent. of the area under wheat was in the Wimmera, Mallee, and Northern districts; more than half that under oats was in the Wimmera and



Northern districts; nearly two-thirds of that under barley was in the Central and Northern districts; and over four-fifths of that under potatoes was in the Central, North Central, and Western districts. Hay was more uniformly cultivated over the whole State, though the proportion was somewhat small in the Mallee, North-Eastern, and Gippsland districts. The Central district accounted for more than one-third of the area under minor crops, principally through a much larger area being used for gardens and orchards and for peas and beans. Naturally the fallow land is confined to the wheat-growing districts.

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

PERCENTAGE OF AREA UNDER PRINCIPAL CROPS TO TOTAL CULTIVATION IN EACH DISTRICT, 1907-8.

District.	Percentage of Total Cultivation under—						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
Central .. .. .	2·82	9·66	7·49	6·53	44·60	20·21	8·69
North-Central .. .. .	8·11	21·39	3·66	7·91	43·67	5·90	9·36
Western .. .. .	26·83	12·48	3·37	4·01	34·09	5·20	14·02
Wimmera .. .. .	47·81	7·84	·08	·03	9·03	·47	34·74
Mallee .. .. .	73·97	7·03	·33	..	2·08	1·68	14·91
Northern .. .. .	47·43	11·18	1·45	..	14·47	2·49	22·98
North-Eastern .. .. .	23·15	11·36	·57	1·90	40·35	15·91	6·76
Gippsland .. .. .	1·21	9·11	3·76	7·51	42·92	33·82	1·67
Total of Victoria .. .. .	44·76	9·66	1·53	1·31	16·53	4·54	21·67

NOTE.—For counties contained in each district, see table on page 623.

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

In Victoria the proportion of the land under each crop to the total area under tillage during the last ten years was:—

PROPORTION TO TOTAL CULTIVATION OF LAND UNDER EACH CROP, 1898-9 TO 1907-8.

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

It is shown on page 621, that in the period covered by this table, the area under cultivation has steadily increased. By the figures in the table above it would seem that the actual area under wheat has not made anything like a corresponding increase, though taken in conjunction with land in fallow which is mainly used for wheat cropping, it will be observed that in proportion to the total area under cultivation, that used for wheat has been fairly uniform in the last ten years, but that in the later years the practice to fallow preparatory to sowing has grown considerably.

Prices of  
agricultural  
produce.

The following information regarding prices in February and March has been procured direct from the growers. The table gives the average price for each of the last ten years:—

PRICES OF PRODUCE, 1899 TO 1908.

Year.	Average Price in February and March.						
	Wheat.	Oats.	Barley.		Hay.	Potatoes.	
			Malting.	Other.		Early Crop.	Main Crop (after March).
	Per bushel.	Per bushel.	Per bushel.	Per bushel.	Per ton.	Per ton.	Per ton.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1899	2 2	1 7 $\frac{1}{2}$	4 2 $\frac{1}{2}$	2 2 $\frac{1}{2}$	34 5	73 0	36 5
1900	2 5	2 1	3 2 $\frac{1}{2}$	2 3 $\frac{1}{2}$	40 9	41 11	26 11
1901	2 5 $\frac{3}{4}$	1 6 $\frac{1}{2}$	2 10 $\frac{3}{4}$	1 11 $\frac{1}{4}$	39 4	73 11	55 10
1902	2 10 $\frac{1}{4}$	2 4	3 9 $\frac{1}{4}$	2 9 $\frac{1}{4}$	55 5	77 7	84 4
1903	6 0	3 2 $\frac{3}{4}$	4 5 $\frac{3}{4}$	3 8	100 1	91 3	47 1
1904	2 8	1 1 $\frac{1}{2}$	2 10 $\frac{1}{2}$	1 9 $\frac{1}{2}$	27 2	52 6	26 1
1905	2 11 $\frac{1}{2}$	1 6	3 2 $\frac{1}{2}$	2 1	33 6	110 0	84 0
1906	2 10 $\frac{3}{4}$	1 10 $\frac{1}{4}$	3 11	2 8 $\frac{1}{2}$	38 0	115 6	101 5
1907	2 9	1 10 $\frac{1}{4}$	4 2	2 2 $\frac{1}{2}$	38 2	59 1	37 6
1908	4 0 $\frac{1}{2}$	3 0 $\frac{1}{2}$	4 11 $\frac{1}{2}$	3 7	88 7	70 4	54 11

In Melbourne the price of wheat has been good, ranging from 2s. 10 $\frac{1}{2}$ d. to 5s. 8 $\frac{1}{2}$ d. per bushel throughout last year, the latter price being reached in October. After October, the price declined, and in December was down to 4s. 5d. The highest and the lowest prices in Melbourne during each month in 1907 were as follow:—

PRICES OF WHEAT IN MELBOURNE, 1907

Month.	Price per Bushel.			
	Highest.		Lowest.	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
January	...	...	2	10 $\frac{1}{2}$
February	...	...	3	11 $\frac{1}{2}$
March	...	...	3	0 $\frac{1}{2}$
April	...	...	3	1
May	...	...	3	3 $\frac{3}{4}$
June	...	...	3	7 $\frac{3}{4}$
July	...	...	4	10 $\frac{1}{2}$
August	...	...	3	9 $\frac{1}{2}$
September	...	...	4	0 $\frac{1}{2}$
October	...	...	5	5 $\frac{1}{2}$
November	...	...	5	8
December	...	...	4	1 $\frac{1}{2}$

The following return shows the yield of the principal crops in the various Australian States and New Zealand for each of the nine years ended March, 1908:—

Yield of crops in Australasia.

YIELD OF PRINCIPAL CROPS IN AUSTRALASIA, 1899-1900 TO 1907-8

Year ended March.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
<b>WHEAT.</b>	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1900 ...	15,237,948	13,604,166	614,414	8,453,135	966,601	1,101,303	8,581,898
1901 ...	17,847,321	16,173,771	1,194,088	11,253,148	774,653	1,110,421	6,527,154
1902 ...	12,127,382	14,808,705	1,692,222	8,012,762	956,886	963,662	4,046,589
1903 ...	2,569,364	1,535,097	6,165	6,354,912	970,571	876,971	7,457,915
1904 ...	28,525,579	27,334,141	2,436,799	13,209,465	1,855,460	767,398	7,891,654
1905 ...	21,092,139	16,464,415	2,149,663	12,023,172	2,013,237	792,956	9,123,673
1906 ...	23,417,670	20,737,200	1,137,321	20,143,798	2,308,305	776,478	6,798,934
1907 ...	22,618,043	21,817,938	1,108,902	17,466,501	2,758,567	651,408	5,605,252
1908 ...	12,100,780	9,155,884	693,527	19,135,557	2,933,560	644,235	5,567,139
<b>OATS.</b>	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1900 ...	6,116,046	627,904	10,712	218,331	73,556	1,148,160	16,325,832
1901 ...	9,582,332	593,548	7,855	366,229	86,433	1,406,913	19,085,837
1902 ...	6,724,900	687,179	42,208	469,254	163,653	1,702,659	15,045,233
1903 ...	4,402,982	351,758	520	620,823	161,714	1,752,745	21,766,708
1904 ...	13,434,952	1,252,156	70,713	902,936	255,300	1,621,950	15,107,237
1905 ...	6,203,429	652,646	15,137	555,696	226,318	1,178,819	14,553,611
1906 ...	7,232,425	883,081	5,858	869,146	283,987	1,200,024	12,707,982
1907 ...	8,845,654	1,404,574	28,884	896,166	457,155	1,979,574	11,201,789
1908 ...	5,201,408	851,776	9,900	874,388	719,553	1,526,002	15,021,861
<b>BARLEY.</b>	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1900 ...	1,466,088	132,476	118,443	188,917	56,587	142,721	1,585,145
1901 ...	1,215,478	114,228	127,144	211,102	29,188	116,911	1,027,651
1902 ...	693,851	103,361	277,037	243,362	34,723	167,483	855,993
1903 ...	561,144	18,233	3,595	317,155	45,778	201,133	1,136,232
1904 ...	1,218,003	174,147	510,557	487,920	51,447	212,459	1,160,504
1905 ...	874,099	266,781	331,772	346,718	37,332	163,194	1,128,164
1906 ...	1,062,139	111,266	61,816	505,916	49,497	93,664	1,024,045
1907 ...	1,255,442	152,739	158,283	491,246	48,827	141,895	1,035,346
1908 ...	1,059,295	75,268	64,881	566,937	75,965	149,186	1,163,406
<b>POTATOES.</b>	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1900 ...	173,381	81,337	22,675	19,716	8,373	101,670	222,124
1901 ...	123,126	63,253	20,014	14,566	4,835	93,862	169,042
1902 ...	125,474	39,146	22,402	15,059	5,739	114,704	206,815
1903 ...	168,759	30,732	3,257	28,312	6,200	163,518	193,267
1904 ...	167,736	56,743	17,649	31,415	4,315	168,419	208,787
1905 ...	92,872	48,754	19,231	19,521	5,614	110,547	134,608
1906 ...	115,352	49,889	11,308	20,328	6,297	64,606	123,402
1907 ...	166,839	114,856	15,830	22,277	5,028	182,323	169,875
1908 ...	135,110	55,882	13,177	20,263	5,659	145,483	142,999
<b>HAY.</b>	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1900 ...	596,193	546,850	103,409	229,800	70,078	51,123	136,468*
1901 ...	677,757	526,260	78,758	353,662	103,813	94,198	136,046*
1902 ...	884,369	472,621	122,039	346,467	89,729	88,125	125,968*
1903 ...	601,272	243,289	23,181	308,825	91,593	89,210	138,684*
1904 ...	1,233,063	816,810	136,117	479,723	119,156	115,513	154,334*
1905 ...	514,316	366,293	80,662	294,252	113,794	73,457	157,632*
1906 ...	864,177	459,182	56,829	435,546	139,380	90,077	161,498*
1907 ...	881,276	621,846	94,343	398,866	158,112	104,797	140,402*
1908 ...	682,370	367,800	77,601	376,170	136,625	98,406	160,870*

\* Estimated.

Other crops.

The following table shows the area and production under other than principal crops since March, 1902 :—

## OTHER THAN PRINCIPAL CROPS, 1902-3 TO 1907-8.

Crop.	1902-3.		1903-4.		1904-5.	
	Area.	Production.	Area.	Production.	Area.	Production.
Maize .. ..	Acres. 10,906	Bushels. 750,524	Acres. 11,810	Bushels. 904,239	Acres. 11,394	Bushels. 623,736
Rye .. ..	1,487	21,179	2,021	29,586	2,267	30,578
Peas and Beans ..	8,085	141,888	8,960	213,735	11,523	201,145
Mangel-wurzel ..	1,392	Tons. 17,174	1,564	Tons. 21,305	1,441	Tons. 13,894
Beet, Carrots, Parsnips, and Turnips	747	5,600	1,014	9,879	823	6,149
Onions .. ..	5,565	27,467	4,176	25,218	2,862	12,969
Green Forage ..	31,145	..	33,165	..	29,902	..
Grass and Clover Seeds	1,568	Bushels. 15,836	2,749	Bushels. 35,660	2,249	Bushels. 27,300
Hops .. ..	213	Cwt. 1,572	214	Cwt. 2,447	251	Cwt. 1,449
Tobacco .. ..	171	781	129	848	106	1,112
Vines—Grapes ..	28,374	444,966	28,513	654,965	28,016	452,433
Flax .. ..	233	{ 320 fibre 990 seed }	259	{ 61 fibre 1,226 seed }	564	{ 320 fibre 781 seed }
Gardens and Orchards	58,415	..	59,812	..	60,655	..
Minor Crops ..	2,201	..	2,403	..	2,716	..
Land in Fallow ..	492,305	..	632,521	..	853,829	..
Artificial Grasses	565,635	..	962,665	..	953,543	..

Crop.	1905-6.		1906-7.		1907-8.	
	Area.	Production.	Area.	Production.	Area.	Production.
Maize .. ..	Acres. 11,785	Bushels. 641,216	Acres. 11,559	Bushels. 704,961	Acres. 10,844	Bushels. 508,761
Rye .. ..	1,959	28,893	1,571	20,770	1,441	21,966
Peas and Beans ..	12,253	265,206	12,012	236,636	13,613	213,818
Mangel-wurzel ..	1,657	Tons. 16,400	1,360	Tons. 16,139	1,184	Tons. 14,295
Beet, Carrots, Parsnips, and Turnips	909	6,408	713	5,644	496	3,650
Onions .. ..	4,889	25,597	4,705	28,000	4,249	22,649
Green Forage ..	34,041	..	36,502	..	59,897	..
Grass and Clover Seeds	2,767	Bushels. 33,281	1,859	Bushels. 17,494	1,076	Bushels. 10,685
Hops .. ..	313	Cwt. 1,906	323	Cwt. 2,787	248	Cwt. 1,179
Tobacco .. ..	169	1,405	133	†	345	†
Vines—Grapes ..	26,402	498,590	25,855	752,826	26,465	535,804
Flax .. ..	500	{ 332 fibre 2,357 seed }	655	{ 1,116 fibre 4,853 seed }	1,263	{ 60 fibre 2,710 seed }
Gardens and Orchards	59,607	..	61,927	..	63,133	..
Minor Crops ..	2,763	..	2,699*	..	2,982*	..
Land in Fallow ..	1,049,915	..	990,967	..	894,300	..
Artificial Grasses	1,040,335	..	1,095,642	..	1,095,471	..

\* For details see page 645.

† Not available.

In the year 1901-2 there were 10,020 acres under maize, from Maize. which a return of 615,472 bushels was obtained. The area of land under this crop has been fairly constant from that year, and in 1903-4, there were 11,810 acres sown, and 904,239 bushels produced; in 1904-5, 11,394 acres produced 623,736 bushels; in 1905-6, 11,785 acres produced 641,216 bushels; in 1906-7, 11,559 acres produced 704,961 bushels; and in 1907-8, 10,844 acres produced 508,761 bushels; of which Tambo produced 155,184 bushels, Tanjil, 124,323 bushels, Croajingolong, 96,255 bushels, Dargo, 83,070 bushels, Bogong, 17,599 bushels, Benambra, 11,688 bushels, Buln Buln, 10,560 bushels, and Delatite, 8,090 bushels. Other districts of the State also grow maize, but not to any great extent.

In 1907-8, the area under rye was 1,441 acres, from which 21,966 Rye. bushels were obtained. The area of this crop has been decreasing during the last four seasons. Rye was last season grown all over the State, except in Grenville, Borung, Kara Kara, Gunbower, Gladstone, Rodney, and the Mallee counties of Millewa, Weeah, Karkaroc, and Tatchera. In Delatite, the quantity yielded was 8,463 bushels, in Bogong, 2,890 bushels, and in Normanby, 1,646 bushels. In Bourke and Talbot the produce exceeded 1,000 bushels; but in the other counties of the State it was under 1,000 bushels.

In the area under peas and beans there was an increase from Peas and beans. 8,297 acres in 1901-2 to 12,253 acres in 1905-6, and to 13,613 acres in 1907-8. The production in the seven years has substantially increased, the yields being 169,971 bushels in 1901-2, and 213,818 bushels in 1907-8. Peas and beans are generally grown in all the counties except those in the Mallee and Northern Districts, the principal crops last season came from Buln Buln, where 42,861 bushels were obtained; Grant supplied 29,777 bushels; Bourke, 28,968 bushels; Talbot, 17,255 bushels; Dalhousie, 16,371 bushels; and Mornington, 16,248 bushels.

A very considerable increase was made in the area under mangel- Mangel- wurzel. wurzel since 1900-1, being 865 acres in 1901-2, but 1,360 acres in 1906-7, and 1,184 acres in 1907-8. During the same period the production increased from 9,679 tons to 16,139 and 14,295 tons. Mangolds are grown principally in the Gippsland counties of Tangil and Buln Buln, and in Bourke, Grant, Mornington, Villiers, and Normanby. In other counties the production is not very large.

The cultivation of beet, carrots, parsnips, and turnips, exclusive Beet, car-rots, parsnips, and turnips. of those grown in market gardens, decreased by 30 per cent. in area and 35 per cent. in production in the last as compared with the previous season. In 1901-2, the land sown was 561 acres; in 1905-6, 909 acres; and in 1907-8, 496 acres. The produce was 4,140 tons, 6,408 tons, and 3,650 tons, in the respective years named.

Onions are grown in nearly every county south of the Dividing Onions. Range. The counties yielding the largest crops last season were—Bourke, Grant, Polwarth, Grenville and Buln Buln. In Bourke the yield was 4,601 tons from 870 acres; in Grant it was 3,204 tons

from 943 acres; in Polwarth, 3,026 tons from 505 acres; in Grenville, 2,724 tons from 558 acres; in Buln Buln, 2,635 tons from 377 acres; in Mornington, 2,243 tons from 384 acres; in Villiers, 1,783 tons from 281 acres; and in Hampden, 1,624 tons from 189 acres. The total area under and production of onions in 1907-8 were exceeded in the two previous years. The following is a return for the last thirteen years:—

## ONION CULTIVATION, 1895-6 TO 1907-8.

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

**Green forage.** During the last seven seasons the area devoted to green forage was lowest in 1904-5, when it was 29,902 acres. In 1907-8, it increased to 59,897 acres, which is the highest recorded since 1877-8.

**Grass and clover seed.** The area under grass and clover for seed shows a decline, that for 1907-8 being only 1,076 acres, which is the lowest during the last thirty-six years. The product returned was 10,685 bushels, or an average of nearly 10 bushels per acre, and it is remarkable that such profitable results are not availed of more widely.

**Hops.** The hop-growing industry attained its maximum development in 1883-4, when 1,758 acres were planted, and yielded 15,717 cwt. Dargo, Tanjil, Delatite, Bogong, and Tambo were the chief counties in which hops were grown, and in Evelyn, Buln Buln, Villiers, Polwarth, and Croajingolong smaller yields were recorded. There has, however, been a heavy falling off in the last twenty-three years. In 1907-8 there were only 44 growers, whose return from 248 acres was 1,179 cwt.

**Flax.** In 1895-6 there were 1,969 acres under flax or linseed ("Linum Usitatissimum"), but in 1898-9 the area had fallen to 72 acres. Since that year the area sown has increased, the returns for 1903-4 showing 19 growers of flax, who cultivated 259 acres, and produced 1,226 cwt. of seed, 61 cwt. of made fibre, and 4,769 cwt. of straw for treatment; in 1904-5 there was a considerable increase, the number of growers being 33, the area cultivated, 564 acres, the produce 781 cwt. of seed, 320 cwt. of fibre made, and straw for treatment 3,060 cwt.; in 1906-7 there were 72 growers, and the area increased to 655 acres, which produced 4,853 cwt. of seed and 1,116 cwt. of fibre, with 13,800 cwt. of straw awaiting treatment. Last year there were 87 growers, and the area still further increased to 1,263 acres; but the season was very unfavorable to the crop, and only 2,710 cwt. of

seed, 60 cwt. of fibre, and 9,800 cwt. of straw for treatment were returned. Unfortunately, the yield last season was light, and the loss by fire of the factory at Pentridge destroyed the only local market for this product. The mill has, however, been since re-established, and there is also a company now buying up this product from the farmer. The Commonwealth has also come to the assistance of the grower by offering a bonus of 10 per cent. on the market value of both fibre and seed, so there is a bright future for both the fibre and linseed oil industries.

There are two mills in the State available for the treatment of seed for oil making, but, so far, only one has been utilized, and that chiefly on imported seed. In 1907, imports into Victoria included linseed to the value of £2,871; linseed oil, £36,701; and fibre, £106,627. After supplying local requirements there is an extensive market, as there is scarcely any limit to the demand for linseed and fibre in other parts of the world, so there is great promise that in this State the flax industry will rapidly become established, and be very profitable. The Agricultural Department is now also giving some attention to the introduction of Phormium tenax, or New Zealand flax, and up to the present 50 acres have been put under this plant. The crop requires three or four years to mature, and the result of the experiment will be awaited with interest.

As well as the Government tobacco experimental station (see page Tobacco. 597, there are plantations in the counties of Delatite, along the banks of the King River, and in Bogong. Particulars relating to the cultivation of tobacco for the last twelve years, are as follow :—

## CULTIVATION OF TOBACCO, 1896-7 TO 1907-8.

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

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

Vines, wine,  
raisins, &c.

The area under vines shows a steady increase from 4,284 acres in 1879-80, to 30,307 acres in 1894-5. In 1900-01 the area was 30,634 acres, but since then there has been a falling off to 25,855 acres in 1906-7, since when there was a small increase. The vineyards are distributed fairly all over the State. There are, however, districts where the principal industries are connected with vine-growing; the Shire of Mildura producing last season 251,804 cwt. of grapes; Rutherglen, 124,984 cwt.; and Yackandandah, 27,311 cwt. In the Goulburn Valley wine-making is a flourishing industry. In the Wimmera district, in the County of Borung, there are many vineyards, particularly in the Stawell Shire, where 11,678 cwt. of grapes were produced in 1907-8. At Mildura, the crop was principally dried for raisins and currants. The results of twelve years' operations are as follow:—

VINE PRODUCTION, 1897 TO 1908.

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

Of the total quantity of grapes gathered in 1907-8, 195,086 cwt. were used for making wine, 274,211 cwt. for raisins and currants, and 66,507 cwt. for table consumption and export. Of the 68,617 cwt. of raisins made, 28,283 cwt. were sultanas almost entirely from Mildura. That destructive insect affecting the vines, the phylloxera vastatrix, has not during recent years shown itself to any marked extent. Attempts are now being made to completely stamp out the pest by the Department of Agriculture by the distribution of disease-resistant stocks.

Raisins are now being produced in Victoria upon a scale far in excess of local requirements. It is estimated that a year's consumption of raisins is about 20,000 cwt., so there are over 48,000 cwt. of the production in 1908 available for export. With regard to currants, a year's consumption is about 29,650 cwt., so that although there has been a substantial increase in the production, it must extend largely before local requirements are met.



The total number of persons in the State growing fruit for sale <sup>Orchards.</sup> was 5,241 in 1907-8, as against 5,367 in 1906-7, 5,163 in 1905-6, and 5,341 in 1904-5. The area under such orchards in these years was 49,212, 49,086, 47,312, and 47,205 acres respectively. The orchards are fairly spread over the whole State. The largest areas last season were in the counties of Evelyn, with 11,956 acres; Bourke, 10,787 acres; Mornington, 6,478 acres; Rodney, 2,859 acres; Talbot, 2,655 acres; Bendigo, 2,015 acres; Karkaroc (including Mildura), 1,656 acres; Borung, 1,462 acres; Grant, 1,425 acres; and Buln Buln, 1,079 acres.

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

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

Fruit.	Number of Trees, Plants, &c., 1907-8.		
	Not Bearing.	Bearing.	Total.
Apples .. .. .	795,188	1,155,966	1,951,154
Pears .. .. .	225,916	261,959	487,875
Quinces .. .. .	18,505	48,309	66,814
Plums .. .. .	187,353	296,915	484,268
Cherries .. .. .	100,228	231,084	331,312
Peaches .. .. .	109,406	295,189	404,595
Apricots .. .. .	43,312	260,351	303,663
Nectarines .. .. .	1,807	5,048	6,855
Oranges .. .. .	27,117	34,024	61,141
Lemons .. .. .	14,111	46,465	60,576
Loquats .. .. .	2,170	5,248	7,418
Medlars .. .. .	63	197	260
Figs .. .. .	4,846	29,274	34,120
Passion .. .. .	4,203	7,251	11,454
Guavas .. .. .	352	949	1,301
Pomegranates .. .. .	152	93	245
Persimmons .. .. .	253	517	770
<b>Total Large Fruits .. .. .</b>	<b>1,534,982</b>	<b>2,678,839</b>	<b>4,213,821</b>
Raspberries .. .. .	..	1,547,847	1,547,847
Strawberries .. .. .	..	4,157,534	4,157,534
Gooseberries .. .. .	..	297,853	297,853
Mulberries .. .. .	430	1,145	1,575
Olives .. .. .	652	3,165	3,817
Currants (Red, White, and Black) ..	10,327	77,906	88,233
Almonds .. .. .	8,605	19,772	23,377
Walnuts .. .. .	4,726	3,787	8,513
Filberts .. .. .	1,197	2,052	3,249
Chestnuts .. .. .	410	476	886
<b>Total Nuts .. .. .</b>	<b>14,938</b>	<b>26,087</b>	<b>41,025</b>

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

## ORCHARDS GROWING FRUIT FOR SALE, 1900-1 TO 1907-8.

Year Ended March.	Number of Fruit-growers.	Area under Gardens and Orchards.	LARGE FRUITS GATHERED.						
			Apples.	Pears.	Quinces.	Plums.			
		Acres.	Bushels.	Bushels.	Bushels.	Bushels.			
1901	5,400	44,688	893,418	251,384	71,357	172,467			
1902	5,693	45,885	652,525	118,742	64,145	201,291			
1903	5,301	44,502	903,853	248,030	91,665	154,112			
1904	5,254	46,642	805,034	158,186	81,516	289,972			
1905	5,341	47,205	1,019,816	188,849	90,735	121,725			
1906	5,163	47,312	578,700	219,864	56,898	130,917			
1907	5,367	49,086	1,010,381	303,647	77,277	237,468			
1908	5,241	49,212	618,424	182,609	47,871	157,366			
LARGE FRUITS GATHERED—continued.									
			Cherries.	Peaches.	Apricots.	Oranges.	Lemons.	Figs.	Others.
			Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1901	105,032	160,968	228,686	37,184	57,866	21,846	9,901		
1902	111,891	284,312	234,101	60,150	64,954	18,135	9,363		
1903	102,512	173,414	168,348	23,210	48,083	19,214	8,187		
1904	124,423	260,589	336,899	27,670	61,429	26,405	8,863		
1905	82,504	230,130	186,360	34,088	81,716	23,500	7,335		
1906	116,845	132,870	154,791	21,364	63,904	32,467	12,339		
1907	120,496	276,077	258,049	23,431	37,662	29,549	16,817		
1908	71,798	290,178	239,735	28,620	46,827	20,460	10,753		
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.
1901	20,396	4,246	12,431	1,794	882	66,837	25,294	6,818	6,469
1902	13,610	4,435	10,436	1,383	968	72,528	18,435	3,469	6,990
1903	20,185	3,101	11,573	1,456	1,011	41,551	19,378	3,437	8,262
1904	22,377	3,122	14,199	2,312	1,327	113,791	13,276	2,223	6,677
1905	12,480	5,456	13,558	1,805	1,320	80,758	28,306	1,756	4,396
1906	6,821	2,643	9,814	2,113	1,320	81,077	23,131	6,144	4,696
1907	13,816	5,487	12,276	2,054	3,307	69,378	15,863	5,339	3,506
1908	12,466	3,645	8,526	3,705	2,145	62,921	20,266	1,928	5,047

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

## PRODUCE OF FRUIT TREES.

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

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

In addition, large quantities of melons, rhubarb, and tomatoes were produced in these orchards, the following being the quantities returned for 1907-8—Melons, 15,309 cwt.; rhubarb, 43,989 dozen bundles, and tomatoes, 21,970 cwt. There were also 4,899 acres laid down in private fruit gardens, the value of the produce being estimated at about £10,000.

Previous to 1904-5 the value of the fruit produce of the State was estimated at the rate of £25 per acre; but during the last four years extensive inquiries have been made, the most prominent growers,

the various fruit associations, and others interested in the trade having been consulted, with the result that it has been decided to estimate only the value of such fruit as reaches the market. Upon this basis, and according to the prices received by the growers, the estimated value of the fruit sold was £341,891 in 1904-5, £345,844 in 1905-6, £451,672 in 1906-7, and £386,807 in 1907-8. This, of course, will not represent the actual value of all the fruit grown, large quantities being privately consumed in various ways, but no very reliable estimate of the value of such fruit can be prepared. It may, however, be set down at about £35,000 from orchards growing fruit for sale, and from private gardens.

In recent years some attention has been given to cider making, and, with a view of encouraging this industry, the Agricultural Department has imported a complete cider-making plant, and had it sent to various districts, which resulted in large quantities of cider having been made by it. Local manufacturers of machinery have since made machines on the lines of the imported one, with the result that cider mills are being established in several districts.

Market  
gardens.

The area under market gardens for the year 1907-8 was 9,022 acres. In view of the fact that these gardens are generally situated near large centres of population, and the producers are consequently able to dispose of the bulk of their goods with a minimum of loss from waste, &c., an average return of £25 per acre is regarded as a fair estimate. On this basis, the total value of the produce may be stated as over £225,500. 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, but the quantity has, principally under the head of apricots, since declined, though the figures for the last two seasons present a notable improvement when compared with those for 1905-6. The details for the last eight seasons are as follow:—

#### DRIED FRUIT, 1900-1 TO 1907-8.

Year ended June.	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Pears.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1901 ..	28,944	35,931	97,254	411,526	62,639	..	636,294
1902 ..	42,218	33,789	90,328	328,599	66,472	..	561,406
1903 ..	27,113	28,996	70,759	110,666	69,069	..	306,603
1904 ..	25,137	58,293	114,096	184,960	17,599	..	400,085
1905 ..	28,021	33,080	134,019	179,520	41,137	..	415,777
1906 ..	19,290	9,207	27,703	252,746	29,227	..	338,173
1907 ..	42,113	64,648	109,958	143,970	37,716	..	398,405
1908 ..	35,544	25,504	87,383	223,091	13,112	8,077	392,711

Nearly all the dried fruit comes from Mildura, where fruit trees are to a large extent being replaced by vines of the sultana variety, which accounts for the falling-off in the quantity of dried fruit. At Mildura in 1907-8, there were 3,108,112 lbs. of sultana raisins made, which represent a decrease of 1,721,216 lbs. on the figures for the previous year.

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

## MINOR CROPS, 1906-7 AND 1907-8.

Crop.	1906-7.		1907-8.	
	Area.	Produce.	Area.	Produce.
	Acres.		Acres.	
Artichokes ... ..	5	80 cwt.	2	200 cwt.
Calabashes ... ..	...	...	19	6 tons
Chicory ... ..	191	114 tons (dry)	283	174 tons (dry)
Flowers ... ..	116	...	114	...
Garlic ... ..	2	51 cwt.	...	...
Herbs ... ..	...	...	6	...
Millet—Broom ... ..	283	{ 1,498 cwt. fibre 1,246 cwt. seed }	285	{ 1,582 cwt. fibre 1,766 cwt. seed 40 cwt. seed }
„ Japanese ... ..	...	...	4	...
Nursery ... ..	473	...	448	...
Opium poppies ... ..	8	95 lbs.	...	...
Pumpkins ... ..	1,487	14,029 tons	1,688	17,606 tons
Rice ... ..	17	...	...	...
Seeds—Agricultural and garden ... ..	15	...	57	...
Sunflowers ... ..	102	6,890 bushels	76	2,047 bushels
Total... ..	2,699	...	2,982	...

The fallowing of land commenced in 1858-9, when 6,000 acres Land in fallow were so treated. With annual variations in acreage, but a general increase, the area in fallow reached 853,829 acres in 1904-5, 1,049,915 acres in 1905-6, 990,967 acres in 1906-7, and 894,300 acres in 1907-8. The system of fallowing is much more extensive in the wheat-growing counties than in other districts of the State. It is gratifying to find that the enormous advantages obtainable from this mode of treating the land are now being properly recognised; and from returns received it appears that, where fallowed for 1907-8 crop, on manured land there was a gain in wheat yield of over 5 bushels per acre, and on unmanured land the gain was nearly 2 bushels per acre. In order to obtain definite information regarding the relative production from fallowed and unfallowed land under wheat, particularly in a dry season like the last, some of the principal growers in the wheat districts of the State were invited to

furnish information on the subject, and the tabulated results of their replies are set out in the table which follows:—

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

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

Taking the districts as a whole, it will be seen that the yield per acre from the fallowed was more than twice as great as that from the unfallowed land; and taking the districts separately, this proportion is maintained in each of the three principal districts. In the Western District the difference is not marked, due probably to the fact that the district is a comparatively new one.

Some information was also obtained regarding the unmanured land, particulars of which, in the case of the counties of Karkaroo and Tatchera in the Mallee District (the driest in the State last year) are as set out below:—

District and County.	UNMANURED LAND.			
	Fallowed.		Unfallowed.	
	Area.	Yield per acre.	Area.	Yield per acre.
Mallee—				
Karkaroo .. ..	Acres. 3,067	Bushels. 2·21	Acres. 17,448	Bushels. ·95
Tatchera .. ..	2,453	3·06	17,323	·24
Total .. ..	5,520	2·59	34,771	·60

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

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

Manure used.

## MANURE USED FOR FERTILIZATION, 1898 TO 1907.

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

During 1907 the quantity of manure imported into Victoria was 1,286,378 cwt., and its value £181,829, while that exported was 485,563 cwt. valued at £108,182.

So widespread is the range of application, and so universal has the use of artificial manures become in Victoria, that it would appear difficult to add anything of interest to the purchaser of these modern aids to agriculture. If there is one point more than another, with which the purchaser of manures is not entirely conversant, it is probably a knowledge of safeguards afforded him by the Artificial Manures Act.

Use of  
artificial  
manures.

After divesting the intentions of the framers of the Act of their legal phraseology, it will be found that every vendor of artificial manures (over the amount of one half hundred-weight) within the State is required each year during the month of October or November to furnish the Agricultural Chemist with samples of all manures, together with the selling price of each, which it is intended to sell during the ensuing twelve months. From these samples the Unit Values or values of 1 per cent. of each class of plant food (Nitrogen, Phosphoric Acid, and Potash) in a ton of manure are calculated. The Unit Values so established operate for twelve months only, and what is called the "real value" of all manures sold during that period is calculated from them. A list showing the "real value" and selling price of all manures will be found in the *Agricultural Journal*. The Act further requires that each bag of manure shall have a label attached showing the net weight and analysis of the contents. A further amendment of the Artificial Manures Act will be introduced to Parliament during the coming session, which will provide for the registration of all trade marks and brands applying to the sale of artificial manures. This is being done so that an alteration may be made in the quality of any fertilizer out on the market during the current year. It may not be generally known that each purchaser of manures is required under the Act to produce these labels if a case for prosecution arise. Purchasers of manures, therefore, may with advantage to themselves observe the precaution of keeping these labels.

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

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

It may be assumed that superphosphates form by far the largest proportion of manures sold, and the position is concisely put by the Agricultural Chemist in the statement "That a superphosphate of 20 per cent. water soluble and  $1\frac{1}{2}$  per cent. insoluble would cost per ton in Victoria, £4 11s. 6d., as against £5 3s. 10 $\frac{1}{2}$ d. in New South Wales and £6 5s. 3d. in New Zealand."

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

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

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

The soils of Victoria, like those of every part of the world, vary widely in their physical and chemical condition. Colour alone is a poor index to productivity, yet to the average mind a darkish colour in soils is generally accepted as indicating a higher potential fertility than lighter coloured soils. There is some logic in this reasoning on account of darkish coloured soils containing generally more organic matter, and, other things being equal, having a better absorptive and retentive power for moisture. Fertility, however, is the harmonious operation of a number of factors, some of which are difficult to control. The absorption, retention, and movement of the soil moisture are entirely dependent on the composition, size, and nature of the soil particles, and in this particular, many farmers do



not sufficiently appreciate the far-reaching effects of cultivation as the most economical manner in which the latent wealth of the soil may be made available to the needs of crops. Porosity, or natural drainage, controls the temperature, especially during the period when growth is most abundant, viz., the Spring, hence it is that many soils whose drainage is imperfect, remain cold at that season and the crops grown upon them are restricted in yield. Capillarity, or the power of the soil to transfer moisture from subsoil to the upper cultivated portion, wherein the roots of crops develop, is exemplified in the case of the two extreme types of sand and clay. In the former case, the surface dries rapidly during summer, although there may be an abundant supply of moisture a few feet down—in the latter case, owing to the facility with which moisture rises from the subsoil to the surface and is lost by evaporation, the soil becomes hard and dry. It is, however, the amounts of the mineral elements of plant food present which are usually regarded as the true measure of fertility. Without food no plant can thrive, but without an adequate supply of moisture no seed can even germinate, much less produce a mature plant. Hence it is that the chemical condition of a soil is subordinate in importance to its physical composition.

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

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

The percentage of lime present forms a distinct feature in soils of the northern plain, but in the south with the exception of certain places where the geological formation is of limestone, this most essential element is lacking. It is not too much to say that many thousands of acres in Southern Victoria stand in more need of drainage and liming than manures. As a corrector of soil acidity, and the formation of a base, wherewith other plant foods may combine and

be held in such a manner as to become gradually available to the needs of plants, lime will be found of great service. For the breaking down of adhesive clay soils, so as to render the passage of implements easier, lime well repays the application of from 5 to 10 cwt. per acre—once every four or five years.

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

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

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

MACHINERY AND IMPLEMENTS ON FARMS AND PASTORAL HOLDINGS IN EACH DISTRICT, 1907 AND 1908.

Farm implements.

Number of —

Districts.	Engines.		Horse-works.	Harvesters.	Threshing Machines.	Winnowing Machines.	Reapers and Binders.	Strippers.	Ploughs.	Harrow.	Cultivators.	Grain Drills.	Chaff-cutters.	Cream Separators.
	Steam.	OIL.												
1907.														
Central ..	440	158	1,652	55	77	306	2,501	37	13,864	10,089	4,355	1,538	4,815	4,080
North-Central ..	262	58	1,043	132	38	290	1,920	43	5,308	3,966	1,147	1,039	2,020	1,986
Western ..	226	244	1,524	455	62	255	2,156	145	7,660	5,624	1,508	1,227	2,587	1,765
Wimmera ..	104	127	2,959	1,876	63	2,397	2,854	3,331	8,310	5,590	3,167	3,415	3,511	1,584
Mallee ..	100	28	831	691	23	1,448	875	2,644	3,378	1,684	1,943	1,318	996	922
Northern ..	524	76	1,982	3,629	136	3,242	4,935	3,318	12,571	8,313	4,655	4,203	2,895	3,994
North-Eastern ..	231	41	807	176	39	337	1,223	386	4,405	3,047	931	569	1,378	1,117
Gippsland ..	450	58	517	35	50	112	614	38	6,646	4,917	1,865	387	1,621	3,989
Total ..	2,337	790	11,315	7,047	488	8,387	17,168	10,442	62,342	43,250	10,501	13,696	19,823	19,446
1908.														
Central ..	457	195	1,655	55	76	291	2,701	99	14,321	10,313	4,720	1,649	5,054	4,152
North-Central ..	236	72	1,073	129	45	346	1,892	66	5,318	3,914	1,244	1,133	2,058	2,225
Western ..	201	312	1,543	459	66	274	2,249	155	7,917	5,727	1,513	1,370	2,701	1,796
Wimmera ..	97	200	2,968	2,041	45	2,279	2,862	3,572	8,205	5,612	3,394	3,500	3,490	1,703
Mallee ..	113	23	854	707	35	1,417	855	2,564	3,556	1,906	2,049	1,342	974	846
Northern ..	655	102	1,970	3,661	105	3,140	4,844	3,173	12,745	8,182	5,018	4,389	2,801	4,284
North-Eastern ..	269	45	789	186	40	351	1,237	386	4,762	3,163	1,003	630	1,413	1,447
Gippsland ..	484	78	555	26	41	113	719	21	7,149	5,279	2,004	535	1,743	4,146
Total ..	2,462	1,027	11,407	7,264	453	8,211	17,409	10,036	63,973	44,096	21,035	14,543	20,234	20,599

NOTE.—The returns collected in March, 1908, showed that there were also in use 324 milking machine plants, 2,705 shearing machines, and 2,974 wool presses.

Compared with 1907, the only decreases shown by the figures for 1908 are in threshing machines, winnowers, and strippers, and this position is the result of the increased use of harvesters, which, especially in the Wimmera, Mallee, and Northern districts have grown in numbers. The Central, Wimmera, Northern, and Gippsland dis-

tracts are mainly responsible for a marked increase in cultivators, and there is also shown a more popular use of grain drills throughout the State. A marked increase occurred also in cream separators, which are much more numerous, each district but one having contributed its share towards the alteration.

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

DAIRYING, 1903 TO 1907.

Year.	Number of Cow-keepers.	Number of Dairy Cows at end of Year.	Butter Made.	Cheese Made.	Number of Cream Separators in use.
			lbs.	lbs.	
1903 ..	41,824	515,179	46,685,727	5,681,515	8,986
1904 ..	42,931	632,493	61,002,841	4,747,851	13,408
1905 ..	46,757	649,100	57,606,821	4,297,350	15,710
1906 ..	47,741	701,309	68,088,168	4,877,593	19,446
1907 ..	49,406	709,279	63,746,354	4,397,909	20,599

The number of cow-keepers, dairy cows, and cream separators continue to show a large annual increase. It is generally regarded that the milk required to make one pound of butter will make about 2 lbs. of cheese, and on this basis the figures in the table show that, after supplies required for milk and cream consumed in their natural state and for milk concentrated, condensed, or preserved, the average production from each dairy cow is equal to 93 lbs. of butter in 1907, as against an average of 100 lbs. in 1904 and 1906, 92 lbs. in 1905, and 97 lbs. in 1903.

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

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

Stock.	1861.		1871.		1881.		1891.		1901.	
	Population 540,322.		Population 731,528.		Population 862,346.		Population 1,140,405.		Population 1,201,341.	
	Number.	Per Head of Population.	Number.	Per Head of Population.	Number.	Per Head of Population.	Number.	Per Head of Population.	Number.	Per Head of Population.
Horses (including foals) ..	76,536	·14	209,025	·29	275,516	·32	436,469	·38	392,237	·33
Cattle—										
Milch Cows	197,332	·37	212,193	·29	329,198	·38	395,192	·35	521,612	·43
Other	525,000	·97	504,534	·77	957,069	1·11	1,387,639	1·22	1,080,772	·90
Sheep	5,780,896	10·70	10,477,976	14·32	10,360,285	12·01	12,692,843	11·13	10,841,790	9·03
Pigs	61,259	·11	180,109	·25	241,936	·28	282,457	·25	350,370	·29

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

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

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

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

The following return shows the live stock in Victoria in the last three years. Tables showing the stock, classified in conjunction with holdings in March, 1906, will be found on page 613; and the sheep, further classified in different sized flocks, in March, 1908, on page 659.

LIVE STOCK IN VICTORIA, 1906 TO 1908.

Live Stock.	1906.	1907.	1908.
Horses (including foals)...	385,513	406,840	424,648
Cattle—			
Dairy Cows ... ..	649,100	701,309	709,279
Other (including calves) ...	1,088,590	1,103,014	1,133,528
Sheep ... ..	11,455,115	12,937,440	14,146,734
Pigs ... ..	273,682	220,452	211,002

It will be seen that there has been an increase over the previous year's figures in all classes except pigs. During the year, horses, which include 50,561 foals reared, show an increase of 17,808, and as there was a net export of 1,742, the number which died is about 31,000, or 7½ per cent. Allowing for accidents and old age, this is a very light mortality, and indicates that the rearing of horses in Victoria is not interrupted by disease of any kind. Pigs continue to decline in numbers, though as they are in good demand at improved values, there is the very best prospect of a most profitable return in the rearing of them.

In the following table will be found a statement of the average and range of prices obtaining in Melbourne during the years 1906 and 1907. The information has been extracted from the Melbourne *Stock and Station Journal*:—

PRICES IN MELBOURNE OF LIVE STOCK, 1906 AND 1907.

Stock.	Prices in 1906.						Prices in 1907.									
	Average.			Range.			Average.			Range.						
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.				
<i>Horses.</i>																
Extra heavy draught	47	12	0	38	10	0 to 55	10	0	48	3	0	40	0	0 to 57	0	0
Medium, draught ..	32	17	0	22	10	0 to 40	0	0	33	15	0	25	0	0 to 46	0	0
Delivery Cart ..	24	3	0	15	0	0 to 35	0	0	27	16	0	16	0	0 to 35	0	0
Order Cart ..	15	0	0	12	0	0 to 18	10	0	18	15	0	14	0	0 to 22	10	0
Indian Remounts ..	30	18	0	25	10	0 to 40	0	0	31	12	0	23	0	0 to 38	0	0
Saddle and Harness	11	13	0	7	10	0 to 16	0	0	11	12	0	6	0	0 to 17	0	0
Carriage, per pair ..	165	16	0	110	0	0 to 231	0	0	162	6	0	110	0	0 to 200	0	0
Ponies ..	22	1	0	15	0	0 to 30	0	0	22	5	0	11	0	0 to 30	0	0
<i>Fat Cattle.</i>																
<i>Bullocks—</i>																
Extra Prime ..	13	5	6	10	10	0 to 16	10	0	14	11	8	11	15	0 to 19	10	0
Prime ..	11	7	10	9	5	0 to 13	15	0	12	8	1	10	0	0 to 16	5	0
Good ..	9	9	0	7	15	0 to 12	0	0	10	8	7	8	0	0 to 13	10	0
Good Light and Handy Weights ..	7	16	6	7	10	0 to 10	5	0	8	11	9	6	10	0 to 11	10	0
Second ..	6	8	2	5	0	0 to 8	15	0	6	16	2	4	7	6 to 9	0	0
<i>Cows—</i>																
Best ..	8	1	3	6	10	0 to 10	0	0	8	14	2	7	0	0 to 12	15	0
Others ..	5	14	0	4	0	0 to 8	0	0	5	12	2	3	0	0 to 9	10	0
<i>Calves—</i>																
Prime Steers and Heifers ..	4	11	4	3	10	0 to 6	0	0	4	11	2	3	0	0 to 8	0	0
Prime Calves ..	2	14	5	2	0	0 to 3	10	0	2	16	2	1	15	0 to 4	0	0
Other Good ..	1	16	2	1	7	0 to 2	10	0	1	18	4	1	0	0 to 2	15	0
<i>Dairy Cattle.</i>																
Best Milkers ..	10	2	5	9	0	0 to 12	15	0	9	13	6	8	10	0 to 15	0	0
Good ..	8	0	7	7	0	0 to 9	15	0	7	15	6	7	0	0 to 9	10	0
Medium ..	6	2	0	5	0	0 to 7	10	0	6	8	4	5	5	0 to 7	15	0
Inferior ..	4	2	0	4	0	0 to 4	15	0	4	15	0	4	0	0 to 5	10	0
Springers, best	8	9	4	7	10	0 to 10	10	0	8	0	3	6	5	0 to 10	10	0
Heifers, best Springers	6	14	4	5	5	0 to 8	2	6	6	5	0	5	5	0 to 8	10	0
Dry Cows ..	4	12	6	3	15	0 to 5	0	0	4	3	0	3	5	0 to 5	0	0
Stores ..	2	16	0	2	15	0 to 4	0	0	3	1	10	2	0	0 to 4	0	0
<i>Fat Sheep.</i>																
<i>Wethers (cross)—</i>																
Extra Prime ..	1	2	8	0	17	0 to 1	8	3	1	3	0	0	16	0 to 1	14	0
Prime ..	0	19	9	0	15	0 to 1	3	6	1	0	4	0	12	6 to 1	8	6
Good ..	0	17	9	0	12	6 to 1	3	0	0	17	2	0	7	0 to 1	3	0
<i>Ewes (cross)—</i>																
Extra Prime ..	0	19	10	0	14	0 to 1	5	4	1	0	2	0	13	0 to 1	10	6
Prime ..	0	17	8	0	13	6 to 1	2	6	0	17	8	0	10	6 to 1	6	6
Good ..	0	14	10	0	12	0 to 1	0	0	0	14	8	0	2	0 to 1	1	0

## PRICES IN MELBOURNE OF LIVE STOCK, 1906 AND 1907—continued.

Stock.	Prices in 1906.						Prices in 1907.											
	Average.			Range.			Average.			Range.								
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.			
<i>Fat Sheep</i> —continued.																		
<i>Wethers</i> (merino)—																		
Prime .. ..	0	18	9	0	14	0 to	1	4	6	0	18	5	0	10	6 to	1	8	0
Good .. ..	0	15	7	0	12	0 to	1	0	0	0	15	1	0	7	0 to	1	3	0
<i>Ewes</i> (merino) ..	0	13	7	0	10	6 to	0	19	9	0	11	1	0	6	6 to	1	4	0
<i>Fat Lambs.</i>																		
Extra Prime ..	0	16	9	0	13	0 to	1	2	3	0	16	11	0	12	0 to	1	2	0
Prime .. ..	0	14	5	0	11	6 to	0	17	0	0	14	7	0	10	0 to	0	19	0
Good .. ..	0	12	3	0	9	0 to	0	15	0	0	11	11	0	7	0 to	0	16	0
Second .. ..	0	10	1	0	7	6 to	0	13	6	0	9	4	0	5	0 to	0	12	6
<i>Pigs.</i>																		
<i>Back Fatters</i> —																		
Extra Heavy ..	3	15	0	2	15	0 to	4	16	0	4	14	7	2	15	0 to	7	17	6
Extra Prime and																		
Weighty .. ..	2	11	4	2	5	0 to	3	2	0	3	6	0	2	0	0 to	4	15	0
<i>Baconers</i> —																		
Extra Prime ..	2	11	2	2	0	0 to	3	6	0	3	1	1	2	4	0 to	4	8	0
Prime .. ..	2	4	8	1	15	0 to	2	10	0	2	13	9	1	17	0 to	3	18	0
<i>Porkers</i> .. ..	1	6	3	0	19	0 to	1	15	0	1	12	8	1	0	0 to	2	9	0
<i>Stores</i> .. ..	0	14	2	0	10	0 to	1	3	0	0	19	0	0	9	0 to	1	15	0
<i>Slips</i> .. ..																		
<i>Suckers</i> .. ..	0	6	7	0	4	0 to	0	13	0	0	8	7	0	2	0 to	0	18	0

Compared with 1906, the average prices in 1907 point generally to improved values. The range of prices in both years denotes a great unevenness in the quality of all classes of stock.

Stock  
slaughtered.

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

## STOCK SLAUGHTERED: 1900 TO 1907.

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

The purposes for which the carcases of the slaughtered animals were used were as follow :—

PURPOSES FOR WHICH STOCK SLAUGHTERED: 1900 TO 1907.

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

The most noticeable figures in these tables are those relating to the sheep—a large proportion of which were lambs—slaughtered for freezing. They point emphatically to the growing importance of the frozen-meat trade in Victoria. The increase shown in 1906 in the number of pigs slaughtered was not quite maintained in 1907.

The following is a return of the imports and exports of animals under principal heads during 1907. The export of horses is largely to India; but the other trade in live stock is principally with Australian States :—

Gain or loss in live stock.

LIVE STOCK IMPORTED AND EXPORTED, 1907.

	Number of—			
	Horses.	Cattle.	Sheep.	Pigs.
Imported ... ..	6,908	88,429	2,141,467	5,654
Exported ... ..	8,650	64,858	824,821	72
Net Imports ... ..	...	23,571	1,316,646	5,582
Net Exports ... ..	1,742	...	...	...

The information in this table combined with that of stock held at end of year and stock slaughtered during the year shows that there has been no serious mortality among live stock in 1907, and that any losses are probably due to unavoidable causes—accidents and age. By adding the net increase in stock held during 1907, the number slaughtered, and the net exports, it is evident that after replacing losses by mortality, those reared give a net production for the year of about 20,000 horses, 305,000 cattle, 3,120,000 sheep, and 243,000 pigs.

Wool pro-  
duction.

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

VICTORIAN WOOL CLIP AND ESTIMATED TOTAL PRODUCTION,  
SEASON 1907-8.

Districts.	Wool Clip, 1907-8.		
	Sheep.	Lambs.	Total.
	lbs.	lbs.	lbs.
Central ... ..	5,601,514	507,813	6,109,327
North Central ... ..	4,994,013	557,345	5,551,358
Western ... ..	27,617,102	2,340,842	29,957,944
Wimmera ... ..	13,159,565	1,136,617	14,296,182
Mallee ... ..	2,804,583	229,251	3,033,834
Northern ... ..	10,896,026	1,073,953	11,969,979
North-Eastern ... ..	3,575,894	328,979	3,904,873
Gippsland ... ..	3,894,082	402,394	4,296,476
Total Clip* { 1907-8	72,542,779	6,577,194	79,119,973
{ 1906-7	67,943,784	6,739,416	74,683,200
{ 1905-6	58,919,314	5,258,557	64,177,871
		1906-7.	1907-8.
		lbs.	lbs.
Wool clip ... ..		74,683,200	79,119,973
Estimated quantity of wool stripped from Victorian skins ... ..		4,288,186	5,109,096
Estimated quantity of wool on Victorian skins exported ... ..		9,462,910	8,853,272
Total production ... ..		88,434,296	93,082,341
Total value ... ..		£3,869,000	£3,878,431

\* The average weight of the fleece in 1907-8 is—sheep, 6·38 lbs ; lambs, 2·22 lbs. ; sheep and lambs combined, 5·52 lbs.

The quantity of wool produced last season, although there was a reduced clip from lambs, as compared with the previous season, was the greatest in the history of the State, and was worth £3,878,431, or almost £565,000 more than the value of the clip in 1905-6.

Wool im-  
ported, ex-  
ported, and  
used  
locally.

The following table shows the wool imported, exported, and used in the factories of the State, and the value of the same. With an allowance for weight lost in washing and scouring and for the wool



on skins exported, the figures will give approximately the quantity of wool produced in the last nine calendar years:—

QUANTITY AND VALUE OF WOOL IMPORTED, EXPORTED, AND USED LOCALLY—1899 TO 1907.

Year	Wool Imported.		Wool Exported.		Wool Used in Manufactures in the State.			Wool Production—Greasy and Scoured (Approximately).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Rate per lb.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	s. d.	£	lbs.	£
1899	63,067,135	2,351,059	121,877,604	5,701,410	2,867,884	1 0	143,394	61,678,353	3,493,745
1900	62,527,987	1,927,677	102,205,965	4,217,018	3,045,292	0 6	76,132	42,723,270	2,365,163
1901	61,796,450	1,840,066	131,623,062	4,350,285	3,408,526	0 6	85,213	73,235,138	2,595,432
1902	38,008,765	1,141,715	109,516,094	3,473,372	3,473,835	0 8	115,794	65,981,164	2,447,451
1903	36,726,396	1,381,647	84,560,603	3,186,054	3,772,390	0 9	141,464	51,606,597	1,945,871
1904	51,449,037	2,076,958	123,208,133	5,452,973	4,027,080	0 10	167,795	75,786,176	3,543,810
1905	67,935,833	2,911,556	125,181,191	5,420,259	4,433,041	0 10½	196,570	61,738,399	2,705,273
1906	82,989,583	3,578,056	141,696,567	6,154,382	4,765,687	0 10½	208,498	63,472,671	2,784,824
1907	70,940,674	3,111,249	167,506,728	7,372,148	5,600,873	0 9	210,033	102,166,321	4,470,932

The quantity and value of wool produced in 1906 in the various Australian States and New Zealand, estimated on the import and export returns, were:—

	Quantity. (Greasy, Washed, and Scoured.)		Value.
	Quantity.	Value.	
	lbs.	£	
Victoria .. .. .	63,472,671	2 784,824	
New South Wales .. .. .	287,654,821	14,104,336	
Queensland .. .. .	66,937,111	3 388,883	
South Australia .. .. .	41,771,682	1,561,664	
Western Australia .. .. .	15,041,604	603,080	
Tasmania .. .. .	11,334,410	511,129	
New Zealand .. .. .	158 082,078	6 927,919	

The 1906 figures have been inserted, as the information for some of the other States for 1907 is not available.

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

PRICES OF WOOL, 1905-6 TO 1907-8.

Class of Wool.	Average Value per lb. in—		
	1905-6.	1906-7.	1907-8.
<b>GREASY MERINO.</b>			
Extra Super (Western District) ..	up to 17½d.	up to 18½d.	17½d. to 20½d.
Super .. .. .	13d. to 15d.	15½d. to 16½d.	16d. to 17d.
Good .. .. .	11d. to 12½d.	14d. to 14½d.	13d. to 15½d.
Average .. .. .	10d. to 10½d.	10½d. to 11½d.	11d. to 14d.
Wasty and Inferior .. .. .	7d. to 8½d.	7½d. to 8½d.	6d. to 9½d.
Extra Super Lambs .. .. .	up to 20½d.	up to 20½d.	20d. to 21d.
Super Lambs .. .. .	11½d. to 14½d.	12½d. to 15½d.	14d. to 16d.
Good Lambs .. .. .	10d. to 11d.	10½d. to 11½d.	10½d. to 12½d.
Average Lambs .. .. .	8½d. to 9½d.	8d. to 9½d.	7d. to 9d.
Inferior Lambs .. .. .	5½d. to 6½d.	5½d. to 7½d.	4½d. to 6½d.

## PRICES OF WOOL, 1905-6 TO 1907-8—continued.

Class of Wool.	Average Value per lb. in—		
	1905-6.	1906-7.	1907-8.
<b>GREASY CROSSBRED.</b>			
Extra Super Comebacks ... ..	up to 16½d.	up to 17½d.	17½d. to 18½d.
Super Comebacks ... ..	13d. to 15d.	15½d. to 16d.	up to 16½d.
Fine Crossbred ... ..	11d. to 13d.	15d. to 15d.	8½d. to 13½d.
Medium Crossbred ... ..	9½d. to 11d.	12½d. to 13½d.	6½d. to 11d.
Coarse Crossbred and Lincoln ... ..	9d. to 9½d.	9½d. to 11½d.	5d. to 9½d.
Super Fine Crossbred Lambs ... ..	11½d. to 14½d.	13d. to 14½d.	13d. to 14½d.
Good Crossbred Lambs ... ..	10d. to 12d.	11½d. to 12½d.	9½d. to 12d.
Coarse and Lincoln Lambs ... ..	8½d. to 9½d.	9½d. to 10½d.	6d. to 9d.
<b>SCOURED.</b>			
Extra Super Fleece ... ..	up to 24½d.	up to 24½d.	21½d. to 25d.
Super Fleece ... ..	21½d. to 23d.	22d. to 24d.	19d. to 22d.
Good Fleece ... ..	20d. to 21d.	20½d. to 21½d.	17½d. to 20d.
Average Fleece ... ..	19d. to 20d.	19½d. to 20½d.	16d. to 19d.
<b>RECORD PRICES FOR THE SEASON.</b>			
Greasy Merino Fleece ... ..	17½d.	18½d.	20½d.
" Comeback Fleece ... ..	16½d.	17½d.	18½d.
" Merino Lambs ... ..	20½d.	20½d.	21d.
" Comeback Lambs ... ..	14½d.	14½d.	14½d.
Scoured Fleece ... ..	24½d.	24½d.	25d.

Flocks of sheep.

Returns tabulated for the second time give full information as to the flocks of sheep in Victoria. The number of flocks and of sheep in March, 1908, in the different districts were as follow:—

## NUMBER OF FLOCKS AND SHEEP IN DISTRICTS, 1908.

District.	Number of—		Average Number of Sheep in a Flock.	Percentage of—	
	Flocks.	Sheep.		Flocks.	Sheep.
Central ..	2,325	1,224,639	527	10.67	8.76
North-Central ..	1,803	1,056,890	586	8.28	7.56
Western ..	4,693	5,071,479	1,081	21.54	36.28
Wimmera ..	3,707	2,366,378	638	17.02	16.93
Mallee ..	857	479,918	560	3.93	3.43
Northern ..	4,307	1,921,028	446	19.77	13.75
North-Eastern ..	1,780	832,684	468	8.17	5.96
Gippsland ..	2,312	1,024,918	443	10.62	7.33
Total ..	21,784	13,977,964	642	100.00	100.00

The figures do not include 168,770 sheep travelling on roads, or in cities and towns. The average number of sheep to a flock in Victoria is exceeded only in one of its divisions—the Western District—where some very large-sized flocks are responsible for giving

to it over 36 per cent. of the total sheep in the State, though only possessing  $21\frac{1}{2}$  per cent. of the total flocks. In the Northern, North-Eastern, and Gippsland districts, which supply  $38\frac{1}{2}$  per cent. of the flocks, but only 27 per cent. of the sheep, there is a much better distribution, and also the evidence that raising lambs and wool is more combined with cultivation. Since 1906 there has been an increase of 5,717 flocks, and of 2,637,842 sheep, each district contributing to both increases; but, considering the increase in sheep, the growing popularity to possess them is more strongly indicated in the fact that the average number in a flock has been reduced from 706 to 642 in the same time, though the Wimmera, North-Eastern, and Gippsland districts did not assist in the reduction. A classification of sheep according to sizes of flocks in each county was also compiled. Excluding those travelling and in cities and towns, the following divisions are made for the whole State:—

## SHEEP ACCORDING TO SIZES OF FLOCKS, 1908.

Size of Flocks.	Number of—		Percentage of—	
	Flocks.	Sheep.	Flocks.	Sheep.
Under 500 .. ..	15,797	2,415,541	72.52	17.28
500 to 1,000 .. ..	3,414	2,393,866	15.67	17.13
1,001 „ 2,000 .. ..	1,499	2,130,673	6.84	15.24
2,001 „ 3,000 .. ..	411	1,007,456	1.89	7.21
3,001 „ 5,000 .. ..	288	1,139,661	1.32	8.15
5,001 „ 7,000 .. ..	114	679,493	.52	4.86
7,001 „ 10,000 .. ..	100	864,734	.46	6.19
10,001 „ 15,000 .. ..	79	989,913	.36	7.08
15,001 „ 20,000 .. ..	39	684,469	.18	4.90
Over 20,000 .. ..	52	1,672,158	.24	11.96
Total .. ..	21,784	13,977,964	100.00	100.00

Flocks of over 15,000, though not very numerous, being only about one in every 240, accounted for almost as many sheep as those in the most general size—that under 500—which formed  $72\frac{1}{2}$  per cent. of the total flocks. Of the largest flocks, 39 containing 1,233,268 sheep belong to the Western District counties, and 4, containing 176,059 to the Central District counties. Flocks of the second largest size were also chiefly confined to the Western District, where 32 of them, representing 560,847 sheep, were found—a proportion in each of over four-fifths of the respective totals of this size in the State. The Western District has, altogether, over 36 per cent. of the total sheep in Victoria, but less than 16 per cent. of their number in this district is in flocks up to 1,000. In every other district the keeping of sheep is combined with agriculture to a much greater extent, as of the total in each district the proportion per

cent. in flocks up to 1,000 was, in the Northern, 54; Mallee, 51; North-Eastern, 46; Wimmera, 46; Gippsland, 41; North-Central, 39; and in the Central, 36. Since 1906 the flocks up to 1,000 increased by 5,157, or 37 per cent., and the sheep in them by 1,428,712, or 42 per cent.; while in the same time the flocks over 1,000 increased by 560, or 28 per cent., and the sheep in them by 1,209,130, or only 15 per cent.

An attempt to estimate the numbers of sheep of different breeds in Victoria is made for the first time, and from reliable information received it is estimated that in March, 1908, they were as follow:—

SHEEP ACCORDING TO BREED, MARCH, 1908.

Breed of Sheep.				Number.
Merino	...	...	...	5,092,824
Comeback	...	...	...	3,253,749
Crossbred, coarse	...	...	...	1,839,075
"    Shropshire and Southdown	...	...	...	1,697,608
Lincoln	...	...	...	990,271
Shropshire	...	...	...	565,869
Other	...	...	...	707,338
Total				14,146,734

Breed of sheep.

Lamb raising.

The export trade in frozen lamb began in 1892, and, in the few years that have elapsed, it has so enormously developed that it has come now to be recognised as one of the permanently established industries of the State. In 1892, 11,794 centals of beef and mutton were exported, and, in 1894, 111,715 centals of mutton, or some 250,000 carcasses, were shipped. In two years the trade had increased tenfold, which augured well for its future prosperity. For three or four years after the inception of the trade mutton was the chief export, but in 1896 the export of lambs commenced to be seriously viewed by graziers. The trade in lambs has since grown to such an extent that even the most sanguine prophecies concerning it seem likely to fall short of realization. In 1907 there were killed for export 702,767 carcasses of lamb, and 175,447 carcasses of mutton. During the year the actual numbers shipped were 646,085 carcasses of lamb, and 144,996 carcasses of mutton.

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

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

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

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

If special fodder crops were generally grown and methods of husbandry practised on the same lines as in New Zealand, it should be quite possible for Victoria to soon possess 25,000,000 sheep, whereas at present we have about 14,147,000. The carrying capacity of a farm is increased by growing special fodder crops, yet, at the present time, although unlimited markets exist abroad, graziers do not make sufficient special provision for feeding their stock. They, for the most part, rely entirely on the natural pastures. If, however, systematic efforts were made to extensively grow fodder crops, graziers would not only materially augment their own incomes, but would increase the resources and prosperity of the State.

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

The possibilities, then, for farmers engaging in the trade of raising lambs in Victoria for export are very great, and no apprehension need be felt that the outlet for lambs is likely to become contracted. The significant feature to keep before the mind is that the number of sheep all the world over is declining, whilst the population is rapidly increasing. Europe will, therefore, have to look to Australia principally for its mutton supply.

Raising lambs, although not an arduous vocation, is, however, a calling in which one would have to possess some knowledge of farm

practice and the management of flocks, as well as having an acquaintance with diseases incidental to sheep, before he could hope to successfully embark in the enterprise.

Live stock  
in Australia  
and New  
Zealand.

The total number and the number per square mile of horses, cattle, sheep, and pigs in the various Australian States and New Zealand, according to the returns for the end of 1907, are as follow :—

## LIVE STOCK IN AUSTRALASIA, 1907.

State.	Horses.	Cattle.		Sheep.	Pigs.
		Milch Cows.	Other.		
Total Number.					
Victoria .. .. .	424,648	709,279	1,133,528	14,146,734	211,002
New South Wales	578,326	753,116	1,993,277	44,531,839	216,145
Queensland	488,486	3,892,232		16,738,047	133,246
South Australia* ..	208,639	100,743	233,928	6,829,637	90,741
Western Australia..	113,117	33,301	725,745	3,694,852	53,122
Tasmania	40,392	54,245	161,278	1,744,800	46,704
New Zealand	352,832	541,363	1,274,936	20,983,772	241,128
Number per Square Mile.					
Victoria .. .. .	4.83	8.07	12.90	160.97	2.40
New South Wales	1.86	2.42	6.42	143.33	.70
Queensland	.73	5.82		25.04	.20
South Australia* ..	.55	.26	.62	17.97	.24
Western Australia..	.12	.03	.74	3.79	.05
Tasmania	1.54	2.07	6.15	66.56	1.78
New Zealand	3.37	5.17	12.17	200.32	2.30

\* Exclusive of Northern Territory.

The most striking feature in the figures presented in this table is the all-round decrease in the number of pigs in the last two years. The reduction, since 1905, is as much as 36 per cent. in Tasmania, 30 per cent. in New South Wales, 29 per cent. in Western Australia, 23 per cent. in Victoria and South Australia, 19 per cent. in Queensland, but only 3 per cent. in New Zealand. There is no apparent reason for these reductions, as the rearing of pigs is a most profitable adjunct to farming or dairying. Other classes of stock show an increase in the same interval in every case except two, viz.:—a reduction of 1,710 milch cows in Western Australia, and one of 18,280 other cattle in New Zealand. The stock, in proportion to area, is evidently most numerous in New Zealand, which possesses horses, cattle, and sheep equal to about 338 sheep to the square mile; Victoria comes next with 335; then follow New South Wales, 215; Tasmania, 131; Queensland, 67; South Australia, 29; and Western Australia, with the lowest average, having stock equivalent to less than 10 sheep to the square mile.

The following is a statement of the number of sheep in the world in 1906, according to the *Year-Book*, United States Department of Agriculture, except in the case of Australasia and of South America:—

World's supply of sheep.

NUMBER OF SHEEP IN THE WORLD, 1906.

	No. of Sheep.
United Kingdom ... ..	29,210,000
Other European countries ... ..	158,875,000
<b>Total Europe ... ..</b>	<b>188,085,000</b>
Australia and New Zealand ... ..	103,788,000
Asia ... ..	91,325,000
Africa ... ..	33,770,000
North America... ..	60,200,000
South America ... ..	100,500,000
<b>Total ... ..</b>	<b>577,668,000</b>

The importance of the preservation of forage in a green state is so great that public attention to the question is highly desirable. Not only will stock eat anything of a vegetable nature that will make useful ensilage, but ensilage-fed animals at all times present an appearance of health and vigour. It cannot be affirmed that the uncertainty of the result of the system need militate against the trial. The silo is no longer in an experimental stage. Ancient nations are known to have practised the preservation of forage and fruits in a green state in large subterranean vaults; and during the last twenty years experiments on a large scale have been carried on, particularly in America, where the almost universal testimony of farmers is to its economy in feeding cattle, and the consequent increased stock-carrying capacity of the land. As a result of these experiments, many farmers have introduced silos upon their holdings, but it is a matter of surprise that so little has been done in Australia. Dr. Cherry, in a paper on "The Modern Silo," points out particularly that "animals which chew the cud differ from all other classes in requiring their food comparatively juicy and bulky. Their digestive apparatus is formed to suit this kind of food. Hence the cow or bullock cannot thrive on exclusively dry food so well as a horse." In Victoria, where every season the rapid drying up of the grass under the excessive heat of the summer sun causes large areas of pasture land to be parched and grassless, and green food usually disappears from December till autumn, an artificial method of preserving fodder should be of the utmost possible benefit, and the advantage of the luxuriance of trefoil, grasses, and self-sown crops in the spring would not then be lost. The juicy state in which the silo preserves ensilage fulfils another of the requirements of ruminant animals, that their food should be presented in a succulent condition. A supply of such nutriment in the winter, judiciously mixed with drier protein-bearing food, or with grain, bran, oil cake, &c., means to the farmer and stock-raiser an economizing of green stuffs when their luxuriance would otherwise tend to wastefulness, a steady and assured food supply for the summer, and a consequent augmentation, not only of the quantity, but also of the quality, of the milk yielded. Even in districts

Ensilage.

where fresh green fodder is available throughout the greater part of the year, the advantage of being able to secure the crop when it is in its best condition seems so evident, that the silo should soon become an indispensable adjunct on every farm.

Notwithstanding the importance of this means of preserving food for stock, the returns for Victoria show that in the last three seasons there has been a reduction in the number of farmers who made ensilage and in the material used, compared with 1904-5. The following figures show how little has been done in this direction up to the present:—

#### ENSILAGE RETURNS, 1900-1 TO 1907-8.

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

Bee-keeping.

The returns for 1906-7 show that there were 4,974 bee-keepers owning 29,157 frame and 18,848 box hives, producing 2,643,808 and 321,491 lbs. of honey respectively, and 46,780 lbs. of beeswax. In 1907-8, there were 4,745 bee-keepers owning 27,505 frame and 15,707 box hives, producing 975,847 and 163,145 lbs. of honey respectively, and 24,521 lbs. of beeswax.

The number of bee hives increased from 21,412 in 1900-1 to 49,120 in 1904-5, 48,005 in 1906-7, and 43,212 in 1907-8. In 1891-2, the quantity of honey returned was 1,128,283 lbs.; after a decline in the next two years, the quantity gathered in 1894-5 was 1,323,982 lbs.; a further falling off is recorded from that year to 195,163 lbs. in 1897-8. A recovery has since been made, and the returns for the last six years indicate that the industry is making fair progress. The production of honey in 1907-8 was the least of the last four years.

#### BEE-KEEPING, 1900-1 TO 1907-8.

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



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

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

Poultry production.

Taking the above figures as a basis, it is estimated that the gross value of poultry and egg production for the year 1907 was £1,525,000.

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

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

POULTRY: RETURN FOR THREE CENSUS YEARS.

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

It thus appears that there was a falling off in the number of poultry-owners between 1891 and 1901, and although fowls show a slight increase, there was a diminution in the other kinds of poultry. The United Kingdom in the five years ended December, 1907, imported annually £6,878,852 worth of eggs, over 70 per cent. of which was from Russia, Denmark, and Germany. Also in the last four years, an annual average of nearly £950,000 worth of poultry, 98 per cent. of which was from foreign countries.

Active operations for the destruction of rabbits, &c., on Crown lands were first undertaken by the Government in 1880, and from that date to the 30th June, 1907, sums amounting to £481,310 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	1902-3... ..	16,489
1889-90 to 1898-9 ..	208,638	1903-4... ..	15,759
1899-1900 .. ..	14,801	1904-5... ..	16,603
1900-1... ..	15,817	1905-6... ..	16,477
1901-2... ..	17,250	1906-7... ..	16,513

The whole of the State, with the exception of portions of Gippsland, is more or less troubled with rabbits. In addition to the expenditure of £481,310, referred to above, a loan of £150,000 was allocated to shires in 1890 for the purchase of wire netting to advance to land-holders, the whole of which has been repaid, and in 1896 a loan of £50,000, bearing interest at 3 per cent., was advanced, and this, with the exception of £181, has also been repaid. A complete system, administered by an officer called the Chief Inspector under the Vermin Destruction Act, exists for effectually keeping the rabbits under control.

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

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

RABBITS, HARES, AND WILD-FOWL SOLD AT THE MELBOURNE FISH MARKET, 1902 TO 1907.

Year.	Rabbits.	Hares.	Wild Fowl.
	pairs.	brace.	brace.
1902 ...	471,964	2,401	32,756
1903 ...	316,462	1,024	13,130
1904 ...	402,944	1,466	49,556
1905 ...	364,066	903	47,348
1906 ...	275,166	535	28,610
1907 ...	298,024	260	58,210

Frozen  
rabbits,  
&c., ex-  
ported.

Large quantities of frozen rabbits and hares were exported to the United Kingdom and other oversea countries during recent years, the numbers and values for the last six years being as follow:—

FROZEN RABBITS AND HARES EXPORTED OVERSEA: 1902 TO 1907.

Year.	Quantity.	Value.
	pairs.	£
1902 ...	3,213,376	158,043
1903 ...	3,447,077	165,580
1904 ...	4,045,036	125,038
1905 ...	5,093,952	219,665
1906 ...	4,622,307	221,064
1907 ...	3,251,231	154,789

In the following tables some information is given regarding the fishing industry. The first shows the various fishing districts round the coast and on the Murray and Goulburn Rivers, the number of men and boats engaged, and the value of the general fishing plant in use. The second shows the approximate weight and value of fish caught in the various waters, and sold in the Metropolitan market during the years 1906 and 1907; and the third shows the quantity and value of Victorian fish sold in the Melbourne, Ballarat, and other markets during 1907:—

The fishing industry.

FISHERIES—MEN AND BOATS EMPLOYED, 1907.

District.	1907.			
	Number of Men.	Boats.		Value of Nets and other Plant.
		Number.	Value.	
Anderson's Inlet .. .. .	9	6	£ 97	£ 192
Barwon Heads and Ocean Grove .. .. .	16	9	388	16
Brighton .. .. .	6	5	84	71
Corner Inlet, Welshpool, and Toora .. .. .	70	38	4,394	739
Dromana .. .. .	28	19	819	188
Echuca .. .. .	7	9	72	45
Frankston .. .. .	10	8	114	64
Geelong .. .. .	72	29	1,189	848
Gippsland Lakes .. .. .	296	201	4,487	2,740
Kerang .. .. .	7	5	12	20
Lorne .. .. .	9	4	65	55
Mallacoota .. .. .	5	4	55	34
Mentone .. .. .	11	8	67	81
Mordialloc .. .. .	13	15	338	95
Mornington .. .. .	18	13	488	311
Nathalia .. .. .	25	15	38	15
Portarlington and St. Leonards .. .. .	72	39	1,230	420
Portland .. .. .	46	30	1,390	554
Port Albert .. .. .	62	34	1,174	2,748
Port Fairy .. .. .	51	29	1,758	357
Port Melbourne .. .. .	20	11	390	277
Queenscliff .. .. .	105	55	4,556	448
Sandringham .. .. .	17	24	589	72
Sorrento, Portsea, and Rye .. .. .	24	25	604	314
St. Kilda .. .. .	6	3	49	75
Swan Hill .. .. .	1	1	3	5
Warrnambool .. .. .	12	7	129	93
Western Port, Cowes, Hastings, Flinders, San Remo, and Tooradin .. .. .	117	63	1,660	1,063
Williamstown .. .. .	18	12	316	171
Total .. .. .	1,153	726	26,555	12,111

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

FISH SOLD IN THE MELBOURNE FISH MARKET, 1906 AND 1907.

	1906.		1907.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Fresh Fish (Victorian) lbs.	10,271,260	55,640	10,365,428	56,146
Crayfish (Victorian) .. doz.	20,517	5,129	22,751	5,688
Imported Fish (fresh or frozen) lbs.	1,008,485	16,085	1,466,640	16,805
Oysters .. .. cwt.	18,000	8,640	20,165	10,385
Total .. ..	..	85,494	..	89,024

In addition to the above, 1,581 cwt. of smoked fish, and 186 baskets of prawns were sold in this market in 1907.

The quantity and value of fish caught in Victorian waters, and sold in the Melbourne and the Ballarat markets or elsewhere in 1907 were as follow:—

VICTORIAN FISH SOLD IN 1907.

Markets.	Quantity.		Value.	
	Fish.	Crayfish.	Fish.	Crayfish.
	lbs.	doz.	£	£
Melbourne ... ..	10,365,428	22,751	56,146	5,688
Ballarat ... ..	562,240	1,552	2,996	344
Other ... ..	239,511	586	1,300	147
Total ... ..	11,167,179	24,889	60,442	6,179

Fish  
imported.

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

FISH IMPORTED, 1906 AND 1907.

	1906.		1907.	
	Quantity.	Value.	Quantity.	Value.
Fish—		£		£
Fresh .. .. lbs.	557,568	5,520	584,971	6,789
Preserved by cold process .. ..	} 678,380	8,550	833,972	13,504
Smoked .. ..			75,861	2,043
Fresh Oysters .. .. cwt.	25,824	12,428	27,009	13,980
Potted, &c. .. ..	..	2,532	..	2,065
Preserved, in tins, &c. lbs.	4,837,563	108,338	4,800,831	107,345
N.E.I. .. .. cwt.	7,274	12,911	6,043	11,085
Total .. ..	..	150,279	..	157,211

Of the most important item in this table—fish preserved in tins and other air-tight vessels—86 per cent. came from the United Kingdom, the United States, and Canada.

In Victoria the natural conditions are most suitable for agricultural and pastoral pursuits, and there is room for considerable expansion in these avenues of production. There is little need to fear over-production, as the United Kingdom offers an almost unlimited market for the consumption of many articles which could be supplied from here and give very profitable employment. Some idea of the enormous importations by the United Kingdom from foreign countries of certain articles that may be profitably produced here is given in the table which follows. The figures which are taken from the United Kingdom Board of Trade returns represent the average annual imports for the five years 1902 to 1906:—

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

AVERAGE ANNUAL IMPORTS INTO THE UNITED KINGDOM,  
1902 TO 1906.

Articles.	Annual Value of Imports into United Kingdom from—				
	Victoria.	Other States of Australia.	Other British Possessions.	Foreign Countries.	All Countries.
	£	£	£	£	£
Butter .. ..	941,321	771,635	2,472,530	17,312,389	21,497,875
Cheese .. ..	..	..	4,978,094	1,673,493	6,651,587
Eggs .. ..	..	..	157,774	6,555,769	6,713,543
Meats—Bacon and Hams .. ..	..	..	2,691,783	14,110,949	16,802,732
Meats—All other ..	541,649	887,560	4,171,590	16,600,678	22,201,477
Poultry and Game ..	..	3,166	29,041	1,060,502	1,092,709
Fruit—Fresh and Preserved ..	23,606	243,011	1,247,239	9,215,552	10,729,403
Flax and Hemp .. ..	..	..	961,711	6,373,415	7,335,126
Maize .. ..	..	..	702,006	10,784,652	11,486,658
Wheat .. ..	1,044,440	1,329,066	9,055,721	20,419,283	31,848,510
Wheatmeal and Flour	120,803	109,717	945,335	6,578,130	7,753,985
Wine .. ..	54,625	62,385	19,185	4,013,525	4,149,720
Leather .. ..	133,094	268,096	2,515,675	5,473,448	8,390,313
Skins, Furs, and Hides .. ..	297,513	637,785	2,877,271	4,998,422	8,810,991
Tallow and Stearine ..	107,780	559,697	550,351	1,204,424	2,422,252
Wool .. ..	2,788,760	7,273,069	8,603,913	3,710,411	22,376,153

In the sixteen articles specified, the requirements of the United Kingdom are to the extent of 68 per cent. met by foreign countries. Only 3 per cent. is supplied by Victoria, where bountiful soils and a salubrious climate give an opportunity of doing much more,

especially in the further supply of butter, meats, fruit, and bread-stuffs. That it requires only increased population to enormously swell the output of primary products is apparent if a comparison be made with Great Britain, which is of equal size and less favoured generally by climate. The figures relating to agriculture and live stock for 1907 in Victoria and Great Britain are for comparative purposes placed side by side in the table which follows:—

AGRICULTURE AND LIVE STOCK IN VICTORIA AND GREAT BRITAIN,  
1907.

	Victoria.	Great Britain.
Area .. .. . acres	56,245,760	56,788,366
Wheat produced .. .. bushels	12,100,780	55,206,192
Oats .. .. . "	5,201,408	134,392,120
Barley .. .. . "	1,059,295	60,370,184
Potatoes .. .. . tons	135,110	2,977,485
Horses .. .. . No.	424,648	1,556,369
Cattle .. .. . "	1,842,807	6,912,067
Sheep .. .. . "	14,146,734	26,115,455
Pigs .. .. . "	211,002	2,636,766

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

MINING.

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

Expenditure  
in aid of  
mining  
industry.

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

EXPENDITURE ON MINING: 1902-3 TO 1906-7.

	1902-3.	1903-4.	1904-5.	1905-6.	1906-7.
	£	£	£	£	£
Mining Department ...	35,815	23,702	24,526	} 25,431	26,200
Mining boards ...	3,500	3,500	2,916		
Victorian coal—Allowance to Railway Department on carriage of ...	5,568	5,099	8,847	10,807	11,302

EXPENDITURE ON MINING: 1902-3 TO 1906-7—*continued.*

	1902-3	1903-4.	1904-5.	1905-6.	1906-7.
	£	£	£	£	£
Diamond drills for prospecting ...	2,798	4,993	10,823	11,231	13,124
Testing plants ...		2,358	2,664	2,463	2,548
Geological and underground surveys of mines	5,245	5,450	5,616	5,469	5,631
Miscellaneous ...	1,035	873	963	777	916
Total ...	53,961	45,975	56,355	56,178	59,721

The expenditure under the heading Mining Department for 1902-3 includes also that of the Water Supply Department. In 1904, however, the departments were separated, and the figures for the latter four years in the above statement refer solely to the cost of the Mines Department. Yearly grants are also made to Schools of Mines, particulars of which will be found on page 282 of this work.

In addition to amounts annually voted from the consolidated revenue, £85,100 have been appropriated from funds provided by the Surplus Revenue Acts, of which sum £32,660 have been expended during the last three financial years, consisting for the main part of advances to companies and miners. Also, since 1897, £271,022 have been apportioned and expended from loan receipts towards mining enterprise, particulars of which are shown in the following statement:—

## LOAN MONEY EXPENDED ON MINING ENTERPRISE.

	£
Advances to companies for development of mining ...	125,669
Construction of roads and tracks for mining ...	57,579
Plant for testing metalliferous material ...	12,357
Construction of races and dams for water for sluicing for gold ...	8,260
Advances to miners for prospecting ...	27,839
Purchase of cyanide process patent rights ...	20,000
Equipping Schools of Mines with mining appliances ...	9,975
Miscellaneous ...	9,343
Total ...	271,022

Of the loans advanced £23,149 have been repaid, and £7,865 recovered by taking possession of and selling the plant, &c., of several companies, to whom £18,610 had been advanced, and who were unable to continue operations.

Persons engaged in mining, 1901.

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

RETURN OF PERSONS ENGAGED IN MINING PURSUITS, 1901.

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

Total Males .. .. . 31,428

Total Females .. .. . 19

GRAND TOTAL .. .. . 31,447



The average number of men employed in mining is estimated Goldminers. annually by the Mining Department, and the figures for the eight years ended with 1907 are subjoined:—

NUMBER OF MEN EMPLOYED IN GOLD MINING, 1900 TO 1907.

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

The number of men employed in each mining district in 1907 was:—Ararat and Stawell, 1,139; Ballarat, 4,716; Bendigo, 4,772; Beechworth, 4,327; Castlemaine, 3,643; Gippsland, 1,574; and Maryborough, 3,120.

The following table shows the quantity and value of the metals Mineral and minerals produced in Victoria up to the end of 1907:— produce.

TOTAL MINERAL PRODUCTION TO 31ST DECEMBER, 1907.

Metals and Minerals.	Recorded prior to 1907.		Recorded during 1907.		Total Recorded to end of 1907.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Gold .. ..	Fine. 65,097,646	£ 276,516,978	Fine. 695,576	£ 2,954,617	Fine. 65,793,222	£ 279,471,595
Silver .. ..	27,184	7,446	2,221	305	29,405	7,751
	1,230,929	191,049	29,460	4,050	1,260,389*	195,099
Coal, black ..	2,674,766	1,468,552	138,584	79,681	2,813,350	1,548,233
" brown ..	48,416	19,582	50	50	48,466	19,632
Lignite .. ..	12,923	3,086	..	..	12,923	3,086
Ore—copper ..	17,470	206,895	38	2,356	17,508	209,251
" tin .. ..	15,322	746,156	103	10,531	15,425	756,687
" antimony ..	23,177	180,811	4,500	13,290	27,677	194,101
" silverlead ..	793	5,760	..	..	793	5,760
" iron .. ..	5,434	12,540	..	..	5,434	12,540
Diamonds ..	..	108	..	..	..	108
Sapphires, &c. ..	..	630	..	..	..	630
Gypsum .. ..	12,898	7,907	1,036	259	13,934	7,866
Magnesite ..	6	12	..	..	6	12
Kaolin .. ..	2,955	8,400	593	772	3,548	9,172
Diatomaceous earth	1,888	8,422	155	930	2,043	9,352
Bluestone, Freestone,						
Granite, &c.† ..	..	3,413,937	..	..	..	..
Limestone ‡ ..	..	..	..	80,218	..	3,537,644
Salt (crude) ‡ ..	..	43,489	..	..	..	..
Total .. ..	..	282,841,460	..	3,147,059	..	285,988,519

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

The total quantity of gold raised since the first discovery in 1851 to the end of 1907, amounts to 69,956,448 ounces gross, or 65,793,222 ounces fine, valued at £279,471,595. The value is based on the average value of the gold received at the Melbourne Mint, which in 1907 was £3 18s. 4d. per ounce. The yield of gold for 1907, 754,270 ounces gross, or 695,576 ounces fine, is 80,505 ounces gross, or 76,714 ounces fine, less than the yield of the previous year, the falling off in the yields of lode mines and the working out and closing of some deep lead mines being responsible for this result.

In the following return will be found the yield of gold from alluvial workings and from quartz reefs during 1906 and 1907 in each mining district of the State, according to the calculations of the mining registrars:—

DISTRICT YIELDS OF GOLD, ALLUVIAL AND QUARTZ,  
1906 AND 1907.

Mining District.	1906.			1907.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	oz.	oz.	oz.	oz.	oz.	oz.
Ararat and Stawell ...	8,638	16,261	24,899	9,093	12,178	21,271
Ballarat ...	51,881	112,184	164,065	41,286	106,782	148,068
Beechworth ...	103,514	31,298	134,812	104,007	25,254	129,261
Bendigo ...	9,270	211,917	221,187	18,696	177,768	196,464
Castlemaine ...	32,990	66,396	99,386	38,446	63,944	102,390
Gippsland ..	8,778	88,402	97,180	8,467	66,715	75,182
Maryborough...	38,595	41,672	80,267	47,835	33,366	81,201
Total ...	253,666	568,130	821,796	267,850	486,007	753,857

These returns fall short of the actual yield by 433 ounces. Compared with 1906 alluvial mining shows an increase of 14,164 ounces, and lode mining a decrease of 82,123 ounces.

On the 31st December, 1907, there were 14 mines on the Bendigo gold-field, with shafts over 3,000 feet deep, namely, New Chum Railway, 4,318 feet; Victoria Reef Quartz, 4,300 feet; Lazarus New Chum, 3,680 feet; North Johnson's, 3,600 feet; New Chum and Victoria, 3,550 feet; Lansell's 180, 3,354 feet; Great Extended Hustler's, 3,290 feet; New Shenandoah, 3,282 feet; Ironbark, 3,250 feet; Carlisle, 3,158 feet; Victoria Consols, 3,114 feet; New Chum Consolidated, 3,099 feet; Eureka Extended, 3,060 feet; and Princess Dagmar, 3,020 feet. The total number of shafts over 3,000 feet in depth, at Bendigo, is 31, and, in some of the mines, winzes have been put down below the level of the bottom of the shafts, as, for instance, in the Victoria Reef Quartz a winze is down 4,363 feet; in the New Shenandoah, 3,842 feet;

in the New Chum Consolidated, 3,583 feet; in the Princess Dagmar, 3,320 feet; and in the Eureka Extended, 3,319 feet.

The following are the deepest mines on other gold-fields, viz. :—  
 South Star, Ballarat, 3,180 feet; Long Tunnel Extended, Walhalla, 2,800 feet; Magdala, Stawell, 2,410 feet; South German, Maldon, 2,225 feet; and Lord Nelson, St. Arnaud, 1,906 feet.

Dredge mining and hydraulic sluicing continue to make good progress. Prior to 1900 the yield of gold from dredging operations was 90,528 ounces, and, from 1900 to 1907, 443,335 ounces have been obtained from 2,954 acres worked, the average yield of gold being 150 ounces per acre, or 2.41 grains per cubic yard of material treated. The quantity of tin won during the period 1900-7 was 393 tons. The following tables give particulars of the industry for 1907 :—

Dredge mining and hydraulic sluicing.

DREDGE MINING AND HYDRAULIC SLUICING, 1907.

District.	Number of Plants.	Gold won during 1907.	Dividends paid during 1907.*
		oz.	£
Ararat and Stawell	4	1,001	...
Ballarat ...	21	13,162	...
Beechworth ...	50	47,519	32,888
Bendigo ...	4	1,062	...
Castlemaine ...	32	24,275	5,217
Gippsland...	8	3,625	...
Maryborough ...	14	7,177	...
Unspecified ...	6	2,395	134
Total ...	139	100,216	...

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

DESCRIPTION OF DREDGING AND HYDRAULIC SLUICING PLANTS.

District.	Bucket Dredges.	Hydraulic Pump Sluices.	Jet Elevators.	Gravitation Hydraulic Sluicing.	Total.
Ararat and Stawell	...	4	...	...	4
Ballarat ...	1	20	...	...	21
Beechworth ...	37	11	2	...	50
Bendigo ...	...	4	...	...	4
Castlemaine ...	2	28	2	...	32
Gippsland ...	5	3	...	...	8
Maryborough ...	...	14	...	...	14
Unspecified ...	...	...	...	6	6
Total ...	45	84	4	6	139

The 45 bucket dredges raised 10,371,852 cubic yards of material and won 41,085 ounces of gold; the 84 hydraulic pump sluices dealt with 9,670,362 cubic yards of overburden and wash-dirt for a return of 55,272 ounces of gold; the four hydraulic jet elevators put

through 157,678 cubic yards of alluvium for a return of 1,464 ounces of gold; and the six plants, operating in connection with hydraulic sluicing by gravitation, dealt with 396,116 cubic yards of overburden and wash-dirt, which yielded 2,395 ounces of gold. The total quantity of material treated by these plants, during 1907, was 20,596,008 cubic yards, representing an area of 751 acres, the amount of gold obtained being 100,216 ounces, and of tin 73 tons, as against 17,786,543 cubic yards in 1906, for 89,386 ounces of gold, and 74 tons of tin. The yield of gold per cubic yard of material was 2.33 grains, in 1907, as against 2.41 for the previous year. In 1907 the number of men employed, with these 139 plants, was 2,520, whose wages amounted to £214,711. As well as the above, other returns in connection with dredge-mining, &c., give an additional yield of 1,152 ounces, and mining registrars report a further 3,600 ounces won by small parties under miners' rights, in connexion with hydraulic sluicing by gravitation, but no further information is available.

The following is a return showing the value of machinery used in alluvial and quartz mining for the five years ended 1907:—

VALUE OF MACHINERY ON GOLD-FIELDS, 1903 TO 1907.

Year.	Approximate Value of Machinery Employed in—		
	Alluvial Mining.	Quartz Mining.	Total.
	£	£	£
1903 ... ..	566,445	1,474,245	2,040,690
1904 ... ..	628,520	1,551,990	2,180,510
1905 ... ..	790,810	1,819,750	2,610,560
1906 ... ..	809,150	1,817,070	2,626,220
1907 ... ..	964,120	1,935,125	2,899,245

Gold-mining dividends.

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

DIVIDENDS PAID BY GOLD MINING COMPANIES IN EACH MINING DISTRICT, 1902 TO 1907.

Mining District.	Amount Distributed.					
	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£
Ararat and Stawell ...	13,900	15,105	10,167	102	...	...
Ballarat ... ..	114,408	123,900	77,315	66,700	62,700	51,675
Beechworth ... ..	18,100	48,159	57,511	70,413	65,599	53,189
Bendigo ... ..	213,438	319,370	382,321	228,028	251,727	120,880
Castlemaine ... ..	28,050	15,138	17,240	35,465	37,701	39,568
Gippsland ... ..	46,840	34,700	41,844	28,504	56,897	50,850
Maryborough ...	37,400	44,780	37,000	25,219	10,069	1,250

Yields and dividends for the whole State for the last eight years are shown below:—

YIELDS AND DIVIDENDS : 1900 TO 1907.

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

The dividends paid in the years mentioned range from 11 to 19 per cent. of the gold produced, the average for the eight years being about 15 per cent.

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

Gold raised in Australasia.

GOLD RAISED IN AUSTRALASIA, 1851 TO 1907.

Period.	Victoria.	New South Wales.	Queensland.	South Australia.*	Western Australia.	Tasmania.	New Zealand.
	gross ozs.	gross ozs.	gross ozs.	gross ozs.	gross ozs.	gross ozs.	gross ozs.
1851-60	23,334,263	3,280,963	75,000	..	..	..	35,845
1861-70	16,276,566	3,542,912	250,000	..	..	3,504	5,507,004
1871-80	10,156,297	2,251,666	3,187,855	84,593	..	180,178	4,009,345
1881-90	7,103,448	1,164,452	3,925,820	209,275	46,967	397,983	2,265,616
1891-00	7,476,038	2,958,295	7,358,129	355,208	5,870,662	605,519	2,788,398
1851-00	64,346,612	13,198,288	14,796,604	649,076	5,917,629	1,187,184	14,606,208
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1901 ..	730,453	216,888	598,382	28,951	1,703,416	69,491	412,876
1902 ..	720,866	254,435	640,463	24,082	1,871,037	70,996	459,406
1903 ..	767,297	254,260	668,546	22,269	2,064,801	59,891	461,648
1904 ..	765,600	269,817	639,151	17,925	1,983,230	65,921	467,897
1905 ..	747,166	274,267	592,620	20,447	1,955,316	73,540	492,955
1906 ..	772,290	253,987	544,636	25,592	1,794,547	60,023	534,617
1907 ..	695,576	247,363	465,882	..	1,697,553	..	477,312
1901-7	5,199,248	1,771,017	4,149,680	..	13,069,900	..	3,306,711

\* Quantity received at Melbourne and Sydney Mints.

The total production of Australasia from 1851 to 1900, inclusive, amounts to 114½ million ounces (gross), more than half of which was produced in Victoria. The Australasian production for the seven years, 1901 to 1907, amounts to over 28 million ounces (fine), to which Western Australia contributed over 13 million ounces.

World's pro-  
duction of  
gold and  
silver.

The total production of gold and silver for all countries since 1860, and the leading gold and silver producing countries in 1906, as set out in the following tables, have been extracted principally from the annual report issued in 1907, by the Director of the United States Mint. Since 1872, the figures are those of the Bureau of the Mint, and have been compiled from information furnished by foreign Governments, and revised from the latest data:—

WORLD'S PRODUCTION OF GOLD AND SILVER SINCE 1860.

Year.	Gold.		Silver.	
	Ounces— Fine.	Value.	Ounces— Fine.	Value— Commercial.
		£		£
1860 to 1869 ... ..	61,314,500	264,059,200	378,311,600	105,151,400
1870 to 1879 ... ..	52,764,400	227,236,800	628,717,300	161,850,700
1880 to 1889 ... ..	51,405,100	221,383,000	921,103,100	200,523,200
1890 to 1899 ... ..	95,081,700	409,481,900	1,568,876,900	238,928,600
1900 ... ..	12,315,100	53,036,700	173,591,400	22,422,200
1901 ... ..	12,698,100	54,686,000	173,011,300	21,626,200
1902 ... ..	14,313,700	61,416,600	175,102,300	19,354,800
1903 ... ..	15,768,400	67,908,700	167,937,900	18,893,100
1904 ... ..	16,779,400	71,274,800	164,195,300	19,569,200
1905 ... ..	18,268,300	77,598,400	169,588,800	21,257,400
1906 ... ..	19,366,500	82,264,500	165,754,800	23,055,100
Total ... ..	370,075,200	1,590,346,600	4,686,190,700	852,631,900

WORLD'S PRODUCTION OF GOLD AND SILVER—PRINCIPAL COUNTRIES, 1906.

Country.	Gold.		Silver.	
	Ounces— Fine.	Value.	Ounces— Fine.	Value— Commercial.
		£		£
Africa ... ..	6,553,500	27,837,800	702,500	97,700
Australasia ... ..	3,985,700	16,929,900	14,237,200	1,980,300
Austria-Hungary ... ..	126,500	537,400	1,806,300	251,200
British India ... ..	584,700	2,483,900	...	...
Canada ... ..	581,700	2,470,800	8,568,700	1,191,800
Germany ... ..	3,900	16,500	5,696,400	792,300
Japan ... ..	156,000	662,700	2,451,400	341,000
Mexico ... ..	898,600	3,808,600	55,225,300	7,681,400
Mexico ... ..	40,100	170,400	7,404,200	1,029,900
Peru ... ..	943,100	4,005,900	166,200	23,100
Russia ... ..	4,565,300	19,392,500	56,517,900	7,861,200
United States ... ..	929,400	3,948,100	12,978,700	1,805,200
Other Countries ... ..	...	...	...	...
Total ... ..	19,366,500	82,264,500	165,754,800	23,055,100

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

## BLACK COAL RAISED TO 31ST DECEMBER, 1907.

Year.	Tons.
Prior to 1876 ... ..	5,831
From 1876 to 31st December, 1890 ...	49,249
1891 ... ..	22,834
1892 ... ..	23,363
1893 ... ..	91,726
1894 ... ..	171,660
1895 ... ..	194,227
1896 ... ..	226,562
1897 ... ..	236,277
1898 ... ..	242,860
1899 ... ..	262,380
1900 ... ..	211,596
1901 ... ..	209,329
1902 ... ..	225,164
1903 ... ..	64,200
1904 ... ..	121,741
1905 ... ..	155,136
1906 ... ..	160,631
1907 ... ..	138,584
Total ... ..	2,813,350

Brown coal raised to 31st December, 1907, 48,466 tons.

Many attempts were made to develop the coal industry of the State prior to 1889, but a great impetus was given in that year by the constitution of a Royal Commission, which was appointed to inquire into and report upon the best means of developing the industry. Several true coal seams, situated in various localities, chiefly in Gippsland, had been discovered, and were brought under the notice of the Commission. In 1890, five diamond drills were employed, and seams were worked at Boolarra and Korumburra, and, in 1891, at Jumbunna. Coal mining at the latter two places was immediately begun, and has been actively carried on ever since. The principal companies concerned in the industry are the Outtrim-Howitt Company and the Jumbunna Company.

Output of  
collieries.

There were six collieries working at the end of 1907, the output of each for that year being as follows:—

## OUTPUT OF BLACK COAL COMPANIES, 1907.

Companies.	Tons.
Outtrim-Howitt and British Consolidated ...	64,033
Jumbunna ... ..	61,755
Coal Creek Proprietary ... ..	3,762
Silkstone ... ..	7,565
New Extended ... ..	522
New Strezlecki ... ..	947
Total ... ..	<u>138,584</u>

No dividends were paid by any of these companies during the last four years.

Coal miners.

The average number of persons employed in coal mining has fallen considerably since 1906, and is lower than in 1904 and 1905. This will be seen by the following figures:—

## VICTORIAN COLLIERIES—MEN EMPLOYED, 1900 TO 1907.

Year.	Average number of Persons (males) at Work.
1900 ... ..	943
1901 ... ..	1,011
1902 ... ..	1,330
1903 ... ..	468
1904 ... ..	640
1905 ... ..	652
1906 ... ..	713
1907 ... ..	621

Of the persons employed in 1907, 9 were under 16 years of age, whilst the different classes of workers embrace 5 working proprietors, 14 managers and overseers, 14 accountants and clerks, 29 engine-drivers and firemen, 11 carters and messengers, and 548 miners, &c. The greatest number employed at any one time during the year was 713.

In 1903, from January up to the end of the year, the coal miners of Korumburra, Outtrim, and Jumbunna were on strike. The small number employed in 1903 was owing to the difficulty of obtaining men in place of the strikers, and to the interruption of trade caused by the strike. The strike was responsible for the reduction in output from 225,164 tons in 1902 to 64,200 tons in 1903. The industry appears to be gradually recovering since the termination of the labour trouble, but the production of 138,584 tons in 1907 is, with the exception of 1903 and 1904, lower than that of any year since 1893.



The following statement shows the value of the local output, and for comparison, the quantity and value of black coal imported in the last eight years:—

Values of coal produced and imported.

BLACK COAL PRODUCED AND IMPORTED, 1900 TO 1907.

Year.	Raised in State.		Imported.		
	Quantity	Value.	Quantity.	Value.	
				Official.*	Actual.†
	tons.	£	tons.	£	£
1900	211,596	101,599	690,567	403,723	578,350
1901	209,329	147,191	710,918	446,058	595,394
1902	225,164	155,850	656,656	428,904	533,533
1903	64,200	40,818	796,407	450,781	623,852
1904	121,741	70,208	743,470	412,765	539,016
1905	155,135	79,035	745,477	387,069	475,242
1906	160,631	80,283	917,392	475,806	567,636
1907	138,584	79,681	883,245	489,421	636,672

\* Value according to Customs Returns which is the invoice value in New South Wales as given by importers.

† Estimated value found by adding to cost at Newcastle the actual freight, insurance, primage, &c.

The local production and imports of coal amounted to about 900,000 tons in each year from 1900 to 1905, but in 1906 they reached 1,078,023 tons, and, in 1907, 1,021,829 tons.

The quantity of coal raised in the various States and New Zealand back to the date of the earliest records is given below. There is no record of any coal mining being done in South Australia.

Coal raised in Australasia.

COAL PRODUCED IN AUSTRALASIA.

Year.	Tons of Coal raised in—					
	Victoria.	New South Wales.	Queensland.	Western Australia.	Tasmania.	New Zealand.
Prior to 1878	9,346	17,538,869	507,226	..	92,176	709,931
1878 to 1882..	13	8,503,937	305,692	..	54,010	1,408,893
1883 to 1887..	7,951	13,902,101	911,416	..	59,554	2,506,631
1888 to 1892..	83,967	17,738,842	1,444,669	..	216,882	3,179,846
1893 to 1897..	920,452	18,982,101	1,587,973	..	184,391	3,785,485
1898 to 1902..	1,151,329	26,721,213	2,440,078	434,716	242,114	5,566,597
1903	64,200	6,354,846	507,801	133,000	51,805	1,420,193
1904	121,741	6,019,809	512,015	138,550	61,612	1,537,838
1905	155,135	6,632,138	529,326	127,364	50,464	1,585,756
1906	160,631	7,626,362	606,772	149,755	52,895	1,729,536
1907	138,584	8,657,924	683,272	142,373	..	1,831,009

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

Coal production of the world.

The total known coal production of the world (exclusive of brown coal and lignite) in 1906 was about 905 million tons (of 2,240 lbs.).

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

COAL PRODUCED IN VARIOUS COUNTRIES, 1906.

Country.	Production.	Value per ton at Collieries.	Excess of Imports (+) or Exports (-)	Number of Men Employed under and over ground.
Australasia—	Tons.	s. d.	Tons.	
Victoria ... ..	160,631	10 0	+917,049	713
New South Wales ... ..	7,626,362	6 2	-3,777,346	14,929
Queensland ... ..	606,772	5 8½	+37,510	1,223†
Western Australia ... ..	149,755	7 9	+176,185	383†
Tasmania ... ..	52,895	9 9	+92,000	208
New Zealand ... ..	1,729,536	10 7	+65,466	3,692
Austria ... ..	13,257,000	7 5	+6,745,000‡	68,115
Belgium ... ..	23,232,000	10 2¾*	-723,000	134,747*
British India ... ..	9,783,000	3 11	-678,000	99,138
Canada ... ..	8,717,000	9 4	+5,021,000	16,928
France ... ..	33,762,000	10 6¾*	+16,536,000	171,507*
Germany ... ..	134,914,000	8 11¼	-15,632,000	493,308*
Japan ... ..	12,791,000	7 4*	-2,380,000	78,477*
United Kingdom ... ..	251,068,000	7 3½	-76,739,000	860,400
United States ... ..	369,672,000	5 9½	-8,180,000	626,315*

NOTE.—Some of these figures are provisional.

\* Figures for 1905. † Census Figures, 1901. ‡ Austria-Hungary.

Stone quarries.

There were 81 stone quarries at work in 1907 employing 674 hands, and paying £46,015 in wages. These figures include the hands and wages connected with stone-breaking and tar-paving works carried on in conjunction with quarries, which cannot be separated. The quantity and value of stone raised during the last five years are set forth in the following table:—

STONE QUARRIES: 1903 TO 1907.

Year.	Quantity of Stone Operated on—			Approximate Total Value of Stone Raised.
	Bluestone.	Sandstone, Freestone, Slate, &c.	Granite.	
	c. yds.	c. yds.	c. yds.	£
1903 ... ..	259,012	300	940	42,649
1904 ... ..	295,213	253	444	44,943
1905 ... ..	357,474	300	584	52,649
1906 ... ..	393,873	222	983	58,373
1907 ... ..	405,718	475	475	62,296

During 1907 the Mining Department had the following boring plant at work, viz. :—Five diamond drills with steam power, three percussion drills with oil power, and one hand-boring machine. Four of these machines were engaged in boring for deep leads (alluvial), and put down 96 bores, one in boring centre country (quartz), and put down eleven bores, and four in boring for coal, and put down twenty-seven bores. The depth of the alluvial bores totalled 10,878 feet; of the quartz bores, 1,361 feet; and of the coal bores, 9,196 feet. A percussion drill was also engaged in boring for water on behalf of the Closer Settlement Board, and put down 1,275 feet of boring, and the Jumbunna Coal Company obtained the use of a diamond drill and put down two bores, totalling 2,473 feet.

Boring.

During 1907 Government batteries were located in 20 districts, and treated 4,322 tons of ore, which yielded 2,965 ounces of gold, the net cost to the Mining Department being £1,835.

Government batteries.

During 1907, 212 plants were at work treating tailings by the cyanide process. The total quantity of gold obtained in the year was 65,961 ounces, valued at £224,835, from 983,034 tons of tailings, or an average of 1 dwt. 8 grs. per ton, an increase of 317,249 in tonnage of tailings treated, and 21,465 ounces in yield, as compared with the previous year. The royalty, calculated at 5 per cent., the rate generally charged by the owners of the patent rights, on the value of gold recovered in 1907 would be £11,242, whereas the Government gave only £20,000 for the rights acquired. The records show that a grand total of 8,163,130 tons of tailings have been treated by cyanide and other processes for 784,005 ounces of gold, equal to an average of 1 dwt. 22 grs. per ton.

Cyanidation.

The number of accidents happening in 1907 in connexion with gold mining was 110, in which 27 persons were killed and 91 seriously injured. In the last twenty years the average number of men employed in gold mining was 26,970, and the average yearly number of accidents 108; 32 persons per annum being killed, and 84 injured, or 1.25 and 3.10 respectively per thousand employed. In coal mining during the nineteen years, 1889-1907, there were 28 persons killed and 102 injured.

Mining accidents.

#### MANUFACTORIES.

In order to secure uniformity throughout the States of Australia and New Zealand, in tabulating and promulgating statistics relating to manufactories, the Australian Statisticians have agreed to regard as factories all establishments employing, on the average, four hands or upwards, also those with less than four hands, where machinery is worked by power other than manual, making or repairing for the trade (wholesale or retail), or for export. Where two or more industries are carried on by one proprietor in one building, each industry is, when possible, treated as a separate establishment.

Definition of a factory.

The following table shows the number of factories in each class of industry prepared on this basis, the power used, the number of persons employed, the salaries and wages paid to such persons

Classification of factories.

FACTORIES—WORKERS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1907.

Nature of Industry.	Number of Manufactories.	Number using Machinery Worked by—					Actual Horse-power of Engines used.	Average Number of Persons Employed.				Number of Months in Operation during Year.	Salaries and Wages paid during the Year, excluding Working Proprietors.	Approximate Value of—		
		Steam.	Gas.	Electricity.	Oil.	Water, Wind, Horses.		Males.		Females.				Machinery and Plant in Use.	Lands, Buildings, and Improvements.*	
								Working Proprietors.	Employés.	Working Proprietors.	Employés.					
<i>Class I.—Treating Raw Material, the Product of Pastoral Pursuits, or Vegetable Products, not otherwise Classed.</i>																
<i>1. Animal Products.</i>																
Boiling down .. .. .	17	17	..	..	..	..	112	8	106	..	..	8.6	7,893	15,080	9,507	
Bone milling .. .. .	22	18	1	..	3	..	468	15	113	..	3	7.2	6,899	27,473	15,012	
Catgut, sausage skins .. .. .	4	..	..	..	..	..	..	4	120	..	..	12.0	9,623	890	2,880	
Tanning, fellmongering, woolwashing ..	90	61	(11)	(7)	2	5	4	1,223	99	1,789	1	4	10.3	140,436	124,064	174,318
<i>2. Vegetable Products.</i>																
Bark milling .. .. .	2	92	40	14	(1)	40	4	1,389	203	713	3	10	4.9 6.3	41,731	57,989	123,912
Chaff cutting, corn crushing .. .. .	188															
<i>Class II.—Oils and Fats, Animal and Vegetable.</i>																
Oil, grease, glue .. .. .	6	5	..	..	..	..	62	1	52	..	..	10.9	3,764	5,850	11,130	
Soap, candle .. .. .	15	12	1	..	..	..	225	11	486	..	13	11.7	43,429	106,326	96,160	

(excluding working proprietors), and the value of the machinery, plant, land, buildings, and improvements for the year 1907:—

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

Brick, pottery, earthenware .. ..	117	37	(1)3	..	3	72	1,744	124	1,680	..	34	9.6	155,768	119,847	188,811
Cement, including cement pipes .. ..	4	2	..	..	1	..	430	1	145	..	1	11.5	10,591	30,487	7,350
Lime .. ..	14	5	..	..	3	3	64	14	147	..	..	11.1	12,477	5,445	9,440
Asbestos .. ..	1	1	3	1	..	..	73	10	583	..	4	{ 11.5	45,068	28,870	24,600
Glass (including bottles) .. ..	8	..	..	..	..	..	..	..	..	..	..	{ 11.8	..	..	..
Glass bevelling .. ..	17	5	2	(1)4	..	..	61	15	180	..	1	11.4	16,214	4,304	20,670
Marble, stone dressing .. ..	36	4	4	5	..	..	110	44	317	..	2	11.7	32,327	12,275	32,373
Filter (stone) .. ..	2	1	1	..	..	..	5	6	75	..	..	{ 12.0	6,561	1,175	5,335
Modelling in plaster, cement, &c. ..	4	..	..	..	..	..	..	..	..	..	..	{ 11.8	..	..	..

*Class IV.—Working in Wood.*

Cooperage .. ..	14	2	2	..	..	..	18	18	85	..	..	{ 11.9	7,783	2,574	15,747
Cork-cutting .. ..	2	..	..	..	..	..	..	..	..	..	..	{ 12.0	..	..	..
Dairy, domestic implements .. ..	3	2	..	3	..	..	34	5	85	..	1	{ 11.3	7,910	3,119	4,170
Bellows .. ..	2	..	..	..	..	..	..	..	..	..	..	{ 11.9	..	..	..
Saw-milling, forest .. ..	119	117	..	..	..	2	1,732	133	1,548	..	..	8.0	118,258	99,723	12,620
Saw-milling, moulding, joinery, &c. ..	108	51	29	(2)22	1	..	2,586	117	2,186	..	6	10.9	196,779	110,733	169,865
Mantelpiece .. ..	8	1	..	(1)1	..	..	40	9	217	..	..	10.9	13,694	1,481	7,730
Woodcarving, turnery .. ..	34	7	(2)14	10	2	..	164	40	192	1	3	11.4	14,093	10,633	27,826

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

Agricultural implement .. ..	55	31	(1)6	2	(1)8	..	581	65	1,517	..	6	11.5	147,675	66,492	75,038
Engineering, boilermaking, iron foundry	262	110	(8)102	(11)26	(3)15	1	2,990	331	5,490	..	26	11.4	531,398	486,649	355,933
Railway workshop .. ..	15	8	3	..	..	..	436	..	2,457	..	5	12.0	298,854	177,198	264,765
Cutlery, tool .. ..	13	1	9	3	..	..	51	13	51	..	..	11.8	3,784	5,199	10,339
Nail .. ..	9	5	4	..	..	..	275	8	187	..	..	11.3	15,548	38,300	12,720
Iron safe, door .. ..	4	1	..	..	..	..	6	3	36	..	..	11.6	2,647	985	6,190
Sheet iron, tin (including japanning) ..	60	4	17	(1)6	1	..	151	59	1,029	..	8	11.4	74,128	43,386	89,108
Oven, range .. ..	14	2	6	4	..	..	60	22	201	..	1	11.3	16,169	4,875	18,949
Pattern .. ..	8	1	1	6	(1)	..	27	9	31	..	..	12.0	2,446	1,228	3,277

For footnotes see end of table.

Production.

FACTORIES—WORKERS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1907—*continued.*

Nature of Industry.	Number of Manufactories.	Number using Machinery Worked by—					Actual Horse-power of Engines used.	Average Number of Persons Employed.				Number of Months in Operation during Year.	Salaries and Wages paid during the Year, excluding Working Proprietors.	Approximate Value of—	
		Steam.	Gas.	Electricity.	Oil.	Water, Wind, Horses.		Males.		Females.				Machinery and Plant in Use.	Lands, Buildings, and Improvements.*
								Working Proprietors.	Employés.	Working Proprietors.	Employés.				
<i>Class V.—Metal Works, Machinery, &amp;c.</i>													£	£	£
<i>—continued.</i>															
Meter .. .. .	3	1	1	..	..	22	1	90	..	..	12.0	6,647	3,800	4,885	
Spring .. .. .	4	3	..	..	..	35	4	66	1	1	10.9	4,671	5,300	7,220	
Brass, coppersmithing .. .. .	45	2	17	18	2	187	56	582	..	12	11.7	42,190	28,245	56,438	
Lead, shot, pewter, zinc, &c. .. .. .	4	3	1	..	..	330	3	52	..	1	10.3	5,562	7,885	13,560	
Wireworking .. .. .	12	3	5	3	..	111	18	177	..	8	11.5	14,149	13,870	20,288	
Metallurgical .. .. .	9	3	1	4	..	51	13	47	..	..	9.9	4,868	6,362	5,920	
Smelting .. .. .	2	5	1	..	(1)	124	8	73	..	..	12.0	7,503	11,500	6,475	
Pyrites .. .. .	4	..	..	..	..	..	..	..	..	..	12.0	..	..	..	
Cyanide .. .. .	96	18	1	..	(2)21	17	241	121	549	..	9.7	48,377	46,041	6,676	
<i>Class VI.—Connected with Food and Drink, or the Preparation thereof.</i>															
<i>1. Animal Food.</i>															
Bacon-curing .. .. .	27	23	2	(3)	(3) 2	..	213	31	305	1	11	11.6	27,472	25,530	31,820
Butter, cheese .. .. .	223	207	(1) 7	(2) 5	(1) 2	2	2,047	65	1,357	1	35	11.6	120,534	311,241	250,444
Butterine .. .. .	1	..	..	..	..	..	..	..	..	..	12.0	..	..	..	
Creameries† .. .. .	(165)	(162)	..	..	(3)	..	757	..	..	..	..	..	..	..	
Meat freezing, preserving .. .. .	14	14	(1)	(4)	..	..	1,792	14	564	..	3	10.1	42,645	95,930	203,925

2. *Vegetable Food, including Products not Foods, but usually associated with the Manufacture of Foods.*

Biscuit	4	4	(3)	(2)	..	..	141	7	732	..	573	12.0	53,954	44,592	51,300		
Flour	68	68	..	(1)	..	(2)	4,164	46	784	..	4	9.9	85,544	264,566	237,307		
Jam, pickle, sauce, vinegar	27	20	(2)	1	(2)	1	353	19	824	..	499	11.3	67,065	41,654	90,867		
Oatmeal, maizena, starch, arrowroot	18	2	7	(1)	4	1	858	16	252	1	178	11.2	28,345	70,717	126,022		
Macaroni	2	2	..	..	..	..	..	..	..	..	..	12.0	..	..	..		
Sugar, treacle, refining	2	11	(3)	6	(4)	3	..	..	977	25	1,028	2	779	7.8	111,533	126,673	150,538
Confectionery	24	24	..	..	..	..	..	..	..	..	..	11.5	..	..	..	..	

3. *Drinks and Stimulants.*

Aerated water, cordial, &c.	142	68	(1)	40	8	16	5	338	141	983	11	16	10.3	69,635	88,195	138,728
Malt	19	2	(2)	12	(1)	3	..	155	8	162	..	..	11.3	17,855	20,711	125,042
Brewing	37	37	(1)	(1)	(1)	..	..	853	32	1,004	..	1	11.8	118,015	249,571	529,047
Distilling	7	5	..	..	..	..	..	171	5	100	1	..	7.2	11,569	57,000	71,580
Condiments, coffee, chicory, cocoa, chocolate, mustard, spice, &c.	11	5	6	(1)	..	..	..	512	8	173	..	109	9.8	20,753	27,256	62,591
Ice	14	0	(1)	2	..	2	..	404	9	90	..	4	9.0	6,469	25,853	23,581
Salt	3	1	1	..	(1)	1	..	52	1	60	..	..	6.8	5,212	4,445	32,267

4. *Narcotics.*

Tobacco, cigar, snuff	13	2	..	(1)	3	..	..	394	16	829	..	1,174	11.2	118,594	88,341	163,023
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*Class VII.—Clothing and Textile Fabrics, and Fibrous Material.*

1. *Textile.*

Woollen mill	9	8	(1)	1	(1)	..	..	2,187	5	737	..	847	11.9	86,007	259,740	116,330
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2. *Dress.*

Clothing, tailoring	337	..	14	(1)	39	..	..	171	301	1,554	25	5,904	11.5	396,668	35,269	379,338
Corset	2	..	..	..	..	..	..	..	..	157	..	1373	12.0	..	..	..
Dressmaking, millinery	512	..	(1)	4	33	..	..	109	42	128	433	8,053	10.9	236,933	28,361	336,060

For footnotes see end of table.

*Production.*

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FACTORIES—WORKERS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1907—*continued.*

Nature of Industry.	Number of Manufactories.	Number using Machinery Worked by—					Actual Horse-power of Engines used.	Average Number of Persons Employed.				Number of Months in Operation during Year.	Salaries and Wages paid during the Year, excluding Working Proprietors.	Approximate Value of—	
		Steam.	Gas.	Electricity.	Oil.	Water, Wind, Horses.		Males.		Females.				Machinery and Plant in Use.	Lands, Buildings, and Improvements.*
								Working Proprietors.	Employés.	Working Proprietors.	Employés.				
<i>Class VII.—continued.</i>															
<i>2. Dress—continued.</i>													£	£	£
Underclothing, shirt .. .. .	124	4	(1)2	(1)40	.. ..	264	45	{ 160 +7	83	{ 3,783 +788	11.0	149,081	37,645	133,374	
Hat, cap .. .. .	33	7	(1)4	(1)13	.. ..	247	29	{ 547 +8	5	{ 815 +3	11.0	83,694	28,452	59,152	
Hosiery .. .. .	18	1	4	(2)3	.. ..	35	9	{ 28 +18	12	{ 363 +18	11.0	14,358	23,193	16,815	
Oilskin, waterproof clothing .. .. .	4	1	(1)	(1)2	.. ..	13	3	{ 44 +1	1	{ 141 +1	12.0	9,061	1,939	17,300	
Boot, shoe .. .. .	139	4	43	(3)37	1 ..	671	180	{ 3,960 +45	9	{ 2,098 +11	10.9	368,503	122,347	170,127	
Fur .. .. .	6	..	..	..	.. ..	..	7	{ 16 +6	6	{ 46 +3	11.3	3,890	268	3,630	
Umbrella .. .. .	8	..	1	5	.. ..	10	6	{ 74 +1	1	{ 215 +1	12.0	12,020	1,330	18,530	
Dyeing .. .. .	3	2	(1)	..	.. ..	42	4	4	1	161	{ 11.9 11.8	9,635	5,296	9,925	
Feather Dressing .. .. .	1														
<i>3. Fibrous Materials and Textiles, n.c.i.</i>															
Rope, twine, mat, bag, and sack .. .. .	15	3	(1)3	(1)	.. ..	775	19	385	..	277	11.3	34,478	50,810	51,370	
Tent, sail, tarpaulin .. .. .	9	..	1	3	.. ..	7	8	53	..	{ 21 +2	12.0	4,745	1,032	9,900	



<i>Class VIII.—Books, Paper, Printing, Engraving.</i>																
3933.	Printing (including newspapers, paper-bag, lithographic, electrotyping, stereotyping)	279	7	(5)	(18)	(1)12	4	1,461	331	4,183	14	834	11.6	517,304	557,440	572,944
	Photo lithography .. .. .	3	..	1	2	..	..	8	4	46	..	1	11.9	5,955	5,530	3,590
	Account-book, stationery, and rubber stamp	19	1	7	(2)2	1	..	248	15	622	..	744	11.7	70,705	68,434	115,827
	Ink, printing ink .. .. .	6	..	4	..	..	..	35	5	48	..	3	11.9	3,739	1,715	6,904
	Paper, strawboard, millboard .. .. .	3	3	..	..	..	..	690	..	192	..	24	10.0	15,982	59,000	33,500
	Fancy box, &c. .. .. .	17	1	3	(1)5	..	..	52	10	121	4	354	11.7	19,905	10,667	23,355
	Die-sinking, engraving, medals, &c. ..	14	..	2	9	1	..	30	19	126	..		11.7	11,615	8,419	25,381
<i>Class IX.—Musical Instruments.</i>																
	Organ .. .. .	3	..	1	1	..	..	8	2	32	..	..	12.0	2,299	1,337	5,240
<i>Class X.—Arms and Explosives.</i>																
2	Ammunition .. .. .	1														
H	Blasting powder, dynamite, lithofracteur, &c.	1														
	Fireworks .. .. .	1	3	..	(1)	(1)1	..	128	2	101	..	204				
	Fuse .. .. .	2														
<i>Class XI.—Vehicles and Fittings, Saddlery, Harness, &amp;c.</i>																
	Coach, carriage, waggon .. .. .	263	22	17	12	9	2	278	322	2,275	..	11				
	Carriage lamp .. .. .	1														
	Cycle .. .. .	57	..	18	25	(1)1	..	93	50	444	..	7	11.8	30,884	11,718	64,329
	Perambulator .. .. .	6	..	1	1	..	..	4	7	75	..	2	11.9	5,381	560	3,881
	Saddle, harness .. .. .	45	..	..	3	..	..	4	48	328	1	36	11.8	27,352	3,113	57,853
	Saddle-tree, saddlers' ironmongery, &c. ..	4	1	..	1	..	..	11	8	17	..	2	10.7	1,290	750	3,536
	Whip .. .. .	1														

For footnotes see end of table.

Production.

FACTORIES—WORKERS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1907—continued.

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Nature of Industry.	Number of Manufactories.	Number using Machinery Worked by—					Actual Horse-power of Engines used.	Average Number of Persons Employed.				Number of Months in Operation during Year.	Salaries and Wages paid during the Year, excluding Working Proprietors.	Approximate Value of—	
		Steam.	Gas.	Electricity.	Oil.	Water, Wind, Horses.		Males.		Females.				Machinery and Plant in Use.	Lands, Buildings, and Improvements.*
								Working Proprietors.	Employés.	Working Proprietors.	Employés.				
												£	£	£	
<i>Class XII.—Shipbuilding, Fittings, &amp;c.</i>															
Ship, boat .. .. .	5	1	..	..	..	7	8	23	..	..	12·0	2,467	175	2,180	
Docks, slips .. .. .	7	7	..	..	..	950	7	106	..	..	7·0	7,080	54,700	399,405	
<i>Class XIII.—Furniture, Bedding, &amp;c.</i>															
Upholstery, bedding, flock .. .. .	37	4	5	(1)4	..	176	22	372	3	126	{ 11·7 } { 11·6 }	33,581	12,714	46,822	
Bedstead .. .. .	2														
Curled hair .. .. .	3	1	2	..	(1)	25	3	40	..	..	8 10·9	2,822	1,000	1,600	
Cabinet, including billiard table .. .. .	127	4	(1)22	20	1	251	152	1,303	..	..	36 11·6	120,379	21,487	153,653	
Picture frame .. .. .	19	..	2	13	..	26	18	188	1	..	44 12·0	13,584	2,649	22,882	
Venetian blind .. .. .	6	2	..	2	..	14	11	39	..	..	4 12·0	2,575	1,514	8,110	
<i>Class XIV.—Drugs, Chemicals, and By-products.</i>															
Blackening, blue, washing powder, &c. .. .. .	12	3	(1) 3	(2) 2	1	91	14	164	1	126	11·9	15,011	8,444	29,809	
Chemical .. .. .	29	12	(1) 5	(4) 2	..	905	23	658	3	136	11·1	68,702	113,821	184,689	
Essential oil .. .. .	20	12	..	..	..	50	23	132	1	..	4 7·2	7,412	2,338	3,080	
Paint, varnish, white-lead .. .. .	3	2	..	(1)1	..	17	2	36	..	..	12·0	3,270	2,020	7,850	



Classification according to hands employed.

The following grouping shows the factories arranged according to the number of hands employed:—

Under 4 hands	...	...	623 factories	1,675 hands.
4 hands	...	...	591 "	2,364 "
5 to 10 hands	...	...	1,624 "	11,407 "
11 to 20 hands	...	...	811 "	11,771 "
21 to 50 hands	...	...	550 "	17,007 "
51 to 100 hands	...	...	179 "	12,332 "
101 hands and upwards	...	...	152 "	34,347 "
Total	...	...	4,530 "	90,903 "

Of the 4,530 establishments, 2,835 used steam or other power, and employed 72,290 hands; and 1,695 used manual labour only, and employed 18,613 hands.

Factories, metropolitan and country.

In the next return will be found particulars for the years 1906 and 1907 of the factories operating in the metropolitan and country districts. In 1907 there were 119 more factories in the metropolitan than in 1906, and country factories increased by 51 in the same interval.

FACTORIES AND HANDS EMPLOYED, METROPOLIS AND COUNTRY:  
1906 AND 1907.

Nature of Industry.	1906.			1907.		
	No. of Manu- factories.	Average Number of Persons Employed.		No. of Manu- factories.	Average Number of Persons Employed.	
		Males.	Females.		Males.	Females.
<i>Metropolitan Area.</i>						
1. Treating raw material, the product of pastoral pursuits, &c.	73	1,519	3	76	1,758	7
2. Oils and fats, animal and vegetable ..	10	479	15	12	478	12
3. Processes relating to stone, clay, glass, &c.	88	2,310	8	86	2,480	10
4. Working in wood .. .. .	119	2,308	9	125	2,632	10
5. Metal works, machinery, &c. ..	340	9,381	55	363	10,161	55
6. Connected with food and drink, &c. ..	176	5,992	2,606	182	6,294	3,068
7. Clothing and textile fabrics, &c. ..	899	6,530	19,857	938	7,038	21,224
8. Books, paper, printing, engraving, &c.	212	4,367	1,785	223	4,519	1,878
9. Musical instruments .. .. .	3	32	..	3	34	..
10. Arms and explosives .. .. .	2	61	200	2	64	171
11. Vehicles, &c., saddlery, harness, &c. ..	178	1,820	36	192	1,945	39
12. Shipbuilding, fitting, &c. .. ..	9	116	..	10	123	..
13. Furniture, bedding, &c. .. .. .	168	1,856	203	176	2,025	218
14. Drugs, chemicals, and by-products ..	44	749	215	42	853	261
15. Surgical and scientific appliances ..	11	43	5	11	45	5
16. Timepieces, jewellery, and plated ware	49	591	38	50	660	41
17. Heat, light, and energy .. .. .	23	1,368	76	24	1,548	79
18. Leatherware, except saddlery and harness	22	295	94	23	316	102
19. Wares not elsewhere included .. ..	33	708	211	40	789	274
Total .. .. .	2,459	40,525	25,416	2,578	43,762	27,454

FACTORIES AND HANDS EMPLOYED—*continued.*

Nature of Industry.	1906.			1907.		
	No. of Manu- factories.	Average Num- ber of Persons Employed.		No. of Manu- factories.	Average Num- ber of Persons Employed.	
		Males.	Females		Males.	Females
<i>Country Districts.</i>						
1. Treating raw material, the product of pastoral pursuits, &c.	232	1,307	12	247	1,412	14
2. Oils and fats, animal and vegetable ..	10	77	1	9	72	1
3. Processes relating to stone, clay, glass, &c.	120	862	29	117	861	32
4. Working in wood .. .. .	151	1,896	4	165	2,003	2
5. Metal works, machinery, &c. ..	260	3,608	14	256	3,238	15
6. Connected with food and drink, &c. ..	470	3,338	133	474	3,397	135
7. Clothing and textile fabrics, &c. ..	274	1,376	3,118	282	1,466	3,390
8. Books, paper, printing, engraving, &c.	113	1,115	104	118	1,203	101
10. Arms and explosives .. .. .	3	36	33	3	39	33
11. Vehicles, &c., saddlery, harness, &c. ..	183	1,644	19	185	1,629	20
12. Shipbuilding, fitting, &c. .. .. .	2	18	..	2	21	..
13. Furniture, bedding, &c. .. .. .	15	106	3	18	123	4
14. Drugs, chemicals, and by-products ..	17	180	4	22	199	10
16. Timepieces, jewellery, and plated ware	6	22	..	7	25	1
17. Heat, light, and energy .. .. .	45	229	..	46	237	..
18. Leatherware, except saddlery and harness	..	..	..	1	4	..
Total .. .. .	1,901	15,814	3,474	1,952	15,929	3,758
<i>State.</i>						
1. Treating raw material, the product of pastoral pursuits, &c.	305	2,826	15	323	3,170	21
2. Oils and fats, animal and vegetable ..	20	556	16	21	550	13
3. Processes relating to stone, clay, glass, &c.	208	3,172	37	203	3,341	42
4. Working in wood .. .. .	270	4,204	13	290	4,635	12
5. Metal works, machinery, &c. .. .. .	600	12,989	69	619	13,399	70
6. Connected with food and drink, &c. ..	646	9,330	2,739	656	9,691	3,203
7. Clothing and textile fabrics, &c. .. ..	1,173	7,906	22,975	1,220	8,504	24,614
8. Books, paper, printing, engraving, &c.	325	5,482	1,889	341	5,722	1,979
9. Musical instruments .. .. .	3	32	..	3	34	..
10. Arms and explosives .. .. .	5	97	233	5	103	204
11. Vehicles, &c., saddlery, harness, &c. ..	361	3,464	55	377	3,574	59
12. Shipbuilding, fitting, &c. .. .. .	11	134	..	12	144	..
13. Furniture, bedding, &c. .. .. .	183	1,962	206	194	2,148	222
14. Drugs, chemicals, and by-products ..	61	929	219	64	1,052	271
15. Surgical and scientific appliances ..	11	43	5	11	45	5
16. Timepieces, jewellery, and plated ware	55	613	38	57	685	42
17. Heat, light, and energy .. .. .	68	1,597	76	70	1,785	79
18. Leatherware, except saddlery and harness	22	295	94	24	320	102
19. Wares not elsewhere included .. .. .	33	708	211	40	789	274
Total .. .. .	4,360	56,339	28,890	4,530	59,691	31,212

In the metropolitan district the additional factories established were principally those connected with working in wood (6); metal works, &c. (23); food and drinks, &c. (6); clothing, &c. (39); books, printing, &c. (11); vehicles, saddlery, &c. (14); furniture, &c. (8). In the country the noticeable differences between the two years are an increase of 15 in the manufactories treating raw materials such as boiling-down, tanning, fellmongering, wool-washing, and chaff-cutting works; of 14 in those working in wood; of 4 in those connected with food and drink, &c.; of 8 in clothing, textile, &c., factories; of 5 in books and paper printing works, &c.; of 3 in those engaged in the manufacture of furniture, bedding, &c.; and of 5 in those engaged with drugs, chemicals, and by-products; also a decrease of 3 in factories connected with processes relating to stone, clay, glass, &c.; and a decrease of 4 in metal works, &c. The workers in the metropolitan factories have increased by 5,275 since 1906, of whom 3,237 are males, the industries employing most of the extra hands being metal works, &c. (780), foods, drinks, &c. (764), and clothing, &c. (1,875). The country factories employed 399 more hands in 1907 than in 1906, 115 being males, the industry most prominent in connexion with the increase being clothing and textile, &c., with 362 extra hands. Metal works, &c., in country districts show 369 workers less than in 1906.

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

FACTORIES—POWER, HANDS, ETC. : 1902 TO 1907.

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

  

Year.	Hands Employed.			Approximate Value of—		
	Males.	Females.	Total.	Machinery and Plant.	Land.	Buildings and Improvements.
1902	49,658	23,405	73,063	£ 5,082,023	£ 3,045,291	£ 5,125,969
1903	49,434	23,795	73,229	5,010,896	2,855,174	5,112,771
1904	50,554	25,733	76,287	6,027,134	2,721,076	4,919,975
1905	52,925	27,310	80,235	6,187,919	2,767,071	5,004,167
1906	56,339	28,890	85,229	6,450,355	2,857,411	5,204,699
1907	59,691	31,212	90,903	6,771,458	2,932,036	5,444,606

Factories and works for six years.

This table reveals considerable progress in the six years. The factories have increased to the extent of 527, the actual horse-power of engines by 8,882, the hands employed by 17,840, of whom 10,033 were males and 7,807 females; the approximate value of machinery and plant by £1,689,435, and that of buildings, &c., by £318,637. A noticeable feature in connexion with the power employed is the increase in the number of factories using electricity; in 1907 these numbered 558, an increase of 399 since 1902.

In the next table the hands employed in factories during the last three years are grouped according to the nature of their work. The total hands show an increase of 5,674 compared with 1906, and of 10,668 compared with 1905 :—

TOTAL HANDS EMPLOYED.						
		1905.	1906.	1907.		
Males	...	52,925	56,339	59,691		
Females	...	27,310	28,890	31,212		
Total	...	80,235	85,229	90,903		

CLASSIFICATION OF HANDS EMPLOYED.						
		1905.	1906.	1907.		
Working Proprietors—						
Males	...	3,705	3,834	3,975		
Females	...	612	611	629		
Managers and Overseers—						
Males	...	2,192	2,266	2,318		
Females	...	377	369	395		
Accountants and Clerks—						
Males	...	2,102	2,181	2,314		
Females	...	322	393	432		
Engine-drivers and Firemen—						
Males	...	1,473	1,493	1,544		
Workers in Factories—						
Males	...	39,680	42,654	45,319		
Females	...	24,834	26,130	28,400		
Factory Workers working in their own homes—						
Males	...	86	109	115		
Females	...	1,100	1,322	1,314		
Carters and Messengers—						
Males	...	2,774	2,793	3,000		
All Others—						
Males	...	913	1,009	1,106		
Females	...	65	65	42		

Hands employed, male and female.

Wages, fuel,  
material,  
and output  
of factories.

The subjoined statement tabulates the principal items of outlay, and the value of articles produced or work done in connexion with each class of manufacturing for the year 1907:—

VALUE OF WAGES, FUEL, MATERIALS, AND OUTPUT OF  
FACORIES, 1907.

Class of Industry.	Value of—			
	Wages paid, exclusive of amounts drawn by Working Proprietors.	Fuel and Light used.	Materials used.	Articles produced or Work done.
	£	£	£	£
1. Treating raw material, the product of pastoral pursuits, &c.	206,642	24,194	1,896,987	2,336,399
2. Oils and fats, animal and vegetable ..	47,193	10,740	299,713	438,603
3. Processes relating to stone, clay, glass, &c.	279,016	81,777	141,939	684,519
4. Working in wood .. .. .	358,522	7,864	565,784	1,171,610
5. Metal works, machinery, &c. ..	1,226,616	90,818	1,870,542	3,815,558
6. Connected with food and drink, &c. ..	905,224	139,581	8,487,733	11,224,195
7. Clothing and textile fabrics, &c. ..	1,409,073	42,932	2,897,073	5,022,348
8. Books, paper, printing, &c. .. ..	645,205	28,438	649,470	1,910,979
9. Musical instruments .. .. .	2,299	20	1,066	5,653
10. Arms and explosives .. .. .	18,337	1,284	73,438	115,481
11. Vehicles, &c., saddlery, harness, &c. ..	232,408	8,665	281,114	656,545
12. Shipbuilding, fitting, &c. .. ..	9,547	533	6,906	24,368
13. Furniture, bedding, &c. .. .. .	172,941	3,732	326,570	598,875
14. Drugs, chemicals, and by-products ..	94,395	9,142	443,486	760,008
15. Surgical and scientific appliances ..	3,036	101	2,147	8,518
16. Timepieces, jewellery, plated ware ..	62,142	2,008	119,853	240,327
17. Heat, light, and energy .. .. .	215,508	39,038	193,153	830,088
18. Leatherware (except saddlery and harness)	25,151	720	114,691	162,153
19. Wares not elsewhere included .. ..	69,422	6,867	260,774	393,718
Total .. .. .	5,982,677	498,454	18,632,439	30,399,945

The total amount of wages paid during the year (£5,982,677) represents a payment per head on the average for all employés of £69 6s., an increase of £1 12s. on the average payment per head in 1906, and of £2 19s. on the average in 1905, although the proportion of males and females is the same for each year, viz., 65 per cent. of males and 35 per cent. of females. This average is very much below the general rate of wages, as shown in the table "Wages in Melbourne" on page 697, which relates to adult workers only, whereas the average payment of £69 6s. relates to all employés, adult and juvenile, male and female, apprentices and improvers, employed in each industry. Further, all hands are not continuously employed, nor are all factories working throughout the year.



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

OUTLAY AND OUTPUT OF FACTORIES: 1906 AND 1907.

	1906.		1907.	
	Value.	Proportion per cent.	Value.	Proportion per cent.
	£		£	
Wages ... ..	5,468,470	19·5	5,982,677	19·7
Fuel and Light ... ..	409,967	1·4	498,454	1·6
Materials ... ..	17,288,170	61·5	18,632,439	61·3
	23,166,607	82·4	25,113,570	82·6
Articles produced ... ..	28,102,480	100·0	30,399,945	100·0
Margin for profit and miscellaneous expenses	4,935,873	17·6	5,286,375	17·4

The percentage of the total of the various items of outlay to the value of articles produced and work done has increased to the extent of .2 since 1906—wages, fuel, and light showing slight increases, but value of materials a slight decrease. The percentage that the balance between outlay and output, available for miscellaneous expenses and profit, bears to the output is consequently .2 less than in 1906.

In the following return will be found a statement of the rates of wages obtaining in the various industries in Melbourne during 1907, the information having been collected direct from the employers. For information relating to Wages Boards in Victoria and the rise in earnings caused thereby, see page 313 of this work:—

WAGES IN MELBOURNE, 1907.

A.—WAGES FOR ADULT WORKERS IN CLASSIFIED MANUFACTURING INDUSTRIES.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class I.—Treating Raw Material the product of pastoral pursuits or vegetable products not otherwise classed.</i>			
<i>Order 1.—Animal products.</i>			
Boiling down .. ..	Foremen .. ..	.. ..	42s. per week
Bone mill .. ..	Tallowmen .. ..	.. ..	40s. "
	Labourers .. ..	.. ..	36s. "
	Carters .. ..	36s. to 45s. per week	.. ..
Sausage casing .. ..	Sausage skin cleaners	40s. to 42s. "	42s. per week
Tanning, fellmongery, wool-washing, scouring	Curriers .. ..	40s. to 60s. "	45s. "
	Tanners .. ..	36s. to 45s. "	38s. "
	Beamsmen .. ..	40s. to 50s. "	45s. "
	Shedsmen .. ..	36s. to 45s. "	38s. "
	Fellmongers .. ..	30s. to 45s. "	36s. "
	Woolscourers .. ..	.. ..	42s. "
	„ sorters .. ..	.. ..	42s. "
	„ pressers and others	.. ..	36s. "

## WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class I—continued.</i>			
<i>Order 2.—Vegetable products.</i>			
Chaff-cutting .. .. .	Labourers .. .. .	36s. to 39s. per week	36s. per week
<i>Class II.—Oils and Fats, Animal and Vegetable.</i>			
Oil, grease, and glue .. .. .	Labourers .. .. .	6s. to 7s. per day ..	6s. 6d. per day
Soap .. .. .	Soapmakers .. .. .	90s. to 95s. per week	50s. ..
	Assistant soapboilers ..	..	50s. per week
	Foremen .. .. .	..	50s. ..
	Man in charge of milling-room .. .. .	..	48s. ..
	Mixers .. .. .	..	42s. ..
	General hands .. .. .	..	36s. ..
	Wrappers, packers, and stampers (male) .. .. .	..	36s. ..
	Wrappers, packers, and stampers (female) .. .. .	..	22s. 6d.,,
Candle .. .. .	Stillmen .. .. .	..	47s. 6d. ..
	Acidifiers, glycerine distillers, pressroom gangers .. .. .	..	42s. ..
	Candle-room gangers ..	..	41s. ..
	Candle moulders, labourers .. .. .	..	36s. ..
	Carters .. .. .	40s. to 42s. per week	40s. ..
<i>Class III.—Processes relating to Stone, Clay, Glass, &amp;c.</i>			
Brick .. .. .	Patternmakers .. .. .	..	1s. 4½d. per hr.
	Bricklayers .. .. .	..	1s. 3d. ..
	Engine-drivers .. .. .	11½d. to 1s. 0½d. per hr.	..
	Burners on patent kilns, blacksmiths, carpenters, facemen ..	..	1s. per hour
	Drawers, firemen, machine drivers and riggers, setters .. .. .	11½d. to 1s. 1d. per hr.	..
	Pan and crusher at- tendants .. .. .	..	11d. per hour
	Burners (other) hand moulders, wheelers, truckers, clayhole- men .. .. .	9½d. to 10½d. per hr.	..
Glazed pipes .. .. .	Loftmen, yardmen, &c. Burners .. .. .	56s. 3d. to 62s. 6d. per week	9d. per hour ..
	Flangers .. .. .	..	54s. per week
	Setters, pressers, junc- tion stickers, men in charge of plunges, head drawers .. .. .	..	45s. ..
General pottery .. .. .	Labourers .. .. .	45s. to 50s. per week	40s. ..
	Pressers, stoneware and flower pot throwers ..	..	..
	Handlers, turners, jig- gers (male) .. .. .	..	45s. per week
	Placers, dippers .. .. .	40s. to 45s. per week	42s. ..
	Sagger makers .. .. .	..	42s. per week
	Mould makers .. .. .	45s. to 50s. per week	36s. ..
	Labourers .. .. .	..	36s. per week
	Females employed in making general pot- tery .. .. .	..	20s. ..
Tiles .. .. .	Moulders and pressers Females employed in making tiles .. .. .	42s. to 45s. per week ..	17s. 6d. per week
Lime, cement, cement pipes	Labourers .. .. .	6s. 6d. to 8s. per day	7s. per day
Asbestos .. .. .	Machinists .. .. .	36s. to 42s. per week	40s. per week
Glass (including bottles) ..	Bottlemakers .. .. .	60s. to 90s. ..	75s. ..
	Labourers and others ..	30s. to 42s. ..	36s. ..
	Lampware blowers ..	45s. to 50s. ..	45s. ..
	.. finishers .. .. .	50s. to 60s. ..	55s. ..

WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class III—continued.</i>			
Glass bevelling, &c.	Bevellers .. ..	.. ..	45s. per week
	Silverers .. ..	.. ..	45s. "
Marble, stone-dressing	Cutters .. ..	45s. to 54s. per week	.. ..
	Cementers .. ..	.. ..	35s. per week
	Building carvers .. ..	.. ..	1s. 10½d. per hr.
	Carvers and letter cutters .. ..	.. ..	1s. 4½d. "
	Granite cutters .. ..	.. ..	1s. 3d. "
	Bluestone, marble cutters .. ..	.. ..	1s. 2d. "
	Polishers .. ..	10½d. to 11d. per hour	.. ..
Stonefilter	Labourers .. ..	.. ..	10d. per hour
	Filtermakers .. ..	.. ..	37s. 6d. per wk.
Modelling .. ..	Modellers .. ..	12s. to 14s. per day	.. ..
	Shop hands .. ..	10s. to 11s. "	.. ..
Asphalt .. ..	Pressers .. ..	.. ..	42s. per week
	Asphaltes and tarpavers .. ..	7s. to 9s. per day ..	8s. per day
	.. ..	.. ..	.. ..
<i>Class IV.—Working in Wood.</i>			
Cooperage .. ..	Coopers .. ..	56s. to 62s. per week	56s. per week
Corkcutting .. ..	Corkcutters .. ..	30s. to 45s. "	37s. 6d. "
Bellows .. ..	Bellows-makers .. ..	32s. 6d. to 48s. "	40s. per week
Saw-milling, moulding, joinery, sash, door, box, &c.	Sawyers .. ..	45s. to 63s. "	.. ..
	Pullers-out .. ..	36s. to 45s. "	.. ..
	Carpenters and joiners .. ..	54s. to 64s. "	.. ..
	Machine workers .. ..	45s. to 64s. "	.. ..
	Woodturners .. ..	.. ..	54s. per week
	Boxmakers .. ..	.. ..	48s. "
	Box or case printing machine workers .. ..	.. ..	45s. "
	Painters and glaziers .. ..	.. ..	51s. "
	Polishers and Coaters .. ..	.. ..	50s. "
	Engine-drivers .. ..	45s. to 60s. per week	.. ..
Mantelpiece .. ..	Salesmen, tallymen, ordermen .. ..	.. ..	48s. per week
	Draymen and labourers .. ..	36s. to 45s. per week	42s. "
	Mantelpiece makers .. ..	52s. to 56s. "	56s. "
	Polishers, enamellers .. ..	50s. to 56s. "	56s. "
	Carvers .. ..	48s. to 60s. "	54s. "
Wood-carving, turning	Turners .. ..	48s. to 60s. "	54s. "
	.. ..	.. ..	.. ..
<i>Class V.—Metal Works, Machinery, &amp;c.</i>			
Agricultural implement .. ..	Blacksmiths .. ..	54s. to 60s. per week	60s. per week
	Fitters and turners .. ..	54s. to 60s. "	54s. "
	Carpenters .. ..	48s. to 60s. "	54s. "
	Painters .. ..	42s. to 54s. "	48s. "
	Labourers .. ..	36s. to 42s. "	36s. "
	Blacksmiths .. ..	54s. to 72s. "	60s. "
	Strikers .. ..	39s. to 45s. "	42s. "
	Fitters and turners .. ..	60s. to 66s. "	60s. "
	Boilermakers and platers .. ..	60s. to 72s. "	60s. "
	Riveters .. ..	60s. to 72s. "	60s. "
	Moulders—Heavy .. ..	54s. to 72s. "	60s. "
	" Light .. ..	48s. to 60s. "	48s. "
	Pipe moulders .. ..	48s. to 63s. "	.. ..
	Planers and slotters .. ..	45s. to 63s. "	54s. per week
	Drillers .. ..	38s. to 48s. "	42s. "
	Coremakers .. ..	48s. to 66s. "	60s. "
	Patternmakers .. ..	66s. to 75s. "	66s. "
	Iron dressers .. ..	40s. to 42s. "	40s. "
	Carpenters .. ..	.. ..	60s. "
	Labourers .. ..	38s. to 45s. per week	42s. "
Furnacemen, engine-drivers .. ..	45s. to 60s. "	45s. "	
Cutlery .. ..	Cutlers .. ..	60s. to 70s. "	60s. "
	Knifemiths .. ..	50s. to 55s. "	50s. "
	Sawmakers .. ..	40s. to 70s. "	50s. "
	Saw and tool grinders .. ..	30s. to 60s. "	45s. "

## WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.		
		Range.	General Rate.	
<i>Class V.—continued.</i>				
Nail, barbed wire .. ..	Nail makers .. ..	40s. to 70s. per week	60s. per week	
	Machine feeders (under 21)	20s. to 30s. ..	25s. ..	
Iron safe, door .. ..	Labourers .. ..	30s. to 35s. ..	30s. ..	
	Barbed wire workers	30s. to 50s. ..	..	
	Fireproof safe, &c., makers	35s. to 80s. ..	60s. per week	
Tinsmithing, galvanized iron, sheet iron, japanning	Tinsmiths .. ..	40s. to 44s. ..	..	
	Sheet iron workers ..	..	44s. per week	
	Canister makers ..	38s. to 42s. per week	..	
Stove, range, oven .. ..	Galvanizers .. ..	42s. to 60s. ..	..	
	Japanners .. ..	35s. to 45s. ..	..	
	Stove fitters .. ..	42s. to 48s. ..	..	
Pattern making .. ..	Oven fitters .. ..	42s. to 48s. ..	..	
	Pattern makers .. ..	..	66s. per week	
Meter .. ..	Instrument fitters ..	48s. to 60s. per week	54s. ..	
Spring .. ..	Fitters, smiths .. ..	45s. to 65s. ..	54s. ..	
Brass, copper smithing ..	Brass moulders, finishers	..	48s. ..	
	Brass polishers .. ..	..	42s. ..	
	Dressers, furnacemen	..	36s. ..	
	Females making cores only	..	25s. ..	
	Coppersmiths .. ..	45s. to 54s. per week	..	
	Lead, shot, pewter, zinc ..	Lead rollers .. ..	60s. to 70s. ..	60s. per week
	Wire working .. ..	Labourers in lead and shot factories ..	36s. to 45s. ..	40s. ..
		Zincworkers .. ..	48s. to 72s. ..	60s. ..
		Wire workers .. ..	35s. to 48s. ..	40s. ..
	Wire mattress .. ..	Weavers, framemakers	..	48s. ..
Weavers (female) .. ..		..	32s. ..	
Varnishers .. ..		..	45s. ..	
Smelting, chlorination, cyanide, pyrites	Metallurgists and assayers	£3 to £5 per week ..	£3 ..	
	Cyaniders .. ..	36s. to 55s. ..	..	
	Chlorinators .. ..	40s. to 55s. ..	..	
	Smelters .. ..	45s. to 70s. ..	..	
	Roasters .. ..	36s. to 42s. ..	..	
	Furnacemen .. ..	42s. to 60s. ..	..	
	Labourers .. ..	36s. to 48s. ..	..	
	Bedstead, fender .. ..	Blacksmiths .. ..	42s. to 54s. ..	42s. per week
		Fitters-up .. ..	45s. to 54s. ..	45s. ..
		Assistant fitters-up ..	..	36s. ..
Chill fitters or frame setters		48s. to 60s. per week	..	
Chippers .. ..		36s. to 42s. ..	36s. per week	
Modellers .. ..		56s. to 70s. ..	60s. ..	
Moulders .. ..		42s. to 60s. ..	48s. ..	
Mounters of bedstead pillars		36s. to 45s. ..	..	
Grinders and polishers		42s. to 56s. ..	50s. per week	
Japanners .. ..		36s. to 50s. ..	..	
Fitters (fender) .. ..		45s. to 50s. ..	45s. per week	
Electroplaters .. ..		56s. to 70s. ..	56s. ..	
	Polishers of japanned work (female) .. ..	..	22s. 6d. ..	
	Wrappers (female) .. ..	..	16s. ..	
<i>Class VI.—Connected with Food and Drink, or the preparation thereof.</i>				
<i>Order 1.—Animal Food.</i>				
Bacon-curing .. ..	Slaughtermen, cutters-up, &c.	40s. to 60s. per week	48s. per week	
Butter, cheese, concentrated milk	Factory managers ..	60s. to 100s. ..	70s. ..	
	Butter makers, and churners	40s. to 50s. ..	45s. ..	
	Labourers, packers ..	30s. to 40s. ..	35s. ..	

WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class VI.—Order 1—continued.</i>			
Butterine, margarine ..	Labourers ..	30s. to 42s. per week	40s. per week
Meat, fish preserving, freezing	Slaughtermen ..	..	23s. per 100 sheep
	Kitchen hands, tallow-men	36s. to 60s. per week	42s. per week
	Boners .. ..	42s. to 48s. "	..
	Preservers' assistants	45s. to 60s. "	50s. per week
	Tinsmiths .. ..	50s. to 70s. "	..
		(piece-work)	
	Labourers, packers ..	36s. to 48s. "	40s. per week
	Chambermen, &c. ..	40s. to 45s. "	42s. "
<i>Order 2.—Vegetable Food, including products not foods but usually associated with the manufacture of foods.</i>			
Biscuits .. ..	Factory foremen ..	38s. to 80s. per week	50s. per week
	Forewomen ..	20s. to 32s. 6d. "	20s. "
	Cake makers ..	46s. to 56s. "	..
	Machine hands ..	30s. to 42s. "	36s. per week
	Packers—male ..	32s. to 37s. 6d. "	32s. "
	.. female ..	10s. to 20s. "	14s. "
Confectionery .. ..	Confectioners ..	..	50s. "
	Storemen ..	..	45s. "
	.. assistants ..	..	36s. "
	Labourers ..	..	30s. "
	Chocolate dippers—		
	Male ..	..	30s. "
	Female ..	..	17s. "
Flour mill .. ..	Millers ..	55s. to 60s. per week	55s. "
	Smuttermen, packer-men	36s. to 45s. "	..
	Wheat shooters, truckers, &c.	30s. to 40s. "	..
	Engine-drivers, firemen	48s. to 70s. "	54s. per week
	Foremen .. ..	55s. to 85s. "	60s. "
Jam, fruit-preserving, pickle, sauce, vinegar	Tinsmiths .. ..	36s. to 44s. "	..
	Coopers .. ..	56s. to 60s. "	56s. per week
	Engine-drivers ..	48s. to 54s. "	50s. "
	General hands—male	30s. to 35s. "	30s. "
	.. female ..	14s. to 21s. "	14s. "
Oatmeal, cornflour, starch, macaroni	.. male ..	30s. to 60s. "	..
Sugar, treacle refining ..	.. female ..	12s. to 30s. "	..
	Vacuum hands and others	42s. to 115s. "	..
<i>Order 3.—Drinks and Stimulants.</i>			
Aerated waters, cordials ..	Cordial makers ..	55s. to 80s. per week	60s. per week
	Engine-drivers ..	40s. to 54s. "	45s. "
	Bottlers .. ..	35s. to 40s. "	..
	Wirers .. ..	..	32s. 6d. per week
Malt .. ..	Washers .. ..	..	32s. 6d. "
	Persons engaged in turning floors, &c.	..	45s. "
	Persons engaged in screening	..	40s. "
Brewing .. ..	Topmen .. ..	44s. to 50s. per week	44s. "
	Cellarmen .. ..	44s. to 60s. "	44s. "
	Cask washers ..	44s. to 48s. "	44s. "
	Storemen .. ..	44s. to 56s. "	44s. "
	Coopers .. ..	56s. to 62s. "	56s. "
	Farriers .. ..	48s. to 72s. "	48s. "
	Carters, stablemen ..	45s. to 50s. "	47s. 6d. "
	Rackers, corkers, &c.	..	35s. "
	Packers .. ..	32s. 6d. to 40s. per week	32s. 6d. "
	Headers-up .. ..	..	30s. "

## WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class VI.—Order 3—continued.</i>			
Distilling .. .. .	Stillmen .. .. .	45s. to 50s. per week	60s. per week
	Brewhouse, millhouse hands (skilled)	.. .. .	.. .. .
	Brewhouse, millhouse hands (unskilled)	.. .. .	42s. per week
	Coopers .. .. .	56s. to 60s. per week	56s. "
	General labourers and bottling hands	40s. to 45s. "	.. .. .
Condiments, coffee, chicory, cocoa, chocolate, spice, &c.	General hands—male	35s. to 60s. "	.. .. .
	" female	12s. to 25s. "	.. .. .
Ice, refrigerating .. .. .	Storemen .. .. .	40s. to 60s. "	40s. per week
	Chambermen .. .. .	40s. to 45s. "	40s. "
	Ice pullers .. .. .	36s. to 45s. "	39s. "
	Engine-drivers, firemen	42s. to 60s. "	48s. "
	Carters .. .. .	42s. to 52s. "	45s. "
<i>Order 4.—Narcotics.</i>			
Tobacco, cigar, cigarette .. .. .	Flake coverers .. .. .	55s. to 80s. per week	65s. per week
	" (female)	25s. to 34s. "	32s. "
	General hands in press-rooms, &c., (unskilled)	42s. to 48s. "	.. .. .
	Gangers in pressroom	48s. to 52s. "	.. .. .
	Cigar makers .. .. .	35s. to 65s. "	48s. per week
	Cigarette makers (hand)—female .. .. .	20s. to 30s. "	25s. "
<i>Class VII.—Clothing and Textile Fabrics and Fibrous Materials.</i>			
<i>Order 1.—Textile.</i>			
Woollen cloth, blanket, rug .. .. .	Foremen .. .. .	40s. to 60s. per week	40s. per week
	Pattern weavers, tuners	.. .. .	22s. 6d. "
	Power-loom weavers .. .. .	.. .. .	36s. "
	Fettlers, yarnmen, spinners .. .. .	30s. to 40s. per week	30s. "
	Wool scourers .. .. .	30s. to 40s. "	30s. "
	Dye house labourers .. .. .	.. .. .	30s. "
	Wool dryers, warpers .. .. .	.. .. .	36s. "
	Wiley house labourers	.. .. .	25s. "
	Warpers—female .. .. .	.. .. .	.. .. .
	Mule minders .. .. .	30s. to 36s. per week	.. .. .
<i>Order 2.—Dress.</i>			
Clothing, tailoring .. .. .	Cutters—order .. .. .	60s. to 160s. per week	80s. per week
	" stock .. .. .	50s. to 80s. "	60s. "
	Tailors, trimmers .. .. .	45s. to 60s. "	45s. "
	Machinists .. .. .	45s. to 50s. "	45s. "
	Tailoresses .. .. .	20s. to 35s. "	20s. "
	Pressers, examiners .. .. .	45s. to 55s. "	45s. "
	" female .. .. .	20s. to 30s. "	.. .. .
	Folders .. .. .	40s. to 45s. "	40s. per week
	Machinists—female .. .. .	20s. to 30s. "	22s. 6d. "
	Buttonholers, folders, brushers, and examiners (female)	20s. to 25s. "	20s. "
Corset .. .. .	Corset makers—female	17s. 6d. to 25s. "	22s. 6d. "
	Dressmakers in charge	40s. to 160s. "	60s. "
Dressmaking, millinery .. .. .	Dressmakers' assistants—female	16s. to 30s. "	16s. "
	Mantlemakers—female	40s. to 80s. "	40s. "
	Mantlemakers' assistants—female	16s. to 30s. "	16s. "
	Milliners in charge .. .. .	40s. to 80s. "	40s. "
	Milliners' assistants—female	20s. to 35s. "	20s. "
	Pressers—female .. .. .	20s. to 30s. "	20s. "
	Machinists—female .. .. .	20s. to 25s. "	20s. "

WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class VII.—Order 2—continued.</i>			
Shirtmaking, underclothing ..	Shirt makers—female	16s. to 25s. per week	16s. per week
	Underclothing makers—female	16s. to 25s. "	10s. "
	Laundry ironers, &c.—female	16s. to 25s. "	20s. "
Hat, cap .. ..	Body makers, silk hats	50s. to 60s. "	55s. "
	Finishers ..	55s. to 70s. "	..
	Shapers ..	55s. to 65s. "	60s. per week
	Crown sewers, silk hats—female	20s. to 30s. "	25s. "
	Trimmers, silk hats—female	22s. 6d. to 26s. "	25s. "
	Bodymakers, felt hats	70s. to 90s. "	77s. 6d. "
	Blockers ..	60s. to 65s. "	65s. "
	Finishers ..	70s. to 100s. "	75s. "
	Shapers ..	..	65s. "
	Binders, felt hats—female	15s. to 30s. per week	20s. "
	Trimmers, felt hats—female	15s. to 30s. "	20s. "
	Machinists, straw hats—female	20s. to 30s. "	25s. "
	Trimmers, straw hats—female	..	20s. "
	Blockers, pressers, women's hats	..	42s. 6d. "
	Machinists, caps—female	15s. to 25s. per week	20s. "
Hosiery .. ..	Machinists, knitting—female	20s. to 28s. "	22s. 6d. "
	Machinists, sewing—female	17s. 6d. to 28s. "	20s. "
	Linkers—female ..	20s. to 24s. "	22s. "
	Pressers—male ..	40s. to 50s. "	45s. "
	.. female ..	20s. to 30s. "	25s. "
	Winders—female ..	16s. to 20s. "	18s. "
	Menders, &c.—female	18s. to 22s. 6d. "	20s. "
Oilskin, waterproof clothing	Oilskin workers ..	35s. to 60s. "	40s. "
	Machinists, female ..	20s. to 30s. "	25s. "
	Waterproof cutters ..	45s. to 60s. "	50s. "
	Machinists, &c.—female	20s. to 30s. "	25s. "
	Makers, finishers, clickers, stuff-cutters, &c.	45s. to 65s. "	45s. "
Boot, shoe .. ..	Machine operators ..	45s. to 70s. "	50s. "
	Assistant stuff-cutters, lining cutters, and all others	40s. to 50s. "	40s. "
	Machinists—female ..	20s. to 30s. "	20s. "
	Cutters ..	50s. to 80s. "	60s. "
Furrier .. ..	Machinists—female	16s. to 22s. 6d. "	18s. "
	Sewers—female ..	12s. 6d. to 20s. "	15s. "
	Frame makers ..	40s. to 50s. "	40s. "
Umbrella, parasol ..	Cutters ..	40s. to 55s. "	40s. "
	Finishers—male ..	25s. to 50s. "	35s. "
	Machinists—female ..	15s. to 25s. "	20s. "
	Tipplers ..	15s. to 20s. "	16s. "
	Dyers ..	60s. to 100s. "	70s. "
	Dyers' assistants ..	35s. to 50s. "	40s. "
Dye works .. ..	Pressers ..	45s. to 50s. "	45s. "
	Pressers—female ..	20s. to 30s. "	20s. "
	Cleaners ..	35s. to 50s. "	40s. "
	Feather dyers ..	60s. to 10 s. "	70s. "
	.. .. assistants	35s. to 45s. "	40s. "
Ostrich feather ..	Feather curlers, dressers, finishers (female)	15s. to 30s. "	20s. "

## WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate
<i>Class VII.—continued.</i>			
<i>Order 3.—Fibrous Materials and Textiles not elsewhere included.</i>			
Bag, sack (including calico bag)	Bagmenders ..	20s. to 45s. per week	30s. per week
Rope, twine .. ..	Undefined—male ..	36s. to 70s. "	40s. "
	" female ..	15s. to 25s. "	18s. "
Tarpaulin, tent, sail ..	Tarpaulin, tent, sail makers (male)	40s. to 60s. "	48s. "
	Tarpaulin, tent, sail makers (female)	15s. to 25s. "	20s. "
<i>Class VIII.—Books, Paper, Printing, Engraving.</i>			
Printing (including lithographic printing, electrotyping, stereotyping)	Printers—Compositors	56s. to 80s. per week	56s. per week
	" machinists	56s. to 60s. "	56s. "
	Proof readers ..	.. ..	60s. "
	Printers—Linotype and monoline operators	70s. to 84s. per week	..
	" monotype perforating machine operators	63s. to 77s. "	..
	Persons employed on monotype casting machines	..	45s. 6d. per wk.
	Feeders and others (male)	..	36s. "
	Feeders and others (female)	..	20s. "
	Lithographers ..	56s. to 65s. per week	56s. "
	Stereotypers ..	.. ..	56s. "
Bookbinding, account book making, stationery, &c.	Bookbinders ..	56s. to 80s. per week	56s. "
	Feeders and others (male)	.. ..	36s. "
	Pagers, folders, staplers, &c. (female)	16s. to 17s. 6d. per week	16s. "
	Sewers and feeders—female	20s. to 30s. "	20s. "
	Paper rulers, guillotine machine cutters	56s. to 75s. "	56s. "
Ink, printing ink .. ..	Ink makers ..	45s. to 70s. "	50s. "
Paper .. ..	Paper, &c., makers ..	.. ..	60s. "
	Beatermen ..	.. ..	54s. "
	Breakermen ..	.. ..	45s. "
	General hands ..	.. ..	36s. "
	Engine drivers ..	.. ..	60s. "
Paper bag, box, &c. ..	Box cutters ..	.. ..	56s. "
	Other workers (male)	.. ..	45s. "
	Box-makers (female)	15s. to 23s. per week	22s. "
	Cardboard carton cutters	.. ..	52s. "
	Stitchers, folders, &c. (female)	15s. to 20s. per week	18s. "
Die sinking, engraving, &c. ..	Die sinkers ..	52s. 6d. to 80s. "	60s. "
	Engravers, general ..	52s. 6d. to 80s. "	55s. "
	Process engravers ..	50s. to 90s. "	55s. "
<i>Class IX.—Musical Instruments.</i>			
Organ, pianoforte .. ..	Organ builders, expert	.. ..	84s. per week
	" " ordinary	54s. to 72s. per week	54s. "
	Tuners and voicers ..	.. ..	72s. "
	Case makers ..	54s. to 60s. per week	54s. "
	Metal pipe makers ..	.. ..	60s. "



WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class X.—Arms and Explosives.</i>			
Ammunition .. ..	Cartridge operators (female)	12s. to 23s. per week	17s. per week
	Mechanics (fitters, &c.)	55s. to 72s. "	..
	Labourers ..	36s. to 45s. "	..
Explosive .. ..	Nitro-glycerine workers	42s. to 55s. "	48s. per week
	Acid workers ..	..	45s. "
	Labourers and carters	36s. to 42s. per week	36s. "
Fireworks, fuse .. ..	Fireworks makers (male)	37s. 6d. to 45s. "	..
	Fireworks makers (female)	10s. to 16s. "	..
<i>Class XI.—Vehicles, Fittings, Saddlery, Harness, &amp;c.</i>			
Coach, waggon, tramcar, spoke and felloe, wheelwright	Body makers ..	40s. to 60s. per week	45s. per week
	Wheelers ..	40s. to 50s. "	45s. "
	Smiths ..	40s. to 60s. "	48s. "
	Trimmers ..	40s. to 60s. "	45s. "
	Painters ..	40s. to 60s. "	48s. "
	Vicemen ..	35s. to 45s. "	40s. "
Carriage lamp .. ..	Lamp makers ..	44s. to 60s. "	48s. "
Cycle .. ..	Foremen ..	..	57s. 6d. "
	Assemblers ..	..	40s. "
	Filers ..	..	36s. "
	Frame builders ..	..	48s. "
	General repairers ..	..	42s. "
	Screw cutters and turning lathe men	..	50s. "
	Wheel builders ..	..	33s. "
Perambulator .. ..	Wickerworkers ..	..	48s. "
	Fitters up ..	30s. to 50s. per week	30s. "
Saddlery, harness .. ..	Saddle makers ..	48s. to 55s. "	48s. "
	Collar makers ..	48s. to 55s. "	48s. "
	Harness makers ..	48s. to 55s. "	48s. "
	Machinists (female) ..	..	20s. "
Saddle-tree, saddlers' ironmongery, &c. .. ..	Saddle-tree makers ..	40s. to 60s. per week	48s. "
Whip .. ..	Thong makers—male	..	44s. "
	" " female	..	30s. "
Horse shoeing, &c .. ..	Farriers ..	48s. to 52s. per week	48s. "
<i>Class XII.—Ship Building, Fittings, &amp;c.</i>			
Dock, slip .. ..	Shipwrights ..	..	12s. per day
	Foundry and shipsmiths	..	10s. "
	Painters ..	8s. to 9s. per day ..	8s. "
	Labourers ..	..	8s. "
	Stevedores' men and lumpers	..	1s. 3d. per hr.
Boat building .. ..	Wharf labourers ..	..	1s. 1½d. "
	Boat builders ..	48s. to 60s. per week	48s. per week
<i>Class XIII.—Furniture, Bedding, &amp;c.</i>			
Bedding, flock, upholstery ..	Bedding and mattress makers	46s. to 50s. per week	50s. per week
	Machinists (female) ..	20s. to 24s. "	24s. "
	Machine feeders ..	..	25s. "
	Sorters, &c. (female) ..	..	15s. "
	Upholsterers ..	48s. to 70s. per week	56s. "
Curled hair .. ..	Curled hair, horsehair workers	30s. to 70s. "	40s. "

## WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.		
		Range.	General Rate.	
<i>Class XIII.—continued.</i>				
Furniture, cabinet making, chair, billiard table	Cabinet, chair, and couch makers	48s. to 60s. per week	56s. per week	
	Carvers .. ..	48s. to 56s. "	56s. "	
	Turners .. ..	48s. to 56s. "	56s. "	
	Polishers .. ..	48s. to 56s. "	56s. "	
	Billiard table and cushion makers	54s. to 60s. "	56s. "	
	Machinists .. ..	48s. to 64s. "	.. ..	
	Slate rubbers .. ..	.. ..	45s. per week	
Picture frame .. ..	Joiners, gilders, ma- chinists	40s. to 60s. per week	45s. "	
	Mount cutters .. ..	30s. to 55s. "	40s. "	
	Compo workers (male)	25s. to 50s. "	30s. "	
	Stainers .. ..	25s. to 50s. "	30s. "	
	Compo workers (female)	12s. 6d. to 22s. 6d. "	15s. "	
	Fitters-up (female) ..	12s. 6d. to 25s. "	15s. "	
Venetian blind, window blind	Venetian blind makers	36s. to 48s. "	36s. "	
<i>Class XIV.—Drugs, Chemicals, By-products.</i>				
Baking powder .. ..	Skilled, undefined ..	50s. to 80s. per week	.. ..	
	Wrappers (females) ..	12s. 6d. to 20s. "	.. ..	
Blacking, blue, washing powder, soda	Skilled, undefined ..	50s. to 80s. "	.. ..	
	Unskilled .. ..	25s. to 37s. 6d. "	.. ..	
Chemical, drug, horse and cattle medicine	Wrappers (female) ..	12s. 6d. to 20s. "	.. ..	
	Makers of pharmaceuti- cal preparations	55s. to 80s. "	60s. per week	
	Others (unskilled) work- ing in drugs, &c; disinfectant makers	35s. to 45s. "	40s. "	
	Packers (female) .. ..	15s. to 22s. 6d. "	20s. "	
	Essence blenders .. ..	35s. to 55s. "	40s. "	
Essential oil .. ..	Artificial manure workers	35s. to 40s. "	36s. "	
Fertilizer .. ..	Paint and varnish makers	40s. to 90s. "	55s. "	
Paint, varnish, white-lead ..				
<i>Class XV.—Surgical and Scientific Appliances.</i>				
Optical, philosophical instrum- ent, &c.	Opticians, &c. .. ..	35s. to 60s. per week	45s. per week	
Surgical appliance, instrument	Surgical instrument makers	35s. to 70s. "	45s. "	
<i>Class XVI.—Timepiece, Jewel- lery, Platedware.</i>				
Electroplating .. ..	Electroplaters .. ..	56s. to 70s. per week	56s. per week	
	Metal polishers .. ..	42s. to 48s. "	42s. "	
	Lacquerers (female) ..	15s. to 30s. "	20s. "	
	Chainmakers, mount- ers, ringmakers, setters, &c.	50s. to 90s. "	55s. "	
Goldsmithing, jewellery, gold- beating	Watchmakers	45s. to 80s. "	50s. "	
Watchmaking, &c. .. ..				
<i>Class XVII.—Heat, Light, and Energy.</i>				
Electric apparatus .. ..	Engine-drivers .. ..	.. ..	60s. per week	
	Winders .. ..	48s. to 60s. per week	54s. "	
Electric light .. ..	Engine-drivers .. ..	.. ..	10s. 6d. per day	
	Firemen .. ..	8s. 6d. to 9s. 6d. per day	9s. per day	
	Dynamo attendants	.. ..	54s. per week	
	Electrical fitters .. ..	9s. to 11s. per day	10s. per day	
	Switchboard attendants	.. ..	9s. "	
	Linemen .. ..	7s. to 8s. per day	7s. 6d. "	
	Carboners .. ..	.. ..	7s. 6d. "	
	Patrolmen .. ..	.. ..	8s. "	
	Wires .. ..	8s. to 9s. per day	8s. "	
	Greasers .. ..	.. ..	7s. "	

## WAGES IN MELBOURNE, 1907—continued.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
<i>Class XVII.—continued.</i>			
Gas and coke .. ..	Stokers .. ..	8s. to 9s. per day ..	8s. 6d. per day
	Enginemen .. ..	8s. to 9s. ..	8s. ..
	Purifiers .. ..	6s. 4d. to 6s. 9d. ..	.. ..
	Sulphate workers ..	.. ..	8s. per day
	Stove repairers and fitters ..	8s. to 12s. 6d. per day ..	.. ..
	Service layers ..	8s. to 8s. 4d. ..	8s. 4d. per day
	Main layers .. ..	7s. 6d. to 10s. ..	.. ..
Match .. ..	Inspectors .. ..	8s. 9d. to 12s. 6d. ..	.. ..
	Labourers .. ..	6s. 9d. to 7s. ..	.. ..
	Vesta makers (female)	12s. 6d. to 29s. per week ..	17s. 6d. per week
	Box makers (female)	12s. to 24s. ..	15s. ..
	Storemen, casemakers, &c.	35s. to 45s. ..	40s. ..
Ironfounders' dust, charcoal dust	Labourers .. ..	42s. to 50s. ..	45s. ..
	Hydraulic power .. ..	Enginemen .. ..	8s. per day
.. ..	Firemen .. ..	.. ..	7s. 6d. ..
	Fitters .. ..	.. ..	9s. ..
	Main layers .. ..	.. ..	9s. ..
	Special labourers ..	.. ..	8s. ..
	Ordinary labourers ..	.. ..	7s. ..
	<i>Class XVIII.—Leatherware (excluding Saddlery and Harness.)</i>		
Leather Belting .. ..	Belt makers .. ..	48s. to 60s. per week ..	48s. per week
	Machinists .. ..	.. ..	48s. ..
Portmanteau, gladstone bag	Leather bag makers	45s. to 60s. per week ..	45s. ..
	Portmanteau makers	45s. to 60s. ..	45s. ..
	Bagmakers (female) ..	18s. to 20s. ..	20s. ..
	.. ..	.. ..	.. ..
<i>Class XIX.—Wares not elsewhere included.</i>			
Basket, wickerware .. ..	Wicker and bamboo workers .. ..	.. ..	48s. per week
Broom, brushware .. ..	Millet broom makers	35s. to 48s. per week ..	.. ..
	Hair broom, brush makers .. ..	45s. to 64s. ..	.. ..
Rubber goods (including cycle tyres)	Rubber workers, expert ..	60s. to 90s. ..	60s. per week
	.. ordinary .. ..	35s. to 50s. ..	37s. 6d. ..
	Trimmers, finishers, and small rubber goods makers (female) ..	15s. to 25s. ..	20s. ..
	.. ..	.. ..	.. ..
Quarry .. ..	Quarrymen, spawlers ..	48s. to 54s. ..	48s. ..
	Machine feeders and truck fillers .. ..	.. ..	45s. ..
	Stonebreakers .. ..	2s. to 2s. 6d. per c. yd. (2½ in.) ..	.. ..
	Labourers .. ..	.. ..	42s. per week

## WAGES IN MELBOURNE, 1907—continued.

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

Industry or Service.	Occupations.	Wages.		
		Range.	General Rate.	
Educational* .. ..	Governesses .. ..	£20 to £40 per annum	..	
	.. .. advanced	£40 to £60	..	
	Teachers in private schools—			
	Males (elementary)	£50 to £100	..	
	.. (advanced) ..	£100 to £300	..	
Clerical .. .. .	Females (elementary)	£20 to £40	..	
	.. (advanced)	£50 to £150	..	
	Bookkeepers .. ..	40s. to 70s. per week	..	
	Shorthand clerks and typists	30s. to 70s.	..	
	Shorthand clerks and typists (female)	20s. to 50s.	..	
Domestic servants*—males ..	Coachmen, footmen, grooms, gardeners	15s. to 30s.	20s. per week	
	Butlers .. ..	20s. to 40s.	25s. "	
	Cooks .. ..	15s. to 30s.	20s. "	
	Laundresses .. ..	15s. to 20s.	15s. "	
	Housemaids .. ..	10s. to 15s.	12s. "	
	Nursemaids .. ..	8s. to 17s. 6d.	12s. "	
	General servants ..	10s. to 17s. 6d.	14s. "	
	Girls .. ..	5s. to 10s.	7s. "	
	Hotel servants*—males ..	Barmen .. ..	20s. to 35s.	25s. "
		Waiters .. ..	20s. to 30s.	25s. "
Boots .. ..		12s. to 20s.	15s. "	
Ostlers .. ..		12s. 6d. to 25s.	18s. "	
Cooks .. ..		25s. to 60s.	30s. "	
Barmads .. ..		15s. to 25s.	20s. "	
Waitresses .. ..		10s. to 15s.	12s. 6d. "	
Housemaids .. ..		10s. to 15s.	12s. 6d. "	
Cooks .. ..		15s. to 30s.	25s. "	
Building, &c. .. ..		Bricklayers .. ..	11s. to 12s. per day	12s. per day
	Hod-carriers .. ..	8s. to 9s.	9s. "	
	Carpenters and joiners	9s. to 10s. 8d.	10s. 4d. "	
	Labourers .. ..	7s. to 8s.	8s. "	
	Masons .. ..	.. ..	10s. "	
	Painters and glaziers	7s. to 9s. per day	8s. "	
	Paperhangers .. ..	7s. to 9s.	8s. "	
	Plasterers .. ..	.. ..	10s. "	
	Plumbers .. ..	9s. to 10s. per day	10s. "	
	Plumbers, licensed sanitary	11s. to 12s.	11s. "	
	Signwriters and decorators	.. ..	10s. "	
	Slaters .. ..	.. ..	10s. "	
	Baking .. .. .	Bakers, bread (foremen)	54s. to 80s. per week	..
		.. ..	.. ..	54s. per week
		Pastrycooks .. ..	46s. to 56s. per week	..
General workers (male)		.. ..	30s. per week	
Butchering .. .. .	Ornamental workers (female)	20s. to 32s. per week	..	
	Slaughtermen .. ..	.. ..	60s. per week	
	Shopmen .. ..	57s. 6d. to 70s. per week	57s. 6d. "	
	General butchers ..	.. ..	45s. "	
	Small goods men ..	57s. 6d. to 70s. per week	57s. 6d. "	
Laundry .. .. .	Drivers .. ..	37s. 6d. to 45s.	..	
	Laundresses .. ..	20s. to 24s.	20s. per week	
Photography .. .. .	Operators .. ..	50s. to 120s.	..	
	Printers .. ..	30s. to 60s.	..	
	Retouchers (female) ..	20s. to 30s.	50s. per week	
	Finishers (female) ..	10s. to 20s.	20s. "	
	Makers of photographic materials	36s. to 80s.	15s. "	
	Finishers, packers—female	17s. 6d. to 25s.	45s. "	

\* With board and lodging.

The number of tanneries, fellmongery and wool washing establishments was increased by six during 1907, leaving 90 in operation. The hands employed increased from 1,657 to 1,893. The wages paid last year to the hands (excluding working proprietors) amounted to £140,436. The following table shows the approximate value of the machinery, plant, land, buildings, and improvements during each of the last eight years:—

VALUE OF TANNERIES: 1900 TO 1907.

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

Tanning operations during the past year were carried on in 2,778 pits, where 10,049 tons of bark were used. The output for the last eight years was:—

OUTPUT OF TANNERIES, ETC.: 1900 TO 1907.

Year.	Number Tanned of—			Sheep Skins Stripped.	Wool Washed (weight after washing).
	Hides.	Calf Skins.	Sheep and other Skins.		
				No.	lbs.
1900 ... ..	500,549	165,802	1,395,600	1,431,811	6,866,383
1901 ... ..	406,260	181,522	676,936	615,614	8,511,171
1902 ... ..	424,786	189,886	313,166	453,660	5,279,916
1903 ... ..	397,367	179,425	629,465	925,263	6,197,723
1904 ... ..	381,473	134,003	674,105	643,532	5,166,200
1905 ... ..	393,695	139,506	544,145	562,705	4,543,927
1906 ... ..	485,620	132,210	518,139	612,598	5,676,464
1907 ... ..	492,572	188,070	548,765	851,516	7,230,675

The columns under "Hides" and "Skins" include the number of skins dealt with in small tanneries. The work done in these small tanneries in 1907 was the tanning of 2,254 hides, 1,482 calf skins, and 7,423 sheep and other skins. The value of the leather imported into Victoria in 1907 was £260,772; of that exported, £384,190. The export of Victorian leather was valued at £317,235.

The leather industry.

The manufacture of leather in Victoria began at a very early date, and the industry was soon established on a firm basis, since excellent tan bark abounded. It has now assumed considerable proportions, 90 tanneries, employing 1,893 hands, being in actual existence. In 1907, there were tanned 492,572 cattle hides, and 188,070 calf skins, and 548,765 sheep and other skins. Including fellmongery and wool washing, the added value to material operated on during the year was more than a quarter of a million sterling. Raw hides and skins are imported from various other parts of the world for the purpose of being converted into leather, and the finished article is exported in considerable quantity.

Leathers manufactured in Victoria are treated on up-to-date methods, and no mineral adulteration obtains; and it is worthy of note that a brisk demand exists for them in British markets. The value of locally manufactured leather exported from Victoria to the United Kingdom was £133,951 in 1907, and £147,053 in 1906.

Soap and candle works.

There were fifteen soap and candle works in operation in 1907—the same as in the previous year. These factories employed 499 hands and eleven working proprietors. The amount of wages paid to the hands in 1907 was £43,429. The value of the machinery, plant, land, buildings, and improvements, and the quantity of soap and candles produced in the last eight years were as follow:—

SOAP AND CANDLE WORKS—VALUE AND PRODUCTS: 1900 TO 1907.

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

\* Not including soap made in small soap works not classified as factories, viz., 11,220 cwt. in 1900, 11,109 cwt. in 1901, 14,490 cwt. in 1902, 13,869 cwt. in 1903, 7,902 cwt. in 1904, 7,185 cwt. in 1905, 11,706 cwt. in 1906, and 10,527 cwt. in 1907.

The quantity of tallow used in the manufacture of soap and candles in factories was 139,536 cwt., and in minor works 3,946 cwt. in 1907.

The quantity of soap, perfumed and other, imported during 1907 was 3,061,394 lbs., valued at £64,617; the quantity exported was 5,727,818 lbs., of which 4,855,769 lbs. were Victorian made. The former was valued at £72,176; and the latter at £51,459. The quantity of candles imported was 950,410 lbs., valued at £19,206; and exported 1,465,134 lbs., valued at £31,848, including 1,114,525 lbs. of Victorian-made candles, valued at £24,642.

The brickyards and potteries at work during the year numbered 117. The hands employed numbered 1,714, and the working proprietors 124. The sum of £155,768 was paid to the employes in wages; and the value of land, plant, buildings, &c., was £308,658. The estimated value of the bricks made in these brickyards in 1907 was £228,948.

Brickyards,  
potteries,  
earthen-  
ware, &c.

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

BRICKS, POTTERY, PIPES, AND TILES: 1900 TO 1907.

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

\* In addition bricks made in small brickyards not tabulated as factories numbered 1,900,000 in 1900, 1,871,000 in 1901, 1,957,800 in 1902, 1,279,200 in 1903, 685,000 in 1904, 505,000 in 1905, 530,500 in 1906, and 710,000 in 1907.

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

The number of forest saw-mills working in 1907 was 119, being seven more than in 1906. The hands employed in 1907 numbered 1,548, the working proprietors 133, and wages paid amounted to £118,258. The approximate value of machinery, plant, land, buildings, improvements, together with the quantity and value of timber sawn during the last eight years appear in the following statement:—

Forest  
saw-mills,  
&c.

FOREST SAW-MILLS: 1900 TO 1907.

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

\* Value of land occupied by saw-mills only.

The other factories working in wood number 171, comprising—cooperage and cork-cutting works (16), employing 85 persons and 18 working proprietors, and paying £7,783 in wages; dairy and domestic implements and bellows (5), employing 86 persons and 5 working proprietors, and paying £7,910 in wages; saw-milling, moulding, and joinery works (108), employing 2,192 persons and 117 working proprietors and paying £196,779 in wages; mantel-piece (8), employing 218 persons and 9 working proprietors, and paying £13,094 in wages; and wood carving and turnery (34), employing 195 persons and 41 working proprietors, and paying £14,098 in wages. The total amount paid in wages to workers in wood, other than those employed in forest saw-mills, was £240,264; and the approximate value of land, buildings, machinery, &c., in use in the works £353,878.

Firewood,  
&c.

As the result of an investigation, it has been estimated that the approximate value of the production of firewood for consumption in a year is £385,000. In addition, there are supplies of railway sleepers, piles, posts and rails, shingles, and timber for mines obtained from the forests, but it has been found impossible to procure reliable information as to their value.

Bacon and  
ham curing.

There were 27 establishments curing bacon and hams in 1907, or one less than in 1906. The hands employed numbered 348, of whom 32 were working proprietors; and the wages paid to employés amounted to £27,472. Further details of the industry for the last eight years are as follow:—

#### BACON CURING: 1900 TO 1907.

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

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



In addition, the following quantities of bacon and hams were returned as having been cured on farms, viz. :—2,936,769 lbs. in 1900, 3,314,906 lbs. in 1901, 2,736,048 lbs. in 1902, 2,689,900 lbs. in 1903, 3,428,074 lbs. in 1904, 4,826,593 lbs. in 1905, 4,888,243 lbs. in 1906, and 3,691,739 lbs. in 1907. The total for the State in 1907 was thus 17,545,720 lbs.

The imports of bacon and hams in 1907 were 101,085 lbs., valued at £3,451; and the exports were 4,423,562 lbs., valued at £155,828, including 3,983,382 lbs., valued at £140,317, cured in Victoria. Imports and exports of bacon and hams.

The number of butter and cheese factories (including 1 butterine factory) exclusive of creameries was 224 in 1907. Of these factories, 175 made butter, 12 made butter and cheese, 4 made butter and concentrated milk, 31 made cheese only, 1 made concentrated milk only, and 1 made butterine. There were 165 creameries attached to these factories. The number of hands employed was 1,392, and of working proprietors 66, a combined decrease of 47 on the previous year. The approximate value of machinery, plant, land, buildings, and improvements was £561,685. The quantity of milk received at the factories and creameries increased from 77,520,000 gallons in 1895—the first year in which a record was kept—to 146,656,005 gallons in 1906, and 137,866,515 gallons in 1907. The output from butter and cheese factories during the last eight years was :— Butter and cheese factories.

BUTTER AND CHEESE FACTORIES: 1900 TO 1907.

Year.	Butter.	Cream Sold.	Cheese.	Concentrated Milk.
	lbs.	gallons.	lbs.	gallons.
1900 ...	48,839,996	38,274	2,508,843	263,138
1901 ...	40,824,928	50,092	2,073,940	266,083
1902 ...	32,927,546	23,739	2,128,835	243,904
1903 ...	40,707,377	17,882	3,602,988	236,581
1904 ...	55,058,391	7,242	2,599,443	226,810
1905 ...	52,274,639	16,513	2,447,938	232,310
1906 ...	63,231,222	20,332	2,852,687	309,138
1907 ...	59,050,231	25,442	2,691,957	397,388

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

Taking the returns of butter from all sources, the largest quantity, 68,088,168 lbs., was made in 1906, while in 1907 there were Total butter and cheese made.

63,746,354 lbs. made. The largest quantity of cheese returned was 5,681,515 lbs. in 1903, and the total quantity of cheese made in factories and on farms in 1907 was 4,397,909 lbs.

Imports and exports of butter and cheese.

In 1907, butter imported amounted to 1,944,514 lbs., valued at £83,203; the exports in the same year amounted to 42,578,114 lbs., valued at £1,917,910, of which 41,331,133 lbs. were Victorian produce, valued at £1,857,642. The imports of cheese in 1907 amounted to 283,881 lbs. in weight and £8,350 in value; the exports being 1,546,357 lbs. valued at £42,364—1,404,733 lbs., valued at £38,268, being Victorian cheese.

Meat freezing and preserving works.

The works for freezing and preserving meat numbered 14 in 1907, and employed 567 hands and 14 working proprietors, the wages of the employes amounting to £42,645. The approximate value of machinery, plant, land, buildings, and improvements in 1907 was £299,855. The output in each of the last eight years was as follows:—

#### MEAT FREEZING AND PRESERVING: 1900 TO 1907.

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

  

Year.	Preserved.			
	Beef.	Mutton.	Rabbits.	Fish.
	Cwt.	Cwt.	Cwt.	Cwt.
1900	5,593	2,198	24,874	831
1901	3,304	2,417	26,303	1,140
1902	7,705	14,913	16,537	2,134
1903	8,796	2,653	17,380	4,492
1904	4,248	491	14,977	535
1905	4,866	1,435	6,665	...
1906	6,011	1,700	496	...
1907	11,944	2,478	64	...

NOTE.—As well as the above, 15,249 calves, 1,959 pigs, and 25,952 hares were treated at freezing works in 1905; 6,947 calves, 2,580 pigs, and 33,397 hares in 1906; and 8,047 calves, 2,196 pigs, and 55,196 hares in 1907.

The following statement shows the imports and exports (including Inter-State transfers) of frozen and preserved meats, exclusive of bacon and ham, during 1907:—

Imports and exports of meats.

MEAT IMPORTED AND EXPORTED, 1907.

	Imports		Exports.	
	Quantity.	Value.	Quantity.	Value.
<b>Meats, Frozen—</b>		£		£
Mutton ... ..	3,784,600 lbs.	47,328	34,214,383 lbs.	487,119
Beef ... ..	309,107 "	3,598	1,256,028 "	15,395
Pork ... ..	102,934 "	3,256	141,589 "	2,738
Rabbits and Hares ... ..	20,544 "	235	...	155,153
Poultry ... ..	3,756 "	101	...	9,382
Game ... ..	3,373 "	204	39,256 "	1,580
Other meats ... ..	272,451 "	2,803	282,239 "	6,248
<b>Meats—Fresh and smoked</b> ... ..	422,387 "	2,267	229,164 "	2,875
„ Potted and concentrated ... ..	...	4,152	...	1,025
„ Preserved in tins ... ..	481,632 "	17,152	1,507,469 "	31,551
„ Not elsewhere included ... ..	1,366 cwt.	2,213	4,962 cwt.	14,130
<b>Total value</b> ... ..	...	83,309	...	727,196

The number of flour mills in 1907 was 68, employing 837 persons, of whom 49 were working proprietors. The wages paid to employes amounted to £85,544. Further particulars for eight years are given in the following table:—

Flour mills.

FLOUR MILLS: 1900 TO 1907.

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

Other grain operated on amounted to 81,658 bushels in 1900, 75,704 bushels in 1901, 126,765 bushels in 1902, 139,702 bushels in 1903, 157,403 bushels in 1904, 75,595 bushels in 1905, 111,719 bushels in 1906, and 123,885 bushels in 1907.

During the year 1907, 2,664,380 lbs. of Victorian biscuits, valued at £50,180, and 76,475 tons of Victorian flour, valued at £582,285 were exported; as well as 166,861 lbs. of biscuits, valued

Import and export of bread-stuffs.

at £3,923, and 941 tons of flour, valued at £7,779, received from outside the State. The imports were 241,218 lbs. of biscuits, valued at £6,356, and 1,655 tons of flour, valued at £13,894.

Jam, pickle,  
and sauce  
works.

There were 27 manufactories engaged in making jams, pickles, and sauces in 1907, and employing 1,342 persons, of whom 19 were working proprietors. The wages paid to the employes amounted to £67,065, and the value of machinery, plant, land, and buildings was £132,551. The materials used and the output for the last four years were as follow:—

#### JAM, PICKLE, AND SAUCE WORKS: 1904 TO 1907.

Year.	Fruit used.	Sugar used.	Jams and Jellies made.	Fruit Preserved.	Fruit Pulped.	Sauce made.	Pickles made.
	cwt.	cwt.	cwt.	cwt.	cwt.	pints.	pints.
1904 ...	199,306	97,057	190,151	22,408	115,295	2,143,555	920,163
1905 ...	175,119	107,382	192,579	35,395	44,450	2,029,644	859,160
1906 ...	195,902	107,194	203,038	43,138	56,619	2,943,380	889,938
1907 ...	218,276	105,518	190,211	33,819	95,885	3,257,471	1,253,280

Imports and  
exports,  
jams,  
sauces, &c.

In 1907, 1,918,576 lbs. of jams and jellies, valued at £27,233 were imported, as well as preserved and pulped fruit, valued at £28,107, and pickles valued at £19,661. In the same year the total exports of jams and jellies amounted to 6,740,830 lbs., and of fruit pulped to 147,430 lbs., the value of preserved fruits being £58,165, and of pickles and sauces £23,403. The Victorian produce represented in these exports was 5,627,322 lbs. of jams and jellies, and 135,585 lbs. of fruit pulped, preserved fruit valued at £48,717, and pickles and sauces valued at £18,173.

Sugar  
refineries.

There are two sugar refineries working in Victoria, full particulars of which for the last eight years will be found in the following table:—

#### SUGAR REFINERIES: 1900 TO 1907.

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

The raw sugar treated is imported, and during 1907 the imports of cane sugar into Victoria amounted to 1,421,705 cwt., of which 1,376,859 cwt. was from Queensland, and 34,726 cwt. from Mauritius. During the same year 223,084 cwt. of sugar and molasses was exported, of which 125,482 cwt. was to other States of Australia.

There were 37 breweries in 1907, or two less than in the previous year, but the hands employed, 1,037, were seven more than in 1906. The approximate value of the machinery, plant, land, buildings, and improvements, the quantities of materials used, and the beer made during the last eight years were as follow :—

BREWERIES: 1900 TO 1907.

Year.	Approximate Value of—			Materials Used—			Beer Made.
	Machinery and Plant.	Land.	Buildings and Improvements.	Sugar.	Malt.	Hops.	
	£	£	£	cwt.	bushels.	lbs.	gallons.
1900	204,840	230,530	269,410	111,863	598,094	648,648	16,162,550
1901	212,280	236,310	271,600	113,686	608,445	650,214	16,563,068
1902	211,036	228,990	273,325	115,258	625,441	677,262	17,162,680
1903	209,492	229,965	277,383	102,651	552,042	569,981	15,423,149
1904	231,687	229,965	291,180	100,430	530,771	544,524	14,927,873
1905	232,354	198,760	291,738	99,230	529,067	582,012	15,176,439
1906	235,980	197,985	289,982	101,692	533,531	623,249	16,409,465
1907	249,579	212,785	316,262	106,004	542,806	665,236	16,900,336

The number of distilleries was 7 in 1907, or the same as in 1906, the hands employed increased from 81 to 106 during the year; but the estimated value of the machinery, plant, land, buildings, and improvements decreased from £144,799 to £128,585. Although there has been some improvement in the last four years, the industry is still a long way behind what it was in 1900 and 1901. The materials used in manufacture, and the quantity of spirits distilled in the last eight years, were as follow :—

DISTILLERIES: 1900 TO 1907.

Year.	Materials Used.							Spirits Distilled.
	Wine.	Malt.	Wheat.	Maize.	Other Grain.	Sugar and Molasses.	Beer.	
	Gal.	Bush.	Bush.	Bush.	Bush.	lbs.	Gal.	Proof gal.
1900	160,301	91,223	2,353	3,692	26	4,652,480	...	439,117
1901	148,584	123,394	1,541	16,000	2,464	2,853,760	2,265	490,550
1902	128,272	16,744	87	11,880	2,507	1,780,016	...	190,644
1903	207,621	...	...	...	...	...	1,187	41,083
1904	293,836	...	...	...	...	...	...	58,745
1905	348,791	...	...	...	...	199,360	...	85,690
1906	324,005	13,038	...	...	...	101,024	...	94,674
1907	413,242	141,876	...	...	...	49,280	...	375,183

Spirits made by vine-growers for fortifying wine are not included in this table. The following quantities were distilled for that purpose during the last eight years in vineyards:—30,554 gallons in 1900, 38,058 gallons in 1901, 49,867 gallons in 1902, 56,851 gallons in 1903, 73,210 gallons in 1904, 78,163 gallons in 1905, 60,521 gallons in 1906, and 53,517 gallons in 1907.

Tobacco, &c.  
manufac-  
tories.

There were 13 tobacco manufactories in 1907, or one more than in the previous year, the number of hands employed was greater by 173, and the value of machinery, plant, land, buildings, and improvements increased from £229,190 to £251,364. The material used and the output also very materially increased, as will be seen from the particulars for the last eight years in the following table:—

TOBACCO FACTORIES: 1900 TO 1907.

Year.	Unmanufactured Leaf.			Quantity Manufactured of—			
	Imported Duty Paid.	Operated on.		Tobacco.	Snuff.	Cigars.	Cigarettes.
		Imported.	Colonial.				
	lbs.	lbs.	lbs.	lbs.	lbs.	No.	No.
1900	1,743,280	1,661,632	276,407	1,722,236	794	11,584,442	111,010,705
1901	2,742,653	2,542,580	230,113	2,365,831	1,133	13,025,840	125,693,600
1902	969,602	1,379,905	205,434	1,630,510	550	11,936,455	100,817,104
1903	1,910,553	2,052,100	304,049	2,390,976	813	9,336,975	58,928,535
1904	2,597,035	2,768,873	266,053	3,166,767	1,122	12,419,426	73,304,100
1905	3,271,866	3,597,887	265,219	3,981,357	1,051	14,324,536	103,673,300
1906	3,672,884	4,172,065	431,941	4,650,113	516	18,762,205	131,161,460
1907	3,883,146	4,479,073	332,271	4,782,061	993	17,740,782	146,699,600

NOTE.—The quantity manufactured in small factories (£5 licences) is included in the above table.

Woollen  
mills.

There were 9 woollen mills working in 1907, or the same as in 1906, but there was a general improvement in the business of the mills; the horse-power of the engines increased from 2,137 to 2,187, the number of hands from 1,434 to 1,589, and the approximate value of the machinery, plant, land, buildings, and improvements from £341,323 to £376,070 during the same period. The quantities of

wool and cotton used, and of goods manufactured in the last eight years are as follow :—

WOOLLEN MILLS: 1900 TO 1907.

Year.	Quantity of Scoured Wool Used	Quantity of Cotton Used.	Goods Manufactured—			
			Tweed and Cloth.	Flannel.	Blankets.	Shawls and Rugs.
1900	1,831,000	178,332	971,267	1,596,120	56,340	3,500
1901	2,023,509	250,184	818,975	2,229,617	49,302	4,600
1902	2,149,897	273,335	708,749	2,612,343	67,609	5,718
1903	2,130,100	368,749	662,381	3,201,275	77,601	6,565
1904	2,368,871	211,256	697,726	3,301,004	86,253	8,431
1905	2,663,587	499,630	738,924	3,355,013	145,106	8,516
1906	2,825,218	658,882	840,649	3,637,846	146,628	8,383
1907	3,311,097	914,003	867,789	4,088,383	199,743	12,089

The growth of the boot industry in the last thirty-seven years is shown as follows :—

Boot factories.

BOOT FACTORIES: 1871 TO 1907.

Year.	Number of Factories.	Number of Operatives.	Value of Land, Buildings and Machinery.	Wages Paid.
1871	29	1,471	£ 34,019	£ ...
1876	67	2,264	93,372	...
1880	105	3,919	196,809	...
1885	91	4,100	205,773	...
1890	92	3,787	226,950	...
1894	90	3,735	191,300	...
1898	89	4,019	179,945	...
1900	108	4,812	204,080	...
1903	136	5,267	229,396	299,176
1904	131	5,655	241,342	332,749
1905	136	5,910	243,549	330,023
1906	134	5,755	253,436	332,538
1907	139	6,303	292,474	368,503

The following table shows the quantities of goods manufactured in each of the last eight years:—

OUTPUT OF BOOT FACTORIES: 1900 TO 1907.

Year.	Goods Manufactured—	
	Boots and Shoes.	Slippers.
	No. of pairs.	No. of pairs.
1900	3,446,809	66,740
1901	3,125,799	92,174
1902	3,613,487	216,483
1903	3,574,761	150,012
1904	4,065,881	189,108
1905	3,951,033	165,892
1906	4,001,580	175,575
1907	4,290,122	182,039

NOTE.—The number of slippers returned for 1902, and each year since, includes canvas shoes and house-boots, which were not returned previous to these years.

In Victoria it was ascertained that the value of the boots and shoes produced in Victorian factories in the year 1900, at manufacturers' selling prices (that is, wholesale price) was £900,000 in round figures, equal to 15s. per inhabitant per year. Another 10d. per inhabitant was provided by imports. The value of the output of Victorian boot factories for 1907 was £1,322,893, which is an average of £1 1s. 3d. per head of the population. The value of the imported boots in that year was £111,292, or 1s. 9d. per head, about half of which was re-exported.

The progress of the boot manufacturing industry is a matter in which the pastoral and agricultural industries of the State are directly concerned, Victorian boot manufacturers being large consumers of leather made from the hides and skins produced in this State. The development of the leather and boot trades whereby raw material produced is made up locally, is of considerable importance in the prosperity of the State generally.

The imports to and exports from Victoria of boots and shoes at different periods in the past 66 years are shown as follow:—

TRADE IN BOOTS: 1842 TO 1907.

Year.	Imports.	Re-export of Imported Boots.	Victorian-made Exports.	Total Exports.
	£	£	£	£
1842 ...	5,457	...	...	...
1865 ...	632,448	118,646	4,894	123,540
1870 ...	303,437	45,840	588	46,428
1875 ...	202,532	61,941	14,106	76,047
1880 ...	100,941	68,011	54,131	122,142
1885 ...	109,998	21,263	25,482	46,745
1890 ...	127,286	21,402	15,645	37,047
1893 ...	40,993	12,467	6,828	19,295
1897 ...	33,962	5,420	48,213	53,633
1900 ...	49,295	6,489	61,463	67,952



TRADE IN BOOTS: 1842 TO 1907—*continued.*

Year.	Imports.	Re-export of Imported Boots.	Victorian-made Exports.	Total Exports.
	£	£	£	£
1902 ... ..	80,537	8,515	186,224	194,739
1903 ... ..	79,704	14,537	237,127	251,664
1904 ... ..	95,078	47,147	280,895	328,042
1905 ... ..	93,879	45,733	294,016	339,749
1906 ... ..	101,308	47,853	335,789	383,642
1907 ... ..	111,292	58,458	414,640	473,098

It is interesting to note the value of boots exported from Victoria to each of the other States of the Commonwealth, and how the trade tends to develop with each. The particulars in the last three years are as follow:—

## EXPORTS OF BOOTS TO AUSTRALIAN STATES: 1905 TO 1907.

State to which exported.	1905.	1906.	1907.
	£	£	£
New South Wales ...	143,767	138,216	193,280
West Australia ...	65,029	81,136	77,369
Tasmania ...	49,803	61,966	68,743
South Australia ...	39,947	54,032	75,041
Queensland ...	32,407	34,700	40,093
	330,953	370,050	454,526

The number of electric light works was 11 in 1907, or two more than in 1906, and there was a marked advance in the industry in all other ways. The number of hands employed was 398, against 363 in the previous year, and the horse-power of the engines used was raised from 9,130 to 9,948. Other particulars relating to this class of works for the last eight years are given in the following table:—

Electric light works.

## ELECTRIC LIGHT WORKS: 1900 TO 1907.

Year.	Approximate Value of—			Electricity Supplied.
	Machinery and Plant.	Land.	Buildings and Improvements.	
	£	£	£	British Units.
1900 ...	145,580	16,060	37,700	6,100,519
1901 ...	220,690	15,240	86,730	6,680,214
1902 ...	204,022	10,000	67,661	6,450,560
1903 ...	198,751	9,750	76,733	5,626,568
1904 ...	374,850	12,085	98,809	6,644,343
1905 ...	416,847	13,709	107,543	7,698,394
1906 ...	491,171	14,378	129,951	9,760,046
1907 ...	496,314	10,048	130,836	12,542,614

Gasworks.

Forty-eight gasworks were in operation in 1907, the same number as in the previous year. The quantities of coal used, of gas made, and of coke produced, during the last eight years are shown hereunder:—

## GASWORKS: 1900 TO 1907.

Year.	Coal Used.	Gas Made.	Coke Produced.
	tons.	cubic feet.	tons.
1900 ...	153,455	1,516,531,100	77,255
1901 ...	159,374	1,567,649,380	84,546
1902 ...	169,356	1,642,652,799	92,308
1903 ...	166,018	1,628,889,400	94,947
1904 ...	166,307	1,649,396,000	97,357
1905 ...	168,007	1,707,184,000	98,559
1906 ...	178,251	1,810,405,800	105,909
1907 ...	189,190	1,975,892,500	112,050

In addition to the coal used, 108,531 gallons of oil were also consumed in 1902, 105,651 in 1903, 117,114 in 1904, 137,247 in 1905, 154,486 in 1906, and 163,215 gallons in 1907.

Total production.

The following is a return of the value of Victorian production for the years 1905, 1906, and 1907, which shows a total of £37,274,654 in 1907, an increase on the previous year of £725,448, or 2 per cent.

## VALUE OF VICTORIAN PRODUCTION: 1905 TO 1907.

Produce.	Value in		
	1905.	1906.	1907.
<i>Cultivation.</i>	£	£	£
Wheat ... ..	3,366,290	3,109,980	2,443,906
Oats ... ..	678,040	810,851	791,162
Barley, Malting ... ..	126,402	140,425	185,498
Barley, Other ... ..	56,426	65,407	56,009
Maize ... ..	88,167	70,496	87,973
Other Cereals ... ..	52,693	47,391	45,947
Grass and Clover Seed ... ..	8,320	4,519	2,671
Potatoes ... ..	597,426	333,678	383,145
Onions ... ..	133,638	79,800	108,155
Other Root Crops ... ..	39,914	24,233	36,842
Hay ... ..	1,641,936	1,681,768	3,023,128
Straw ... ..	35,384	37,906	133,898
Green Forage ... ..	85,103	91,255	149,742
Tobacco ... ..	1,944	1,529	3,967
Grapes, not made into wine, raisins, &c.	27,071	38,877	37,243
Raisins, ordinary ... ..	43,715	89,577	56,737
" sultanas ... ..	45,631	90,896	53,511
Currants ... ..	11,952	21,994	19,296
Wine ... ..	86,322	110,761	68,280
Hops ... ..	11,563	12,960	5,502

## VALUE OF VICTORIAN PRODUCTION: 1905 TO 1907 —continued.

Produce.	Value in		
	1905.	1906.	1907.
<i>Cultivation—continued.</i>	£	£	£
Other Crops... ..	27,735	28,509	36,082
Fruit grown for Sale in Or- chards and Gardens	369,500	476,215	411,412
Fruit in Private Orchards and Gardens	9,924	9,870	9,798
Market Gardens ... ..	183,325	197,650	225,550
<b>Total ... ..</b>	<b>7,728,421</b>	<b>7,576,547</b>	<b>8,375,454</b>
<i>Dairying and Pastoral.</i>			
Milk Consumed in natural state	697,276	737,719	749,618
Butter made ... ..	2,496,580	2,978,860	2,855,305
Cheese made ... ..	102,563	116,860	109,948
Cream made (not for butter) ...	15,580	20,083	22,430
Concentrated Milk ... ..	40,654	59,515	78,078
Horses produced ... ..	176,267	335,538	273,700
Cattle " ... ..	2,064,000	2,480,226	2,056,198
Sheep " ... ..	1,599,800	1,913,202	1,716,908
Pigs " ... ..	331,140	325,381	424,660
Wool " ... ..	3,313,550	3,869,000	3,878,431
<b>Total ... ..</b>	<b>10,837,410</b>	<b>12,836,384</b>	<b>12,165,276</b>
<i>Mining.</i>			
Gold ... ..	3,173,744	3,280,478	2,954,617
Coal ... ..	79,060	80,283	79,731
Stone from Quarries (including limestone)	81,565	63,272	70,945
Salt (crude) ... ..	10,440	9,273	} 41,766
Other Metals and Minerals ...	16,646	21,550	
<b>Total ... ..</b>	<b>3,361,455</b>	<b>3,454,856</b>	<b>3,147,059</b>
<i>Forest Produce.</i>			
Timber (Forest Saw-mills only)	142,905	153,309	181,590
Firewood (estimated) ... ..	380,000	385,000	391,000
Bark for Tanning ... ..	63,820	64,260	62,580
<b>Total ... ..</b>	<b>586,725</b>	<b>602,569</b>	<b>635,170</b>
<i>Miscellaneous.</i>			
Honey and Beeswax ... ..	16,206	39,015	14,380
Poultry production (estimated)	1,491,550	1,500,550	1,525,000
Rabbits and Hares ... ..	183,560	164,547	132,823
Fish ... ..	69,034	67,775	66,621
<b>Total ... ..</b>	<b>1,760,350</b>	<b>1,771,887</b>	<b>1,738,824</b>
<b>Total Value of Primary Products</b>	<b>24,274,361</b>	<b>26,242,243</b>	<b>26,061,783</b>
<b>Manufacturing—Added value*</b>	<b>9,661,250</b>	<b>10,306,963</b>	<b>11,212,871</b>
<b>Grand Total ... ..</b>	<b>33,935,611</b>	<b>36,549,206</b>	<b>37,274,654</b>

\* Exclusive of butter and cheese factories and forest saw-mills (as regards Victorian timbers) included above.

