PRODUCTION.

Land Settlement, etc.

The return for 1906 received from the Lands Department shows the total area of the State to be 56,245,760 acres, of which 26,836,043 acres are private lands, 22,964,929 acres being alienated in fee simple, and 3,871,114 acres in process of alienation. Crown lands total 29,409,717 acres, and comprise roads in connexion with lands alienated and in process of alienation, 1,643,436 acres; agricultural college and water reserves, 445,391 acres; State forests and timber reserves, 4,655,499 acres; permanently reserved for public purposes, 1,592,400 acres; other reserves, 601,017 acres; unsold land in towns, &c., 1,795,641 acres; in occupation under grazing area leases, 3,533,792 acres; Mallee pastoral leases, 1,731,217 acres; all other licences and leases, 653,284 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, 1906.

County.	Classification.				
	First.	Second.	Third.	Auriferous.	Pastoral.
	acres.	acres.	acres.	acres.	acres.
Buln Buln	11,786	23,121	46,285	376	..
Croajingolong	..	..	489,500	14,150	593,200
Dargo	..	..	72,500	97,500	239,100
Tambo	..	..	179,830	3,800	366,950
Tanjil	..	..	27,450	49,500	360,000
Wonnangatta	..	319	113,042	..	944,070
Bogong	1,439	7,311	156,315	143,844	216,100
Benambra	..	..	134,050	90,320	421,580
Delatite	638	27,183	181,769	71,189	178,800
Moira	132	..	6,503	..	..
Anglesey	..	4,031	28,240	8,192	..
Bourke	..	3,261	..	..	..
Dalhousie	20	794	3,537	8,652	..
Evelyn	252	26,545	..	10,913	..
Mornington	..	2,622	36,783	..	..
Bendigo	..	363	1,556	20,873	..
Rodney	..	165	1,766	3,809	..
Borung	20	1,256	43,943	27,715	5,147
Gladstone	20	2,122	6,800	83,821	490
Lowan	..	177	52,819	..	11,880
Kara Kara	39	3,062	2,193	30,059	..
Talbot	1,605	551	440	81,579	287
Tatchera	..	86	..	..	..
Heytesbury	..	960	172,274	..	..
Polwarth	1,370	11,790	37,432	..	..
Grant	..	..	28,109	23,070	..
Grenville	..	40	..	29,310	..
Ripon	..	100	11,775	9,540	..
Normanby	..	212	77,651	..	..
Dundas	425	40	26,685	..	11,150
Follett	..	147	15,286	..	..
Total	17,746	116,258	1,948,533	808,212	3,348,754

NOTE.—The figures in this table are exclusive of 3,292 acres of swamp or reclaimed lands, and 18,245 acres of lands that may be sold by auction.

In addition there are 6,497,000 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, 12,758,040 acres.

Land Acts 1903, 1904 and 1905.

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.

Agricultural and grazing lands.

Crown lands of the first-class, of which there are now 17,746 acres available for selection, are situated principally in the counties of Buln Buln, Bogong, Talbot, and Polwarth, 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 116,258 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 1,948,533 acres available for selection.

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.

Agricultural and grazing allotments.

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 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 3,348,754 acres, situated in the counties of Wonnangatta, Croajingolong, Benambra, Tambo, Tanjil, Dargo, Bogong, Delatite, Lowan, Borung, and Dundas. 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 3,292 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 18,245 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.

Auriferous lands.

The "auriferous lands" comprise 808,212 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.

Annual grazing licences.

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.

Other leases, purchases, &c.

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.

Mallee lands.

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 the Murray for irrigating, there will be great scope for successful settlement in this country. There are now 6,497,000 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 1¼ 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 1906.

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; and 344,519 acres in 1906; 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; and £375,296 in 1906. 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; and 179,755 in 1906.

Pastoral occupation of Crown Lands.

The pastoral occupation of Crown lands on 31st December, 1906, was as follows:—

Number of Licences and Leases	24,392
Area (acres)	16,683,992
Annual Rental	£58,085

"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 1906 there were 603 applications to bring under the Act land amounting to 70,775 acres in extent, and to £1,071,861 in value, whilst the land brought under the Act during the year by application amounted to 93,397 acres in extent, and to £1,049,676 in value. Up to the end of 1906, there had been brought under the Act 2,374,491 acres valued at £49,075,227. The number of certificates of title issued in 1906 was 9,954, and the fees received under the Act amounted to £40,852.

Assurance fund.

When application is made to bring land under the Transfer of Land Act, a contribution of ½d. 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. Since its first formation, 30 claims have been made, and sums amounting to only £6,457 (including costs) have been paid to claimants.

Total amount realized by sale of lands.

From the period of the first settlement of the State to the end of 1906, the amount realized by the sale of Crown lands was £31,936,735, 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.

Village settlement.

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 of 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.

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 54,404 acres, and this is divided among 1,752 settlers, giving an average of 30 acres each. At the time of the last report (July, 1906), there were 1,576 settlers actually residing, and there were 176 not residing, but improving, making a total of 1,752 in occupation. Including wives and families, the total souls numbered 7,497. On 30th June, the stock numbered 10,557 bullocks, cows, and calves, 2,387 horses, 27,348 fowls, 2,545 pigs, which, together with other stock (goats, sheep, &c.) were valued at £89,580. The area under cultivation was 25,214 acres, and the total value of improvements effected was £265,202.

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, 1906, £26,860 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 4½ 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 31½ 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.

Estates purchased under Act of 1898.

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

(1) The Wando Vale Estate, containing 10,446 acres, situated in the County of Dundas, was purchased on the 23rd March, 1900, for £63,984.

(2) The Walmer Estate, 13,769 acres, in the County of Borung, on the 23rd October, 1900, for £44,750.

(3) Brunswick Lands—91 acres, in the County of Bourke, on the 7th November, 1900, for £2,644.

(4) The Whitfield Estate—4,246 acres, in the County of Delatite, on the 1st November, 1900, for £36,095.

(5) The Eurack Estate—5,108 acres, in the County of Grenville, 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 Administration.

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, £100, and the agricultural labourers £200. 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 73 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; residence of eight months each year; 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, and no 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 upon the allotment, and within two years fence the allotment. Advances out of the fund up to £50 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 cottages to be erected at a cost not exceeding £100 each.

Closer Settlement Act 1906.

The passing of *The Closer Settlement Act* 1906 has gone a long way towards helping the farmer with only limited capital on to a holding, and provision has been made for the extension of a lease, or the suspension of payments other than that provided for in the principal Act.

The clause defining deferred payments now reads:—

> "Sec. 49, sub-sec. 11.—A condition that when a lessee is unable at the end of any half-year to pay his instalments, the Board may, if the lessee has complied with the conditions of his lease, suspend the payments of such instalments as will not exceed 60 per centum of the value of the improvements effected thereon over and above any encumbrance thereon, and allow him to pay the arrears of instalments and interest thereon in one amount or spread over a definite time, or may extend the lease for a corresponding time."

Provision has also been made to enable those lessees under the original sections of the *Land Act* 1898 to transfer their leases to the present Act and obtain the benefits and privileges which the new legislation allows.

The Board is empowered to assist lessees to effect permanent improvements, such as dwelling houses and outhouses, up to a maximum amount of £250. These advances must be repaid in equal half-yearly instalments, extending over a period not exceeding twenty years, and bear interest at the rate of 5 per cent.

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.

Estates purchased under Act of 1904.

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, 1907) 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	70,540	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	45,000	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 ...	367	Near Port Fairy	3,200	8
Exford ...	8,054	Near Melton	64,160	54
Colbinabbin ...	19,171	Near Rushworth	110,198	68
Pirron Yaloak	1,050	Near Colac	23,686	being subdivided
Numurkah ...	2,360	Adjoining Numurkah ...	18,900	18
Allambee ...	5,006	Near Warragul	31,744	32
Keayang ...	1,494	Near Terang	14,965	12
Staughton Vale	9,830	Near Bacchus Marsh ...	66,465	bein subdivided
Werneth ...	6,450	Near Cressy	30,637	being subdivided

Four of the properties, viz., The Willows, Greenvale, Ercildoune, and Dura, embracing an area of 2,271 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 properties, with an area of 207,789 acres, subdivided into 920 farm allotments and 432 workmen's homes allotments, of which only ten of the former and eleven of the latter remain unsold. Then there are the three properties recently acquired, embracing an area of 17,330 acres, which are now being subdivided, and will probably be made available early next year.

The sum of £163,203 has been repaid to the Closer Settlement Fund up to 30th June, 1907, and of this amount £71,440 has been transferred from that fund to revenue to meet interest due to stockholders; £59,727 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, 1907, being £17,009. The balance of unredeemed stock is now £1,269,508.

Closer Settlement at 1903 and 1906

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 cultivators thereon up to the close of 1906, with corresponding information for the year 1903.

CLOSER SETTLEMENT, 1903 AND 1906.

		At end of—	
		1903.	1906.
Estates Acquired—			
Number			36
Area	acres	33,77	190,036
Cost	£	214,064	1,359,590
Made Available and Occupied—			
Number of Holdings		289	1,014
Area	acres	33,774	119,876
Resident Population		887	3,265
Area in course of preparation or occupation	acres	...	70,160

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

The increase in the land made available and occupied between the years shown in the table represents provision for 725 families, the area of the allotments averaging 117 acres at the close of 1903, and 118 acres at the close of 1906.

Production on Closer Settlement Estates.

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

PRODUCTION ON CLOSER SETTLEMENT ESTATES: 1904-5 AND 1906-7.

		1904–5.	1906–7.
		4 Estates.	18 Estates
Area of Estates	acres	33,571	117,482
Area under crop	„	8,238	19,085
Area in fallow and sown grasses	„	2,773	13,585
Hands employed, male	No.	270	728
Hands employed, female	„	160	388
Area under cereals	acres	7,567	14,120
Area under root crops	„	132	423
Produce—			
Grain	bushels	139,300	227,040
Hay	tons	2,298	5,511
Stock—			
Horses	No.	885	2,593
Cattle	„	4,212	10,245
Sheep	„	11,511	35,686
Pigs	„	1,692	1,585
Cream separators	„	27	145
Butter	lbs.	7,402	27,158
Hams and bacon	„	14,966	28,418
Wool	„	61,949	152,474
Stock slaughtered	No.	1,701	2,216

Workmen's homes and agricultural labourers' allotments.

At Brunswick, 4 miles from the city, 91 acres of land were purchased on 17th October, 1900, for £2,644, where workmen might devote their spare time and labour to create for themselves comfortable homes under healthy and cheerful conditions. After providing for roads and public reserves, it was subdivided into 56 workmen's homes allotments, and made available for application on 4th February, 1901, under certain conditions, amongst which residence is compulsory for the first six years and improvements of a stated value have to be effected. All these allotments have been disposed of and the general appearance of the district has been quite changed. Two bridges have been erected by the Department, and the Metropolitan Board of Works has laid down water mains along the principal streets. A public hall and also a fire brigade station have been erected on the estate.

At Warrnambool 46 acres of Crown land were subdivided and made available, 17th June, 1903, in 28 workmen's home allotments. At Bacchus Marsh, the old police paddock, of 13 acres, was subdivided into 1-acre allotments, and disposed of to local workingmen, 5th November, 1903. At Leongatha, 53 acres of the southern portion of the labour colony were subdivided into five small farm allotments, and made available, 27th November, 1903. Since then the Government has secured the Dal-Campbell and Cadman's Estates, of 45 and 18 acres respectively, adjoining the Brunswick subdivision, and made them available for settlement; also 30 acres in the city of Footscray, which have been cut up into ¼-acre allotments and disposed of. At Mortlake, 2,349 acres of Crown lands were subdivided into thirteen farm allotments and fifteen agricultural labourers' allotments, and disposed of on 18th April, 1905.

Water Supply and Irrigation.

Victorian Waterworks.

The Victorian Waterworks are of two classes, one being designed chiefly for domestic supply, the other for irrigation and stock purposes. The most important of the former group are the Yan Yean Waterworks, supplying Melbourne and suburbs, which were transferred from Government control to the Melbourne and Metropolitan Board of Works in 1891. The Coliban, Geelong, Broken River, Kerang Lakes, and Mallee Supply Works, also engaged in domestic supply, were vested in the States Rivers and Water Supply Commission in 1906. Other works concerned with domestic supply are controlled by Waterworks Trusts and municipal corporations. The

irrigation works are, with one exception, viz., the First Mildura Irrigation and Water Supply Trust, controlled by the State Rivers and Water Supply Commission. The following table contains a summary of all waterworks controlled by the State Rivers and Water Supply Commission, Trusts, Corporations, and the Metropolitan Boards of Works, and the reservoirs for the supply of water on gold-fields:—

WATERWORKS—COST, STORAGE CAPACITY, ETC., AT 30TH JUNE, 1906.

Controlling Bodies.	Purposes of Supply.	Storage Capacity of Reservoirs.	Capital Expenditure on Works.
		Gallons.	£
State Rivers and Water Supply Commission—			
Coliban System	Domestic and Mining	8,825,037,000	1,171,941
Geelong	Domestic	570,780,000	442,322
Broken River	Stock, Domestic, &c.	...	14,853
		Cubic feet.	
Kerang Lakes	" " ...	4,000,000,000	9,587
Mallee Supply	" " ...	2,106,000,000	153,647
Goulburn River	Irrigation, &c. ...	9,500,000,000	701,190
Loddon River	" " ...	610,000,000	153,674
Kow Swamp	" " ...	1,780,000,000	180,400
Irrigation and Water Supply Districts (19)	" " ...	...	803,722
Loddon United Waterworks Trust	Stock, Domestic, &c.	...	25,893
First Mildura Irrigation and Water Supply Trust ...	Irrigation, &c. ...	...	58,700
		Gallons.	
Waterworks Trusts (81) ...	Stock, Domestic, &c.	1,914,987,500	1,367,565
Municipal Corporations (25)...	Domestic	1,645,591,000	669,684
Melbourne and Metropolitan Board of Works *	" ...	6,508,000,000	3,768,270
Municipal and other control—on Goldfields	Mining and Domestic	438,100,000	55,860
Abolished Irrigation and Water Supply Trusts (8)	Irrigation, &c. ...	...	31,952
Miscellaneous Expenditure ...	...	...	102,720
Total	...	...	9,711,980

* For further particulars relating to the Melbourne and Metropolitan Board of Works, see p. 172, Part III. of this work.

The capital expenditure given above is the actual expenditure on the works, and excludes cost of floating loans, whilst the expenditure on the Mallee Supply and Goulburn River Works includes expenditure additional to that on free head-works shown in the following table.

Advances and expenditure for waterworks.

The succeeding table summarizes the amounts disbursed 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, 1906.
	£	£	£	£	£	£
Irrigation.						
State Works	..	..	2,799*	..	..	1,027,909
Irrigation and Water Supply Districts (19)	788,318	..	15,404	540,404	5,480	242,434
First Mildura Irrigation and Water Supply Trust ..	58,700	..	..	..	..	58,700
Abolished Trusts (8) ..	31,709	..	243	31,679	30	..
Total	878,727	..	18,446	572,083	5,510	1,329,043
Domestic, Mining, and Stock.						
State Works	..	..	..	..	..	1,837,814
Loddon United Waterworks Trust	21,771	..	4,122	1,717	..	20,054
Waterworks Trusts (81) ..	1,289,204	6,870	78,361	333,947	56,791	905,336
Municipal Corporations (25)	669,684	43,633	..	165,870	81,052	466,395
Melbourne and Metropolitan Board of Works ..	2,389,934	..	..	..	541,271	1,848,663
Gold-fields' Reservoirs ..	..	..	..	..	..	55,860
Miscellaneous	..	..	..	..	..	102,720
Total	4,370,593	50,503	82,483	501,534	679,114	5,236,852
Grand Total ..	5,249,320	50,503	100,929	1,073,617	684,624	6,565,885

* 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, 1906, amounted to £45,897, viz., £7,000 against irrigation Districts, £15,881 against the First Mildura Trust, £3,401 against the Loddon United Trust, £17,029 against Waterworks Trusts, and £2,586 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, promises to inaugurate a new era in the history of water supply and conservation in Victoria. The centralization of effort

and systematization of policy and management, the want of which is regarded as the retarding influence of past years, are secured under the new legislation, which provides a Board of three Commissioners to administer the new policy. The irrigation trusts (except First Mildura) are abolished, their works and duties being transferred to the new body. Many of the duties of the Water Supply Department also go over. The Commission has power to ultimately impose rates and charges upon the land sufficient to cover the cost of maintenance and management, and interest on the capital outlay. It controls the Coliban, Geelong, Kow Swamp, Goulburn, Loddon, Lake Lonsdale Reservoir, the Mallee water supply, the Long Lake scheme, and other smaller works of the State. All rights in natural waters are vested in the Crown, and the Commission is empowered to take proceedings against persons or corporations who divert water from water-courses, except as provided by the Act, the presumption of grant to do so by length of use being annulled. Pollution and obstruction of water in water-courses are offences, but rights under the Mines Acts are not interfered with. The Board of Land and Works is to construct waterworks, and, on completion, transfer them to the Commission as State works of water supply. The districts of the abolished irrigation and water supply trusts have become districts under the jurisdiction of the Commission; and new districts may be constituted, or the boundaries of old ones altered, by the Governor in Council. A register of all lands within each such district, to be open for public inspection, is to be drawn up, arranging the lands (other than swamp lands) in classes not more than three in number. Occupiers of all lands on the register for any district are entitled to a supply of water for the domestic and ordinary use of persons dwelling thereon, and for watering cattle and other stock on a scale of quantities to be fixed by the Commission. After such provision is made, the remainder of the available water may be appropriated by the Commission for irrigation. Not less than one-half nor more than three-fourths of such available remainder may be apportioned as water rights, *pro ratâ* on the basis of area, to all lands other than swamp lands within the district commanded by gravitation with water from the works. The occupiers of lands to which such water rights are apportioned are to be liable to an annual charge for the water for irrigation. In addition to such *pro ratâ* rates, applications may be made by orchardists and vignerons, and extra water rights granted to them of such water as will reasonably irrigate their trees at the same rate as that charged for the *pro ratâ* rights. These extra water rights lapse one year after the lands have ceased to be used for orchards or vineyards. Thereafter, further water supply may be granted to other lands by agreement with the occupiers, the rate per unit of volume being as in the cases of the *pro ratâ* and extra water rights. Sale of water by agreement may be made to persons or corporations. A general water rate is leviable upon all lands, for which purpose they may be arranged in not more than three divisions, regard being had to the benefits received—

lands commanded by gravitation being in the first or highest division. Water may also be supplied, upon charge, outside district, but no supply of water is permitted until the requirements of all persons within the district entitled to a supply for domestic and ordinary use, and for watering stock, have been met according to their valuation. The Commission or other authority has power to determine the times and manner of the supply for domestic and stock purposes of an owner or occupier who refuses to make proper provision, as required by the Commission or trust, for the reception of his water. Where the available supply is insufficient, a proportionate supply will be arranged. Lands taken for water purposes may be compensated for under the provisions of the *Lands Compensation Act* 1890.

By the *Water Act* 1905, in addition to other powers and duties imposed, the control and management of the Works, Irrigation and Water Supply Districts, Waterworks Districts, and the property of the Waterworks Trust, with the amount of capital cost and other details set out in the following tables were vested in the State Rivers and Water Supply Commission.

WATERWORKS VESTED IN THE STATE RIVERS AND WATER SUPPLY COMMISSION.

	Capital Cost at 30th June, 1906.
(1) STATE WORKS.	
(*a*) *Free Head-works.*	£
Broken River Works	14,853
Goulburn River Works and Waranga Reservoir	693,835
Kow Swamp Works	180,400
Loddon River Works	153,674
Lake Lonsdale Reservoir	48,639
Lower Wimmera Compensation Works	8,558
Long Lake Pumping Works	27,347
Kerang North-west Lakes Works	9,587
Total	1,136,893
	Capital Sum standing at Debit 30th June, 1906.
(*b*) *Other State Works.*	£
Coliban System of Waterworks	1,219,735
Geelong Water Supply Works	456,450
Mallee Distribution Works	For capital sum see Sea Lake Waterworks District below
Mallee Local Storage Works	
Total	1,676,185

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

(2) IRRIGATION AND WATER SUPPLY DISTRICTS.	Total Advances.	Capital written off by Acts Nos. 1625 and 1651.	Paid in Redemption to Treasury.	Capital Sum Standing at Debit 1st May, 1906.
	£	£	£	£
Bacchus Marsh ..	14,406	8,906	213	5,287
Benjeroop and Murrabit ..	12,936	7,200	64	5,672
Boort East	21,566	14,866	142	6,558
Boort North	6,978	4,867	53	2,058
Campaspe	61,700	52,685	305	8,710
Cohuna	151,213	93,968	512	56,733
Dry Lake	1,704	686	297	721
Gunbower West ..	5,889	..	..	5,889
Kerang East	14,025	6,984	18	7,023
Kerang South	633	..	15	618
Koondrook and Myall ..	15,469	12,080	53	3,336
Leaghur and Meering ..	5,043	2,543	78	2,422
Macorna North	18,558	8,082	81	10,395
Marquis Hill	14,477	9,076	2	5,399
Rodney	223,269	149,949	2,901	70,419
Swan Hill	24,800	19,799	163	4,838
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 ..	788,318	540,404	5,480	242,434

(3) WATERWORKS DISTRICTS.	Capital Sum standing at Debit 30th June, 1906.
	£
Long Lake	33,549*
Sea Lake	46,443

(4) WATERWORKS TRUST.	Total Advances.	Capital written of by Act No. 1625.	Capital Sum standing at Debit 30th June, 1906.
	£	£	£
Loddon United	21,771	1,717	20,054

NOTE.—In this table the figures given as capital sum standing at debit contain in the cases of Coliban and Geelong an allowance for cost of floating loans; but in all other cases no such allowance has been made.

* Including £27,347 for Free Head-works for which see page 486.

A statement of the moneys received and disbursed in respect of State Works for the year ended 30th June, 1906, as to the first ten months by the Victorian Water Supply Department, and as to the last two by the Commission, and in respect of Irrigation and Water Supply Districts for the two months ended 30th June, 1906, follows.

STATEMENT OF RECEIPTS AND EXPENDITURE, 1905-6.

——	Receipts. 1.	Expenditure. Annual Votes, including Proportion of Head Office Expenses, 2.	Deduct Expenditure on Capital Works. 3.	Net Expenditure on Management and Maintenance. 4.	Excess. Revenue over Expenditure as per Column 4. 5.	Excess. Expenditure over Revenue. 6.
	£	£	£	£	£	£
Coliban Works ..	34,045	14,832	4,394	10,438	23,607	..
Geelong Works ..	13,470	5,081	1,696	3,385	10,085	..
Goulburn Works ..	204	2,352	..	2,352	..	2,148
Loddon River Works	28	325	..	325	..	297
Kow Swamp Works ..	215	1,880	..	1,880	..	1,665
Broken River Works ..	7	212	..	212	..	205
North-West Lakes ..	110	211	..	211	..	101
Mallee—						
Lake Lonsdale ..	134	304	..	304	..	170
Distributing Channels	..	2,471	..	2,471	..	2,471
Long Lake ..	1,241	2,451	..	2,451	..	1,210
Lower Wimmera ..	..	153	..	153	..	153
Irrigation and Water Supply Districts* ..	5,990	3,777	..	3,777	2,213	..
Totals ..	55,444	34,049	6,090	27,959	35,905	8,420

* For two months only.

The following is a statement of receipts and expenditure, &c., in respect of the Geelong and Coliban systems for the year ended 30th June, 1906. It is compiled, as to the first ten months, from the records of the Victorian Water Supply Department, as to the last two, from the records of the Commission :—

GEELONG AND COLIBAN—RECEIPTS AND EXPENDITURE, ETC., 1905-6.

Service.	Total Cost at 30th June, 1906, including Cost of Loan Flotation.*	Expenditure from Consolidated Revenue. Interest on Loans, and Expenses of paying same.	Expenditure from Consolidated Revenue. Maintenance and Management, including Proportion of Head Office Expenses.	Receipts paid into Treasury to Credit of Consolidated Revenue, Year ended 30th June, 1906.	Receipts over Expenditure on Maintenance and Management equal to % on Total Cost.
	£	£	£	£	£
Geelong Works ..	456,450	15,540	3,385	13,470	10,085 = $2\frac{1}{5}$ %
Coliban Works ..	1,219,734	40,600	10,438	34,045	23,607 = $1\frac{9}{10}$ %

* Subject to addition by proportion of expenses of recent Loan Conversion. Figures not yet available.

As the Commission came into existence after rates for 1906 had been made for the several Irrigation and Water Supply Districts, such rates were collected as general rates for the period ended 31st December, 1906. Meanwhile, valuers have been appointed to value the properties in these and in certain Waterworks Districts subject to the jurisdiction of the Commission, preparatory to the levying of future general rates for the supply of water for domestic and ordinary use, and for watering cattle or other stock. The valuers, in making these valuations, are also preparing a return setting out the number of persons dwelling on the lands valued. In the case of the Waterworks Districts subject to the jurisdiction of the Commission, rates for the like purpose will be made immediately on the completion of the valuations.

The following is a return of the annual value (municipal) of lands and tenements and of the rates made and levied thereon for the year 1906 by the late controlling bodies in the districts named:—

VALUATION AND RATING, 1906.

Name of District.	Annual Value (Municipal) of Lands and Tenements.	——	Rate in the £1.
	£		*s. d.*
Cohuna	11,642	.. ..	7 0
Koondrook and Myall ..	1,471	.. ..	4 6
Benjeroop and Murrabit ..	2,649	.. ..	2 0
Swan Hill	2,038	.. ..	7 0
Gunbower West	1,138	.. ..	5 0
Kerang East	1,905	.. ..	4 6
Macorna North	3,113	Division 1	2 6
		Division 2	5 0
Dry Lake	..	.. ..	*Nil.*
South Kerang	344	.. ..	3 0
Marquis Hill	1,236	.. ..	5 0
Rodney	59,565	.. ..	1 6
Campaspe	7,062	.. ..	1 6
		Werribee Division	2 0
Bacchus Marsh	7,221	Urban Division	1 6
		Parwan Division ..	0 1
		Lower Parwan Division ..	0 1
		Division 1	0 9
Tragowel Plains	19,276	Division 2	1 6
		Division 3	2 4
		Division 4	2 6
North Boort	1,344	.. ..	1 6
East Boort	3,122	.. ..	2 0
Leaghur and Meering ..	1,185	.. ..	1 6
Wandella	2,682	.. ..	2 0
Twelve Mile	1,004	.. ..	1 9
Long Lake	..	.. ..	2d. per acre
Sea Lake	..	.. ..	*Nil.*
		Marong Shire Division ..	0 6
		East Loddon Shire Division ..	0 6
		Gordon Shire: No. 1 East Division ..	1 6
		Gordon Shire: No. 2 East Division ..	1 0
		Gordon Shire: No. 3 East Division ..	0 9
		No. 1 West Division	2 0
		No. 2 West Division	1 6
		No. 3 West Division	0 9
Loddon United Waterworks Trust*	61,615	Korong Shire: No. 1 Division ..	1 4
		Korong Shire: No. 2 Division ..	0 9
		Charlton Division	0 6

* Taken over by the Auditor-General and transferred to Commission by Section 278, *Water Act* 1905.

For the Geelong Water Supply area and the Coliban Waterworks District, revised and amended by-laws have been made for the imposition of rates and charges and for the administration of the works. These by-laws have been published in the *Government Gazette*, and in newspapers circulating in the districts affected.

Areas irrigated.

The following return, showing lands under irrigated culture has been compiled from information obtained from the Victorian Water Supply Department, and from that collected by the State Rivers and Water Supply Commission:—

LANDS UNDER IRRIGATED CULTURE, 1905-6.

Name of District.	Areas Irrigated (Acres).							Net Area of District (Acres).
	Cereals.	Permanent Fodder Crops.	Annual Fodder Crops.	Grass.	Orchards and Gardens.	Miscellaneous.	Total.	
Supplied from Goulburn State Works.								
Rodney	357	17,982	159	5,279	6,424	1,420	31,621	269,000
Echuca and Waranga	1,272	10,805	213	5,083	283	522	18,178	300,000
Total ..	1,629	28,787	372	10,362	6,707	1,942	49 799	569,000
Supplied from Kow Swamp State Works.								
Dry Lake	..	..	60	895	10	10	975	1,510
Gunbower West ..	489	1,106	496	1,188	86	..	3,365	9,790
Kerang East ..	1,880	432	2,058	4,263	44	34	8,711	18,100
Macorna North ..	1,797	151	2,152	8,183	..	..	12,283	27,300
Marquis Hill ..	427	111	554	2,684	..	..	3,776	10,930
South Kerang ..	38	353	70	541	..	..	1,002	2,630
Wandella (portion) ..	1,109	560	649	2,979	..	..	5,297	11,600
Total ..	5,740	2,713	6,039	20,733	140	44	35,409	81,860
Supplied from Loddon State Works.								
Wandella (portion) ..	1,108	559	649	2,978	2	..	5,296	11,600
East Boort	2,028	..	329	922	861	..	4,140	30,000
Leaghur and Meering ..	556	..	115	1,389	6	..	2,066	10,300
North Boort	972	..	..	811	..	..	1,783	10,000
Tragowel Plains ..	14,117	850	1,182	13,157	36	..	29,342	180,900
Twelve Mile ..	914	60	307	1,335	..	..	2,616	9,030
Total ..	19,695	1,469	2,582	20,592	905	..	45,243	251,830
Not supplied from State Works.								
Bacchus Marsh ..	..	243	5	..	4	2	254	910
Benjeroop and Murrabit	1,981	369	253	3,588	68	4	6,263	19,740
Campaspe	160	148	..	493	26	..	827	44,590
Cohuna	7,746	6,437	5,349	14,644	441	169	34,786	94,230
Koondrook and Myall ..	1,187	591	509	2,934	18	..	5,239	12,590
Swan Hill .. ..*	3,057	3,662	54	2,650	137	..	9,560	14,400
Western Wimmera ..*	4	126	46	122	1,268	104	1,670	1,578,030
Total ..	14,135	11,576	6,216	24,431	1,962	279	58,599	1,764,490
First Mildura ..*	1,000	1,962	..	..	24,383	538	27,883	35,000
Grand Total ..	42,199	46,507	15,209	76,118	34,097	2,803	216,933	2,702,180

NOTE.—Areas watered more than once are counted once for each watering.
* The areas shown are the areas watered in 1904–5, the information for 1905–6 not being available.

Of the total area irrigated, 19.45 per cent. was devoted to cereals, 21.44 per cent. to permanent fodder crops, 7.01 to annual fodder crops, 35.09 per cent. to grass, 15.72 per cent. to orchards and gardens, and the remainder, 1.29 per cent., was mostly in fallow for ploughing.

Waterworks Trusts.

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, 1906.

Waterworks Trusts.	Cost of Works at 30th June, 1906, defrayed from—		Capital Indebtedness.				Interest Outstanding at 30th June, 1906.
			Increased by Interest Capitalized.	Reduced by—		At 30th June, 1906.	
	Free State Grant.	Loan Advances made by State.		Amounts Written Off.	Payments to Redemption.		
	£	£	£	£	£	£	£
Alexandra ..	..	3,359	..	..	93	3,266	65
Avenel	..	1,684	..	..	141	1,543	31
Avoca	2,662	9,569	..	2,494	303	6,772	160
Bairnsdale ..	..	35,919	..	23,439	260	12,220	169
Ballan	..	1,100	..	..	223	877	17
Benalla	..	15,579	..	..	2,628	12,951	257
Bet Bet Shire ..	1,384	5,694	..	..	1,067	4,627	92
Birchip	819	5,235	..	..	160	5,075	101
Boort	28	1,150	..	150	32	968	19
Bright	..	2,990	..	..	258	2,732	54
Carisbrook ..	..	8,400	..	2,400	195	5,805	115
Carrum	..	25,732	..	7,732	50	17,950	2,619
Charlton	2,769	7,877	..	887	22	6,968	247
Cobram	..	4,156	..	..	..	4,156	57
Dandenong ..	..	19,129	..	5,128	344	13,657	201
Daylesford Borough ..	..	24,207	2,793	3,139	1,164	22,697	450
Donald	3,058	8,166	..	1,166	219	6,781	135
Echuca Borough ..	..	13,150	..	..	1,231	11,919	480
Elmore	..	4,000	..	..	301	3,699	73
Euroa	..	17,242	..	..	1,050	16,192	11
Gisborne	..	4,668	..	..	817	3,851	76
Hamilton	..	36,900	..	..	981	35,919	713
Healesville ..	..	4,661	..	..	432	4,229	84
Heathcote	..	7,394	..	..	322	7,072	140
Horsham Borough ..	..	17,713	..	7,712	396	9,605	192
Kara Kara Shire ..	1,522	7,343	..	..	237	7,106	142
Kerang	88	4,000	..	..	76	3,924	158
Kerang Shire ..	213	1,200	..	..	28	1,172	47
Kilmore	..	14,148	..	..	1,704	12,444	248
Koroit	..	5,502	..	2,047	143	3,312	66
Korumburra ..	..	11,492	..	..	474	11,018	..
Kowree	292	2,707	..	..	88	2,619	52
Kyabram	..	507	..	..	96	411	8
Kyneton Shire ..	..	26,680	..	..	9,204	17,476	347
Lancefield ..	..	7,083	..	..	344	6,739	134
Lawloit	1,302	12,095	..	..	393	11,702	232
Leongatha ..	..	4,783	..	..	..	4,783	45
Lilydale	..	5,785	..	..	30	5,755	114
Loddon United* ..	..	..	..	..	..	..	..
Longwood	..	2,400	..	550	60	1,790	36
Lowan Shire ..	1,258	11,680	..	..	382	11,298	224
Macedon	..	2,600	..	..	148	2,452	49
Mansfield	..	7,931	..	..	671	7,260	144
Maryborough ..	..	76,257	..	9,200	2,282	64,775	..
Mooroopna ..	..	3,053	..	1,400	67	1,586	31

* See State Rivers and Water Supply Commission Statement, page 487 *ante*.

WATERWORKS TRUSTS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1906—*continued.*

Waterworks Trusts.	Cost of Works at 30th June, 1906, defrayed from—		Capital Indebtedness.				Interest Outstanding at 30th June, 1906.
			Increased by Interest Capitalized.	Reduced by—		At 30th June, 1906.	
	Free State Grant.	Loan Advances made by State.		Amounts Written Off.	Payments to Redemption.		
	£	£	£	£	£	£	£
Murchison	..	2,800	..	..	12	2,788	56
Nagambie ..	..	2,775	..	..	324	2,451	49
Nhill	799	10,068	..	2,482	245	7,341	146
Numurkah Shire ..	1,278	23,029	..	1,376	2,301	19,352	381
Omeo	..	3,982	..	..	316	3,666	73
Riddell's Creek ..	..	3,500	..	497	95	2,908	58
Rochester ..	..	1,300	..	..	114	1,186	24
Romsey	..	4,700	..	..	822	3,878	77
Rushworth ..	..	4,500	..	..	50	4,450	88
Rutherglen ..	..	16,485	..	..	466	16,019	318
Seymour	..	27,959	..	..	1,314	26,645	529
Shepparton Urban ..	24	19,105	..	2,416	1,380	15,309	306
Shepparton Shire ..	110	17,548	..	1,376	962	15,210	302
St. Arnaud Borough	57	44,800	..	15,077	843	28,880	574
St. Arnaud Shire ..	1,691	3,409	4,077	..	1,055	6,431	128
Stawell Shire ..	545	1,370	..	250	1,120	..	..
Sunbury	..	14,925	..	..	..	14,925	362
Swan Hill ..	231	3,988	..	..	77	3,911	78
Swan Hill Shire ..	6,421	36,043	..	36,043	..	..	..
Tatura	..	2,847	..	650	249	1,948	39
Tungamah Shire ..	4,130	12,241	..	..	425	11,816	234
United Echuca and Waranga ..	14,968	70,369	..	34,748	1,708	33,913	1,091
Upper Macedon ..	..	1,842	..	..	276	1,566	24
Violet Town ..	..	4,224	..	..	120	4,104	67
Wangaratta ..	..	9,888	..	..	58	9,830	195
Warracknabeal ..	262	4,116	..	..	398	3,718	74
Warrnambool ..	..	38,500	..	..	1,214	37,286	749
Western Wimmera ..	9,335	213,943	..	132,835	3,425	77,683	1,545
Wimmera United ..	19,818	146,420	..	36,392	3,635	106,393	..
Winchelsea Shire ..	..	4,420	..	..	129	4,291	85
Wodonga	..	7,722	..	..	250	7,472	149
Woodend	..	7,663	..	..	2,052	5,611	112
Wycheproof ..	1,400	9,612	..	700	781	8,131	152
Yarram	..	1,313	..	..	..	1,313	16
Yarrawonga Urban ..	1,897	8,800	..	..	1,254	7,546	150
Yatchaw	..	6,262	..	1,661	150	4,451	88
Yea	..	3,816	..	..	55	3,761	75
Total ..	78,361	1,289,204	6,870	333,947	56,791	905,336	17,029

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 set out above have been relieved of 26 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 six 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, 1906:—

WATERWORKS TRUSTS—RECEIPTS AND EXPENDITURE, 1906.

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	438	3	6	447	134	197	149	..	480
Avenel	239	..	3	242	46	54	70	15	185
Avoca*	..	..	..	..	..	..	..	..	..
Bairnsdale	969	233	346	1,548	860	358	367	8	1,593
Ballan	270	..	1	271	167	32	41	6	246
Benalla	1,088	..	3	1,091	236	452	597	..	1,285
Bet Bet Shire ..	262	68	..	330	34	9	216	2	261
Birchip	617	..	5	622	202	57	110	41	410
Boort	333	..	17	350	200	17	44	5	266
Bright	194	123	3	320	261	61	125	1	448
Carisbrook	346	..	6	352	23	83	263	7	376
Carrum	2,081	..	3	2,084	1,182	73	808	13	2,076
Charlton	508	25	..	533	117	113	300	28	558
Cobram	226	..	..	226	..	79	64	1	144
Dandenong ..	685	27	18	730	40	145	460	4	649
Daylesford Borough	1,198	531	227	1,956	932	98	1,028	..	2,058
Donald	496	134	14	644	102	169	307	2	580
Echuca Borough ..	1,446	1	5	1,452	743	118	667	10	1,538
Elmore	221	75	30	326	76	123	169	3	371
Euroa	789	159	2	950	93	82	1,055	6	1,236
Gisborne	336	..	10	346	344	57	178	..	579
Hamilton	2,075	322	33	2,430	82	341	1,624	50	2,097
Healesville	204	100	15	319	120	36	193	5	354
Heathcote	407	186	13	606	67	88	320	5	480
Horsham Borough ..	1,466	..	128	1,594	639	428	217	14	1,298
Kara Kara Shire ..	257	..	..	257	32	12	177	2	223
Kerang	829	..	6	835	552	181	177	4	914
Kerang Shire* ..	..	..	..	..	..	..	..	..	..
Kilmore	541	350	2	893	84	233	592	9	918
Koroit	489	157	..	646	226	144	193	10	573
Korumburra ..	591	246	71	908	62	139	598	22	821
Kowree	44	..	151‡	195	26	41	118	1	186
Kyabram	258	103	1	362	280	56	24	11	371
Kyneton Shire ..	1,777	789	28	2,594	181	250	1,549	3	1,983
Lancefield	285	104	..	389	20	42	306	..	368
Lawloit	1,191	..	8	1,199	435	310	531	8	1,284
Leongatha	..	..	2	2	..	..	..	133	133
Lilydale	311	11	3	325	89	108	190	4	391
Loddon United ..	1,044	103	313‡	1,460	87	130	960	78	1,255
Longwood	181	..	..	181	106	25	81	3	215
Lowan Shire ..	938	..	1	939	310	297	511	33	1,151
Macedon	183	..	5	188	15	33	111	2	161
Mansfield	427	182	6	615	61	133	332	1	527
Maryborough ..	2,231	1,206	23	3,460	643	§	2,924	..	3,567
Mooroopna ..	320	44	..	364	136	165	56	3	360
Murchison	278	107	6	391	77	133	141	5	356
Nagambie	283	58	13	354	81	105	169	10	365
Nhill	776	33	2	811	441	73	170	..	684
Numurkah Shire ..	2,019	249	71	2,339	809	516	944	33	2,302
Omeo	284	..	1	285	98	29	167	2	296

WATERWORKS TRUSTS—RECEIPTS AND EXPENDITURE, 1906—*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.
	£	£	£	£	£	£	£	£	£
Riddell's Creek ..	169	..	..	169	15	26	132	7	180
Rochester	441	14	..	455	164	173	54	26	417
Romsey	182	57	..	239	75	45	179	2	301
Rushworth ..	553	1	54	608	313	145	201	7	666
Rutherglen ..	1,479	67	14	1,560	344	225	733	2	1,304
Seymour	546	1,068	26	1,640	109	200	1,209	6	1,524
Shepparton Urban ..	1,358	368	14	1,740	467	405	697	6	1,575
Shepparton Shire ..	1,372	15	..	1,387	161	266	690	14	1,131
St. Arnaud Borough ..	1,658	159	27	1,844	178	120	1,308	4	1,610
St. Arnaud Shire ..	536	..	..	536	86	70	274	3	433
Stawell Shire* ..	..	..	..	..	..	..	..	..	..
Sunbury	4	95	61	160	82	31	..	6	119
Swan Hill	620	3	9	632	245	226	265	4	740
Swan Hill Shire† ..	..	..	..	..	..	..	..	..	..
Tatura	319	108	10	437	130	128	89	1	348
Tungamah Shire ..	1,604	26	..	1,630	447	413	536	53	1,449
United Echuca and Waranga ..	2,870	945	6	3,821	1,117	363	2,539	49	4,068
Upper Macedon ..	181	..	..	181	43	19	52	1	115
Violet Town ..	229	..	5	234	16	51	138	4	209
Wangaratta ..	1,055	254	57	1,366	672	301	455	23	1,451
Warracknabeal ..	760	94	16	870	596	138	170	8	912
Warrnambool ..	2,153	329	1,172	3,654	1,964	536	1,550	..	4,050
Western Wimmera ..	5,952	3,107	69	9,128	3,978	620	3,522	..	8,120
Wimmera United ..	9,901	991	2,122‡	13,014	5,377	§	7,769	88	13,234
Winchelsea Shire ..	358	..	..	358	28	73	193	2	296
Wodonga	360	190	2	552	23	127	338	2	490
Woodend	346	263	28	637	71	185	260	5	521
Wycheproof ..	598	45	11	654	111	85	372	2	570
Yarram	120	12	1	133	187	179	81	21	468
Yarrawonga Urban ..	624	195	59	878	147	256	347	..	750
Yatchaw	317	..	..	317	11	28	201	8	248
Yea	286	195	7	488	149	174	170	..	493
Total	69,382	14,330	5,371	89,083	28,857	12,033	44,917	957	86,764

* These Trusts are inoperative.

† 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.

Municipal Waterworks.

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 :—

WATERWORKS OF MUNICIPAL CORPORATIONS—CAPITAL INDEBTEDNESS AND INTEREST OUTSTANDING, 30TH JUNE, 1906.

Local Bodies.	Cost of Works to 30th June, 1906, defrayed from Loan Advances made by State.	Capital Indebtedness.				Interest outstanding at 30th June, 1906.
		Increased by Interest capitalized	Reduced by—		At 30th June, 1906.	
			Amounts written off.	Payments to Redemption.		
	£	£	£	£	£	£
Arapiles Shire ..	3,600	..	..	857	2,743	56
Ararat Borough ..	45,500	..	18,266	1,111	26,123	518
Ballarat Water Commission	309,300	41,869	2,111	34,254	314,804	..
Beechworth Shire ..	28,926	1,256	5,958	3,761	20,463	..
Bet Bet Shire ..	1,000	..	985	15	..	..
Birchip Shire ..	2,669	..	..	239	2,430	..
Borung Shire ..	9,059	..	..	880	8,179	123
Castle Donnington Shire	4,114	..	..	418	3,696	..
Chiltern Shire ..	4,500	508	508	668	3,832	76
Clunes Borough Water Commission ..	70,195	..	62,395	253	7,547	149
Creswick Borough ..	3,500	..	..	3,500	..	98
Dimboola Shire ..	2,566	..	..	236	2,330	35
Dunolly Borough ..	2,190	..	..	791	1,399	28
Inglewood Borough ..	5,149	..	..	1,525	3,624	217
Karkarooc Shire ..	14,898	..	..	856	14,042	211
Kerang Shire ..	2,313	..	..	147	2,166	33
Korong Shire ..	1,564	..	..	387	1,177	23
Ripon Shire ..	3,000	..	..	1,277	1,723	34
Stawell Borough ..	108,506	..	61,661	3,311	43,534	865
Talbot Borough ..	15,000	..	13,986	46	968	19
Tarnagulla Borough	800	..	..	137	663	13
Wimmera Shire ..	28,890	..	..	26,182	2,708	54
Wycheproof Shire ..	2,445	..	..	201	2,244	34
Total ..	669,684	43,633	165,870	81,052	466,395	2,586

The corporations of Ballan and Melton Shires also have waterworks, but constructed out of Shire funds, hence they do not appear in the above table.

It will be seen that the municipalities specified in the table have been relieved of one-fourth of their loan liabilities.

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.

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
Lerderderg ..	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
Total ..	31,709	243	31,952	31,679	14,793	46,472

* £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 30th September, 1887, the licensees assigned all their interests and rights to the Chaffey Brothers Company Limited. In the 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 consituted, 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 making provision 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, 1906, the total amount advanced was £58,700, which, together with interest accumulated to that date, £15,881, 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.

Exports of canned and dried fruits.

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

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 1906.

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

DETAILS OF EXPORTS DURING 1906 OF CANNED AND DRIED FRUITS PRODUCED IN VICTORIA.

Country to which Exported.	Canned Fruits—Value.	Dried Fruits.			
		Raisins.		Other.	
		Quantity.	Value.	Quantity.	Value.
	£	lbs.	£	lbs.	£
New South Wales ..	12,562	1,523,318	27,689	121,033	2,666
Queensland ..	6,468	474,126	10,328	226,654	4,831
South Australia ..	3,327	33,341	744	36,951	693
Western Australia ..	10,233	134,342	3,225	14,124	420
Tasmania	2,010	209,192	5,101	40,115	880
Other Countries ..	5,204	1,290	27	8,983	172
Total ..	39,804	2,375,609	47,114	447,860	9,662

The trade with the other States is growing, the value of the exports amounting to £91,177 in 1906, as against £77,383 in 1903, £85,049 in 1904, and £87,391 in 1905.

Population of Mildura.

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

POPULATION OF MILDURA, 1891 TO 1906.

1891	Census	...	2,321	1903	September	...	4,050
1896	September	...	2,000	1904	"	...	4,100
1901	Census	...	3,325	1905	"	...	4,150
1902	September	...	3,625	1906	"	...	4,350

The following is a statement of the revenue and expenditure of the Mildura Irrigation Trust during the year ended 30th June, 1906 :— Revenue and expenditure of Mildura Irrigation Trust.

REVENUE AND EXPENDITURE OF THE TRUST, 1905-6.

Revenue.	£	*Expenditure.*	£
Arrears, Horticultural Assessment	5,343	Expenditure on Pumping Stations	9,337
Current Rates, Horticultural Assessment	8,772	Expenditure on Town Supply	752
Arrears, Town Assessment	150	Distribution of Water	2,673
Current Rates, Town Assessment	641	Interest	2,345
Miscellaneous	621	Other Expenditure	842
Total	15,527	Total	15,949

The following table shows the average yearly amount of rainfall deduced from all available records to December, 1905, and the rainfall during 1904, 1905, and 1906, 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., 1905.	During 1904.	During 1905.	During 1906.
	Inches.	Inches.	Inches.	Inches.
Glenelg and Wannon Rivers	27·10	24·27	27·76	32·33
Fitzroy, Eumerella, and Merrie Rivers	29·82	27·02	32·12	32·69
Hopkins River and Mt. Emu Creek	26·17	26·22	25·84	29·45
Mt. Elephant and Lake Corangamite	24·84	26·85	23·06	29·15
Otway Forest	40·56	37·69	36·62	40·24
Moorabool and Barwon Rivers	25·53	25·99	24·03	28·97
Werribee and Saltwater Rivers	26·80	23·17	25·76	24·99
Yarra River and Dandenong Creek	35·18	40·92	38·53	35·65
Koo-wee-rup Swamp	34·69	37·64	35·49	35·18
South Gippsland	39·14	35·81	41·00	40·82
Latrobe and Thomson Rivers	36·20	35·40	36·58	37·15
Macallister and Avon Rivers	26·90	17·45	26·58	25·47
Mitchell River	30·48	22·09	34·48	27·65
Tambo and Nicholson Rivers	29·13	21·29	33·13	28·49
Snowy River	38·13	31·17	42·83	28·64
Murray River	22·11	20·54	18·86	28·24
Mitta Mitta and Kiewa Rivers	34·70	35·70	35·42	46·94
Ovens River	41·33	36·65	35·94	49·73
Goulburn River	26·26	26·36	25·62	33·40
Campaspe River	25·50	25·37	22·43	31·65
Loddon River	19·01	18·30	17·43	23·48
Avon and Richardson Rivers	15·87	14·77	16·01	19·58
Avoca River	17·47	15·22	15·77	20·22
Western Wimmera	19·73	17·45	19·32	25·15
Eastern Wimmera	22·45	20·16	20·88	27·55
Mallee Country	13·83	12·17	13·25	16·03
Weighted Averages	25·22	23·28	24·97	28·26

The rainfall recorded for each quarter in 1906, and the quarterly averages up to 1905, 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, 1906.	Average to 1905.	Amount, 1906.	Average to 1905.	Amount, 1906.	Average to 1905.	Amount, 1906.	Average to 1905.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
Glenelg and Wannon Rivers	3.36	3.83	9.97	8.53	11.48	8.72	7.52	6.02
Fitzroy, Eumeralla, and Merrie Rivers ..	3.55	4.35	9.58	9.51	11.45	9.63	8.11	6.32
Hopkins River and Mt. Emu Creek ..	4.05	4.61	8.01	8.05	8.94	7.27	8.45	6.24
Mt. Elephant and Lake Corangamite ..	3.78	4.81	7.98	7.47	9.00	6.63	8.39	5.93
Otway Forest	4.21	8.17	12.11	13.24	13.93	11.21	9.99	7.94
Moorabool and Barwon Rivers	4.35	4.34	6.78	7.75	9.61	7.29	8.23	6.15
Werribee and Saltwater Rivers	4.50	5.25	5.24	8.02	8.48	6.98	6.77	6.55
Yarra River and Dandenong Creek ..	5.73	6.93	8.87	10.15	10.04	9.42	11.01	8.68
Koo-wee-rup Swamp	5.05	6.31	9.17	10.95	9.98	9.14	10.98	8.29
South Gippsland	6.75	7.36	9.28	11.88	12.47	11.02	12.32	8.88
Latrobe and Thomson Rivers	7.04	7.30	8.48	10.42	9.63	9.60	12.00	8.88
Macallister and Avon Rivers	7.67	6.00	3.02	7.42	5.79	6.06	8.99	7.42
Mitchell River	8.57	7.22	2.68	9.09	6.30	6.89	10.10	7.28
Tambo and Nicholson Rivers	10.08	6.87	2.70	8.42	5.44	6.96	10.27	6.88
Snowy River	10.13	8.12	2.65	11.63	5.55	9.77	10.31	8.61
Murray River	5.51	4.36	6.78	6.95	7.85	5.95	8.10	4.85
Mitta Mitta and Kiewa Rivers	8.82	6.94	13.00	10.80	12.13	9.49	12.99	7.47
Ovens River	10.01	7.06	13.72	12.93	13.14	12.17	12.86	9.17
Goulburn River	4.94	4.43	8.89	8.46	10.39	7.48	9.18	5.89
Campaspe River	3.89	4.31	9.39	8.47	11.47	7.11	6.90	5.62
Loddon River	3.65	3.31	7.15	6.38	7.03	4.94	5.65	4.38
Avon and Richardson Rivers	2.38	2.57	7.38	5.36	5.44	4.29	4.38	3.65
Avoca River	2.79	2.75	7.06	6.10	5.87	4.51	4.50	4.11
Western Wimmera	2.27	2.45	8.13	6.56	9.15	6.25	5.60	4.47
Eastern Wimmera	3.66	3.09	8.91	7.54	8.04	6.41	6.94	5.41
Mallee country	2.51	2.51	5.80	4.86	4.57	3.58	3.15	2.88
State	4.82	4.57	7.56	8.00	8.27	6.93	7.61	5.72

RAINFALL IN REGIONS, DURING EACH QUARTER, 1904, 1905, AND 1906.

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

Regions.	First Quarter.			Second Quarter.			Third Quarter.		
	1904.	1905.	1906.	1904.	1905.	1906.	1904.	1905.	1906.
Western Districts	+ 71	—38	—16	—15	+ 8	+ 6	—18	+ 20	+26
Cape Otway Forest	+104	—50	—48	—23	—14	— 9	—17	+ 20	+24
Counties surrounding Port Phillip Bay	+122	—28	—14	—14	— 7	—18	—12	+ 21	+16
South Gippsland	+ 66	—26	— 8	—31	— 9	—22	—20	+ 22	+13
Basins of the Latrobe, Macallister, and Mitchell Rivers	+ 31	—15	+13	—41	—16	—47	—17	+ 4	— 4
Basins of the Tambo and Snowy Rivers	+ 13	+ 1	+35	—28	—29	—73	— 6	— 4	—34
All Northern Areas between the Ranges and the Murray, East of the Campaspe River	+ 17	—41	+22	—26	— 3	+ 9	— 4	+ 21	+30
All Northern Areas between the Ranges and the Murray, West of the Campaspe River	+ 51	—35	+ 3	—29	+11	+21	—18	+ 2	+34

RAINFALL IN REGIONS, DURING EACH QUARTER, 1904, 1905, AND 1906—*continued.*

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

Regions.	Fourth Quarter.			Year.		
	1904.	1905.	1906.	1904.	1905.	1906.
Western Districts	−23	− 8	+32	− 6	*	+15
Cape Otway Forest	−27	− 3	+26	− 7	−10	†
Counties surrounding Port Phillip Bay	−36	+12	+25	+ 2	+ 1	+ 2
South Gippsland	−23	+26	+39	−11	+ 5	+ 4
Basins of the Latrobe, Macallister, and Mitchell Rivers	−45	+45	+32	−22	+ 4	− 4
Basins of the Tambo and Snowy Rivers	−58	+97	+33	−22	+13	−15
All Northern Areas between the Ranges and the Murray, East of the Campaspe River	−14	−19	+52	−10	− 8	+27
All Northern Areas between the Ranges and the Murray, West of the Campaspe River	−36	−18	+21	−18	− 5	+22

* 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.
Averages.						
Mean pressure of air in inches		29·891	29·839	30·001	30·000	29·933
Monthly range of pressure of air—Inches		0·895	0·800	0·807	0·984	0·871
Mean temperature of air in shade—°Fahr.		56·6	64·9	58·5	49·2	57·3
Mean daily range of temperature of air in shade—°Fahr. ..		18·8	21·4	17·7	14·2	18·0
Mean percentage of humidity. Saturation = 100		70	65	73	78	71
Mean rainfall in inches ..		7·32	5·90	6·70	5·72	25·64
Mean number of days of rain ..		37	23	30	41	131
Mean amount of spontaneous evaporation in inches ..		9·99	17·03	7·06	3·70	37·78
Mean daily amount of cloudiness—Scale 0 to 10		6·0	5·3	5·9	6·1	5·8
		h. m.	h. m.	h. m.	h. m.	h. m.
Mean daily duration of sunshine		5 56	7 52	4 37	3 27	5 28
Mean total of hours of sunshine		539 55	709 3	425 10	317 37	1,991 45
Percentage number of hours during which the wind blew from the various points of the compass	North ..	16·0	7·7	16·1	28·5	..
	North-West	9·4	4·1	7·6	13·0	..
	West ..	15·2	9·5	12·2	14·9	..
	South-West	16·8	20·4	12·6	10·8	..
	South ..	16·5	24·1	14·9	6·3	..
	South-East	9·8	19·2	14·1	5·0	..
	East ..	3·7	5·6	5·6	2·7	..
	North-East	11·2	8·1	15·2	17·3	..
	Calm ..	1·4	1·3	1·7	1·5	..
Mean number of days of fog ..		1·2	0·7	5·1	9·6	16·6

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	92,221	
Mean hourly velocity of wind	10·5	

The table below contains the values of the principal Meteorological elements for the whole year 1906, with the corresponding averages and extremes, based on the Observatory Records of 50 years :—

METEOROLOGY, 1857 TO 1906.

Meteorological Elements.	Yearly Averages and Extremes.			
	Year 1906.	Average for 50 Years.	Extreme between which the Yearly Average Values have oscillated in 50 years.	
			Highest.	Lowest.
Mean atmospheric pressure (inches) ...	29·915	29·935	...	...
Highest ,, ,, ,, ...	30·620	30·522	30·678	30·003
Lowest ,, ,, ,, ...	29·237	29·171	29·902	28·868
Range (inches)	1·383	1·359	1·719	1·169
Mean temperature of air, in shade (°Fahr.)	57·5	57·4	58·7	56·3
Mean daily maximum ... ,,	67·4	67·3	69·0	65·8
Mean daily minimum ... ,,	50·2	49·3	51·2	47·2
Absolute maximum ... ,,	109·6	105·4	111·2	96·6
Absolute minimum ... ,,	31·1	30·7	33·9	27·0
Mean daily range ... ... ,,	17·3	18·0	20·3	14·6
Absolute annual range ... ,,	78·5	74·4	82·6	66·0
Solar Radiation (maximum) ... ,,	165·8	161·4	178·5	108·6
Terrestrial Radiation (minimum) ,,	24·8	24·9	46·2	20·4
Rainfall (in inches)	22·29	25·62	44·25	15·61
Number of wet days	114	131	165	102
Year's amount of free evaporation (in inches)	36·346	38·111	45·65	31·59
Percentage of humidity (saturation = 100)	72	72	...	...
Cloudiness (scale 10 = overcast, 0 = clear)	6·3	5·8	...	...
Duration of sunshine (number of hours)	1,992	1,954	...	...
Number of days of fog	8	16·6	...	...

Agricultural Education.

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. Subsequently further reservations were made—at Rutherglen, Edi, and Whitfield. The total areas of these reserves amount to 14,437 acres. Particulars are as follow:—

Areas of Agricultural College and Experimental Farm Lands, 1906.

Name.	Area.	How Used.
	A. R. P.	
Dookie and Currawa	4,889 0 0	College and Experimental Farm
Longerenong (Jung Jung) ...	2,386 0 0	,, ,,
Edi and Whitfield	131 3 25	Tobacco Farms
Rutherglen	913 0 24	Viticultural Station, Model Orchard, and Experimental Farm work
Gunyah Gunyah and Jumbuk ...	2,500 0 0	Let for grazing and cultivation
Olangolah	2,800 0 0	Not in use
Bullarto	817 0 0	Let for grazing
Total	14,437 0 9	

Experimental farm, Dookie.

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 Moira, a county in the North-Eastern District of Victoria, on which to found, under the direction of the Council of Agricultural Education, a State Experimental Farm. The following account of the present state of the farm has been furnished for this work by Mr. E. G. Duffus, Acting Secretary for Agriculture:—

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.

A new dairy has been erected, at a cost of £1,069, on the most scientific plans, and is fitted with a complete dairying plant of latest pattern, including a pasteurizer, refrigerator, &c. The cow byres are thoroughly modern, and are fitted with milking machines and all necessary appliances.

A wine cellar and fermenting house has been erected at a cost of about £1,100, and students are instructed in the art of wine-making. There are 34½ acres under vines, consisting of 4 acres table

grapes, planted in 1887; 5 acres Gordo, Blanco, and Zante currants, planted in 1888; 11 acres Red Hermitage, 7 acres planted in 1889 and 4 acres in 1895; 10 acres Carbenet, planted in 1894; 2 acres Baxter Sherry, planted in 1895; and $2\frac{1}{2}$ acres of Red Hermitage, planted in 1903. There are 20 acres under fruit trees of all the approved varieties.

A new implement and grain shed, 174 feet long, and several other new buildings have been erected, and other improvements are being carried out. A new chemical and biological laboratory has been built. This is one of the best fitted up laboratories in the State, and gives ample opportunities for the scientific teaching.

During the year the rainfall recorded was 27.34 inches.

Considerable attention is paid to experimental work in connexion with the cereals. The rearing of new varieties of wheat, suitable for the different parts of this country, has special attention paid to it.

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

There is a good and growing 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 threshing and the harvesting in general are carried out by the students under competent instructors. The cropping also is mainly carried out by the students, who are taught how to use the ploughs, cultivators, seed-drills, and all other farming implements.

Experiments with new fodder plants and with others of economic importance are 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 $4\frac{3}{4}$ acre plantation of fifteen-year-old olives, of six varieties.

Accommodation has been provided for 70 students, and provision will shortly be made to accommodate 30 more. The charge per head per annum is £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.

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 has been purchased by the Council of Agricultural Education, to be used for stud purposes on the farm and for approved mares of the farmers from the surrounding districts. The cattle on the farm include Ayrshires principally, also Herefords and Shorthorns. Farmers, on paying a small fee, may have the use of the stud bulls for their cows. 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 being imported from England.

Longerenong Agricultural 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 are also attending the classes. The staff consists of the principal (Mr. G. A. Sinclair), the farm manager (Mr. J. D. Martin), and two resident masters (Messrs. Gibson and Baxter); also visiting lecturers for veterinary science, wool-classing, poultry-breeding, &c. The farm contains 2,386 acres of land, about 500 acres being cropped each year with wheat, oats, and barley, wheat being the staple crop.

The orchard, containing 28 acres—5 acres of which are planted with phylloxera-resistant vines; 50 acres of lucerne; and about 10 acres of summer fodder-crops, are all irrigated each season by water obtained from Western Wimmera Waterworks Trust, in an open channel running from the Dooen pumping station. Ten acres are devoted to experimental work in conjunction with the Department of Agriculture. There are 19 draught horses, 4 hacks, 20 dairy cows, Ayrshire bull, 30 Berkshire pigs, 50 Shropshires, 800 breeding ewes, and 25 steers. Lamb-raising is one of the chief industries. About 700 acres are only fit for grazing, being low-lying and subject to floods in winter. The remainder is good wheat-growing land.

Besides three brick underground silos, an over-ground timber silo, of a capacity of 100 tons, was erected in 1906 and filled with surplus grass from the avenues and plantations. 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 are established in different portions of the estate. The paddocks are watered by six tanks, varying in capacity from 1,000 to 5,000 cubic yards which, in dry years, are filled from the irrigation channel. The college has been thoroughly renovated, and water, raised by a windmill, is laid on to the lavatories, shower-baths, kitchen, &c. The buildings are sewered on the septic-tank principle.

Government Tobacco Experimental Station.

The Government Tobacco Experimental Station, of 18 acres of land at Edi, in the North-Eastern District of Victoria, has been relinquished for a larger area of 113 acres, at Whitfield, where a greater range of soil is available, and the situation more central for the district. Experiments in the culture of the better classes of tobacco and their treatment will still form a leading feature in the work of the enlarged farm. Manuring experiments, which are intended to be an object lesson to farmers generally, will be continued, with a view of ascertaining the varieties of tobacco best suited to the soils and climate, for improving the quality of leaf

and increasing returns. During the year 2,000 lbs. (dry weight) of cigar leaf were grown and cured from varieties known as Comstock, Zimmer—Spanish, Connecticut seed leaf, and Connecticut broad leaf, all of which gave good results; but the Comstock was found the most suitable for the district. Other varieties, viz. :—Sumatra, Vuelta Abajo, Pennsylvania, and Stirling gave poor results, being evidently unsuited to the climate and soil of the district. A crop of pipe tobacco, of approximately 1,500 lbs., was also grown from varieties named Jacks, Hester, Blue Pryor, Conqueror, Medley Pryor, Bonanza, Bullion, Orinoco, and Kentucky Yellow. Of these, Jacks, Orinoco, Medley Pryor, and Blue Pryor succeeded best in quality and yield.

Experimental plots have been established at Bruthen, Mount William, and throughout the North-East and seed of improved types has been distributed.

Prices for Victorian-grown tobacco have been higher for all classes of leaf than has been the case for the last five years, the whole of the crop being purchased by manufacturers.

Rutherglen Viticultural Station.

The chief work being done at the Viticultural 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. 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 deadly action of the tiny but formidable phylloxera. These are used as stocks on which to graft the desired producing kinds, as their roots were able to withstand the attacks of the insidious insect foe.

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.

A modern grafting shed and extensive callusing frames have been built to cope with the ever-increasing work of providing grafted resistant stocks.

Large areas are devoted to the permanent growth of resistant stocks for the production of cuttings. Three nurseries contain large numbers of grafted and ungrafted cuttings.

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.

As a rule American vines do not take kindly to calcareous soils. The Berlandieri is one of the best for planting under such conditions, while for saline soils Solonis has so far proved itself most suitable.

Recently fourteen varieties, mostly new to Australia, of wine-making grapes have been imported. They are largely cultivated in South-eastern France, and will be grown and tested at the Viticultural Station with a view to proving their value as wine producers. The average yield of wine per acre in Victoria compares very unfavorably with that of Europe, and it is to be hoped that among this new importation varieties will be found which will increase the yield without diminishing the quality of the product. Two of the varieties

are white grapes from the famous Sauterne vineyards, and are calculated to improve the quality of white table wines, which are becoming more and more popular every year. Other varieties have been received from the Douro Valley in Portugal, and the Sherry district of Spain. Already wines of a port and sherry type of very considerable merit are produced in Victoria, chiefly from French grapes. With the Portuguese and Spanish varieties about to be imported the quality of this class of wines should be improved out of all knowledge, and permanently enhance the reputation of Australian wines.

An excellent laboratory has been erected, and should permit of excellent work being done in the chemical analysis and bacteriological examination of wines.

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 vignerons 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 have been started at the Viticultural Station, with a view to investigating the possibilities of dairying in the drier districts of the State. A dairy herd is being gradually built up. 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 station is open to inspection on all week days, and is well patronized by visitors anxious to learn.

Gunyah Gunyah, Olangolah, and Bullarto.

The Gunyah Gunyah, Olangolah, and Bullarto reserves have never been used for the purposes of colleges, but Gunyah Gunyah, which contains 2,500 acres, is let for grazing and agriculture, and Bullarto, containing 817 acres, is let for grazing.

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	Myrrhee	394
Berringama	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	Pannoomilloo	100
Carraragarmungee	1,864	Peechember	50
Cudgewa	732	Purnim	3,678
Colac Colac	420	Quantong	495
Corack East	474	Quambatook	380
Charam	331	Torrumberry North ..	615
Carchap	99	Tullich	400
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	Torrumberry	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	Yarck	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.

The 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 the class and field work.

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 and canning fruit, vegetable culture, clearing, grading, and trenching of land, management of soils, manures, drainage, and villa gardening.

The principal and his assistant carry out this programme by affording lessons daily in the class room and field. Much of the landed estate has recently been prepared to receive domestic and farm animals of all kinds, and these are now added, and form a helpful source of instruction to students.

In 1899, women students were first admitted. They have for the most part devoted their attention to the designing and making of villa gardens, vegetable and herb culture, and the special cultivation of table grapes and lemons—branches of commercial horticulture most suited to women.

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. Application for admission should be made to the Secretary for Agriculture, Public Offices, Melbourne.

Agricultural High Schools.

The proposals to establish Agricultural High Schools have now taken definite shape by the decision of the Government to devote the sum of £3,000 for this purpose during the year. The sum is made available 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.

It is proposed that pupils for admission to the High School 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 will be appointed for each district High School, and will exercise a general oversight over the work of the school, particularly with regard to the farm operations, and expend the maintenance allowance allotted to the school. In addition, they will nominate for free instruction students who possess the above 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.

Arrangements have been completed for opening such high schools at Warrnambool and Sale.

Agricultural Societies.

There are altogether 90 agricultural societies in the State which received aid from the Government during 1905-6. The total of such aid for that year amounted to £2,075, including £314 for medals, of which those for £100 were awarded at the Royal Agricultural Society's Annual Show. Particulars respecting the most important of these societies are as follow :—

The Royal Agricultural Society.

In any account of the origin of the Royal Agricultural Society of Victoria, it is necessary to allude to the old Port Phillip Farmers' Society, as it was practically from the ashes of that institution the present society arose. The Port Phillip Society, after years of useful work, gradually became disintegrated, largely through internal dissensions, and was allowed to collapse. Then, as the result of a public meeting, in November, 1870, it was resolved—in the absence of any central society to promote the interests of producers—to form a new agricultural society on a wide basis, and this was accordingly done, the institution being called the National Agricultural Society of Victoria. In February, 1871, the foundation council was elected with the Hon. W. Degraves as president. The trustees of the old institution afterwards handed over their balance of funds and rights to a show ground site to the new society. With some fluctuations during its progress, this society—now the Royal Agricultural Society of Victoria, having had its title altered in 1890

—has grown to be the most important agricultural institution in Australasia. Its objects are to promote the development of the agricultural, pastoral, and industrial resources of the State in the manner following:—

(1) By holding exhibitions at such places and times as the council shall appoint; and by offering and awarding prizes and premiums at all such exhibitions, if deemed desirable.

(2) By holding meetings at such places and times as the council shall appoint, at which meetings papers may be read and discussed.

(3) By collecting such information from agricultural publications, scientific and other works, as may be useful in promoting the objects of the society.

(4) By corresponding with agricultural and other kindred societies at home and abroad, and collecting from such correspondence all information which, in the opinion of the council, may lead to practical benefit in the cultivation of the soil and breeding of stock, as well as in the prosecution of other important industries.

(5) By encouraging the attention of men of science to the discovery of better methods of cultivation, the improvement of agricultural implements and machinery, the construction of farm buildings, the application of chemistry to the general purposes of agriculture, the destruction of insects injurious to vegetable life, and the eradication or utilization of weeds.

(6) By promoting the discovery and introduction of new varieties of cereals, vegetables, or grasses suitable to the climate, and capable of being cultivated with profit; and also the introduction of desirable kinds and varieties of live stock.

(7) By collecting information regarding the management of plantations, live-fences, and other subjects connected with rural improvement.

(8) By investigating the nature of diseases in animals or plants, and taking measures for the publication, at such times and periods as the council may appoint, of the information thus collected, together with all approved original essays sent in, lectures delivered, or papers read to the society; besides making provision for the establishment of a library and reading-room for the use of members.

(9) By remunerating any person, if thought fit—who shall ascertain by experiment how far such information may lead to useful results in practice—for any loss incurred by such experiments.

The society possesses the Crown grant of show grounds at Flemington, 30 acres in extent, together with 12 acres added by purchase, on which over £59,000 has been spent in permanent improvements. This large sum has been derived from the general income of the society, excepting £3,000 provided by the Government as a recompense for all buildings and fencing on the site previously held on the St. Kilda-road. Three years ago the society was quite out of debt, but owing to recent heavy expenditure, principally incurred in altering the conformation of the grounds, erecting new buildings, and buying additional land, its present overdraft is over £11,000.

The annual exhibition, in the first week in September, is one of the most important public events of the year. Last year the prize money offered for competition amounted to over £2,600, and there were 6,124 entries of exhibits of a very high standard of excellence. Every year the show is patronized by an increasingly large number of visitors, its importance being recognised and accentuated by the proclamation of a public holiday on the Thursday of show week.

The society has a membership roll of 1,518 subscribers, and a general income of over £11,000, its principal sources of revenue being gate money, entry fees, subscriptions, and donations. Its expenditure is mainly incurred in providing additional accommodation at the show grounds for the annually increasing number of exhibits, in prize money, and in working expenses in carrying out the objects of the society.

The institution is governed by a council of 36 members. Of these, three are trustees, who hold office continuously, the remaining 33 being elective members, of whom eleven, or one-third, retire each year, and are eligible for re-election. The society occupies, on lease, commodious offices in the Equitable Building, Collins-street, with a reading-room and a good agricultural library.

Ballarat Agricultural and Pastoral Society.

This society was established in 1856, its objects being the improvement and advancement of agricultural and pastoral pursuits, of implements and machinery incidental thereto, and of the breed of stock.

Ballarat, being the centre of the great merino district of the State, holds a special sheep show each year, in the month of September. Since 1876, when these special shows were first inaugurated, they have been most successful, the prizes awarded up to date having reached the amount of £11,793.

The agricultural show of the society is usually held each year in the month of October. It is amongst the most important in the Western District, and always attracts a large number of entries. The prize money awarded and paid from 1861 to 1906 inclusive was £32,083.

The total amount of prize money paid since 1861 is £57,449, awarded as follows:—Ploughing matches, £9,245; farm and garden produce, £1,877; agricultural shows, £32,083; sheep shows, £11,606; tenant farms, £2,168; reaper and binder trials, £283.

A sum of £13,628 has been expended in improvements and repairs to the show yards, keeping them in first class order, and providing proper accommodation for all exhibits. On the 30th April, 1906, the society's debit bank balance, covering all liabilities, was £290. The total receipts for the year ended 30th April, 1906, were £1,663, and the expenditure £1,714.

Bendigo Agricultural and Horticultural Society.

This society was founded about 42 years ago. The shows are held on a portion of Rosalind Park, of which the society holds a permissive occupancy from the Bendigo City Council. The progress of the society of late years has been most marked, and buildings of a substantial character for the accommodation of exhibits and the public have been provided.

Its annual spring show is held in the second week of October, and extends over three days, the average attendance being about 15,000 persons. About £1,100 in cash and trophy prizes are distributed. It is practically free from debt, and has valuable assets in the form of buildings and freehold land.

The show room is 200 feet long by 48 feet wide, and in it dairy produce, flowers, fruits, and vegetables are exhibited. The two grandstands will seat 2,000 visitors. The refreshment and luncheon rooms are permanent structures.

This society is noted for the splendid display of jumping at the annual show, the Australian record was made there, in 1903, and again in 1906. The society is effecting many improvements in the yards preparatory to the ensuing show.

Kyneton Agricultural Association.

This association was formally inaugurated in 1856. In 1857, permissive occupancy was obtained of a piece of land opposite the hospital for a show ground, and there the shows were held for the next 30 years. The first grain show was held in March, 1858, and the first show for stock and implements in November of the same year. In 1886, the society had made such progress, and the entries had become so numerous, that it was necessary to procure a more suitable site for show purposes. This site was found on the racecourse reserve, and consists of about 87 acres, where about £4,000 was spent in the erection of fencing and buildings, £3,000 being contributed by the society, and the balance by the District Racing Club. The exhibits of draught horses have always been regarded as of a very high order; and notwithstanding declining grants from the Government, the committee has been able to keep the prize list up to from £450 to £500 annually. The whole of the loan is now repaid. In 1906, the Grand National Show was held under the auspices of the society, and it was generally conceded to be the best show ever held at Kyneton.

North-Eastern and Goulburn Valley Agricultural, and Pastoral Association.

This society came into existence about thirty-three years ago. Its objects are to further the agricultural and pastoral industries of the State by holding shows, awarding prizes, and generally promoting the best interests of the farming, dairying, and grazing industries. Its show grounds, which are situated at Tatura, cover 25 acres, and provide comfortable and extensive accommodation for stock of all kinds. The land is valued at £650, buildings

and improvements at £4,500, and represent a total asset of £5,150. The annual show, held in the third week in October, is popular, and commands up to 3,000 entries annually. Liberal and comprehensive prizes are offered, amounting to between £700 and £800 per annum. The annual revenue is about £1,400; members' subscriptions amounting to £700. The show is very successful, situated as the grounds are, within the Rodney Irrigation district.

This society is one of the first that has taken up the new conditions that the Department of Agriculture requires in connexion with the annual subsidy. Prizes were given during the past year for farms 300 to 1,000 acres and for farms under 300 acres: prizes were also given for lucerne paddocks, and maize, also for chaff ensilage, and hay stack building.

Shepparton Agricultural Society

The society was inaugurated in 1878. The objects of the society are to promote the advancement of agricultural, horticultural, pastoral, and industrial pursuits, in such manner as from time to time may seem most advisable.

The society has progressed since 1891 to the present day as follows:—Membership, 150 to 420; prize money, £425 to £700; gate money, £121 to £362; exhibits from under 1,000 to over 3,000. The society's show grounds now cover 23 acres, and the expenditure on improvements, buildings, land, &c., has been over £4,100. The receipts for the society's year ended 31st January, 1907, were £2,963, and the expenditure £2,757. The society's position is very sound, its solid assets exceeding its liabilities by £2,036, after deducting some £1,500 for depreciation of buildings, fencing, &c.

North Gippsland Agricultural Society.

The North Gippsland Agricultural Society was founded in 1861, at Sale, and was the first institution of its kind in Gippsland. The Annual show is held in the last week in October, on a good ground, 13 acres in area, situated about 1 mile out of Sale. There are numerous entries, and the attendance is a large one. The number of members is 220. The total receipts for the year were £581, and the expenditure £602. There is a loan liability of £900.

Agricultural and Horticultural Societies.

The agricultural societies furnishing returns for 1906, including those just specified, have grounds covering an area of 1,590 acres, and a total membership of 16,131. The receipts amounted to £55,378, and the expenditure to £64,054. Thirty-five horticultural societies also furnished returns. The grounds of these societies cover 44 acres, their membership in 1906 was 3,238, the receipts were £3,872, and the expenditure £3,700.

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.

Extract from a Report by the Government Entomologist.

Orchards, nurseries, and gardens are systematically inspected. 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 into Victoria 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 reserves the right of examination, and, if necessary, a second fumigation.

Besides lectures, inspections and experiments, the entomological branch 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, which teachers from the Education Department, pupils of the Veterinary College, and members of the Field Naturalists and Science Clubs have visited, and from which collections are sent to exhibitions and shows of agricultural societies.

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 erection of a large shed on the wharf, and in which will be open trays for the more thorough examination of fruit from New South Wales, Queensland, and elsewhere, as also a fumigating plant, and the appointment of a number of additional inspectors, and packers. The fruit-fly question is a most grave one, and should either of the abovenamed insects obtain a footing in Victoria, a great portion of the large and important fruit industry of our State would be practically ruined. An Act to further amend the Vegetation Diseases Act, has been passed by Parliament, and is now in force. The increasing area of land for orchard purposes will necessitate the appointment of additional inspectors, and this will be done as circumstances dictate. The Plates and MS. for Vol. IV. of the *Destructive Insects of Victoria* are nearly ready, and the publication of same may shortly be expected.

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. By a recent enactment 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 are prominent features of the measure.

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. Efforts are being made to expand the industry of rearing chickens for export, and the wholesomeness of such products originating in Victoria cannot be questioned.

Experimental Field Work in 1906.

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, 40 varieties of wheat, and the growth of fodder crops.

The last year's results point out 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 subsoil 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 last 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.

It is proposed to undertake the systematic analyses of Victorian wheats, in order to encourage only the growth of those yielding a high percentage of flour (and low percentage of by-products in the shape of bran and pollard) of good "strength" and quality.

Manure Experiments in the South.

Several five-acre forage and potato experiments have been carried on during the year. The trials embrace different fodder crops, grasses, roots, potatoes, cow peas, flax, and onions. The results of all crops are not sufficiently advanced to permit of detailed criticism, but it is sufficiently evident that the superphosphate used alone is hardly adequate to sustain the heavy yields of green fodder produced in localities where the rainfall is from 20 to 35 inches per annum. The addition of nitrogen in the shape of sulphate of ammonia or nitrate of soda to the superphosphate, has in nearly all cases shown a marked improvement both in the quantity and quality of the produce. The addition of potash has given negative results, except in soils of a sandy nature. The application of lime and farm manure has been productive of moderately good results, which will become more prominent as time goes on.

The application of artificial manures to grazing land has been extensively carried on during the year on some 400 acres. Out of some ten different dressings, the superphosphate, bone dust, Thomas' phosphate and lime, and in a minor degree, gypsum—have given the most satisfactory results. It is intended to extend this class of experiment all over the State. In the dairying districts in particular, the stock carrying capacity of the pastures is a matter in want of immediate attention.

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, Casterton, and Foster are projected. The poor land in other parts of the State will also receive attention.

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.

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. The Victorian farmer is willing to be taught, but he wants convincing proof, and this can only be secured by methods that are necessarily slow and cautious.

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 56,245,000 acres, has about twelve million acres of woodland. Of the latter, over 4,600,000 acres are set aside as climatic reserves and for the production of timber, but no portion is formally dedicated in perpetuity for the purpose of forest and water supply. 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.

It is expected that proposed legislation will aid greatly in conserving our forests, and, at the same time, increase their produce, by systematically controlling their working.

Agricultural, Dairying, and Pastoral Industries.

Expenditure on agricultural bonuses.

The Constitution Act provides that, after the inauguration of Federation, the control of the payment of bounties shall pass to the Executive Government of the Commonwealth. A State is therefore precluded from offering bounties on the production or export of its products, and the Department of Agriculture is now only dealing with applications for the bonuses to the extent for which provision had been made at the time of the establishment of the Commonwealth. Out of the provision that had been made prior to that time, the State Government, up to the end of June, 1906, had paid out of the general revenue the sum of £374,108. Bonuses have also been paid

out of loan moneys borrowed for the purpose, particulars of which are set out in the following table:—

BONUSES GRANTED UNDER LOAN ACTS.

Subject of Bonus.	Period during which Bonus operated.	Rate of Bonus.	Expenditure to 30.6.1906.
Under Act No. 1451.			£
Green Fruit exported	prior to 24.7.96	2s. per case	5,404
	after 6.11.96	1s. "	
Honey exported	prior to 9.11.95	1d. per lb.	61
Raisins, Currants, and Figs made	1895	£5 per ton	2,134
Vegetable Oil manufactured ...	...	1s. per gal.	197
Flax and Hemp Fibre produced	...	£5 per ton	557
General Vegetable Products grown	1895	£2 per acre	3,668
Wineries (assistance in building machinery and appliance producing 60,000 gallons of wine in three years)	...	£2,000 each	8,000
Viticultural Education ...	...	...	7,999
Fruit Pulp exported	...	½d. per lb.	3,402
Total	...	...	31,422
Under Acts No. 1564, *etc.*			
District Co-operative Wineries and Viticulture Industry ...			15,085
Dairy Schools, Experimental Stations, purchase of Live Stock, Machinery, Implements and other Appliances, and Technical Agricultural Education			29,988
Development of the Export trade			7,565
Bonuses for the encouragement of the Cultivation, Manufacture, and Export of Fruit, Tobacco, Flax, Hemp, Silk, and of other Rural Industries			4,622
Total			57,260
To Beet Sugar Factory under Act No. 1440			62,000
Grand Total			150,682

In addition, 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. These advances are gradually being repaid.

Particulars of State expenditure in aid of agricultural industries during each of the five financial years ended with 1905-6, are as follow:— Subsidies to agriculture.

SUBSIDIES TO AGRICULTURE, &C.: 1901-2 TO 1905-6.

——	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.
	£	£	£	£	£
Agricultural and Horticultural Societies, &c.	6,484	2,392	2,392	2,420	2,375
Carriage of Agricultural Produce at reduced Rates—Allowance to Railway Department	75,000	6,521	48,000	46,280	41,787
To promote the Agricultural, Dairying, Fruit, and Wine Industries	1,146	370	153	139	296
Expenses in connexion with export of Dairy Produce, Fruits, Meat, Rabbits, and other produce	33,503	33,672	27,500	32,320	31,130
Development of Export Trade	...	...	1,679	1,711	2,920
Viticultural Education and inspection of Vineyards	...	...	1,871	2,317	3,021
Eradication of Vine Diseases	50	...	...	30	..
,, Vegetation Diseases	2,983	3,804	4,147	4,202	4,257
Scab Prevention and Stock Diseases	4,970	5,358	7,417	7,190	7,319
Rabbit and Vermin Extermination	17,250	16,489	15,759	16,603	16,477
Maffra Beet Sugar Company—Expenses in connexion with	1,015	486	454	215	214
Seed Advances	17	110	67	9	23
Technical Agricultural Education	...	9,786	12,077	13,641	14,428
Publishing Agricultural Reports	...	3,990	2,739	2,011	2,250
Carrum Advances Act ...	...	...	...	512	...
Advances to Settlers on account of Losses by Bush Fires	...	...	...	...	3,486
Total	142,418	82,978	124,255	129,600	129,983

From the foregoing it will be seen that the State has rendered material assistance to all the producing industries connected with the land.

LAND OCCUPIED, CULTIVATION, AND STOCK.

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 Land occupied and cultivation and live stock thereon, 1906.

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.

Size of Holdings. (In acres.)	Privately-owned Land. Number of Holdings.	Area occupied.	Crown Land held in conjunction with the privately owned.	Total Area occupied.	Area under— 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

Size of Holdings. (In acres.)	Live Stock on Holdings. Horses.	Cattle. Dairy Cows.	Cattle. Other Cattle.	Sheep.	Pigs.
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 to 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	00.00	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.

The following tables show the land in occupation in March, 1907, in districts, and the uses to which the land was put :—

LAND IN OCCUPATION IN EACH DISTRICT OF VICTORIA, MARCH, 1907.

(Areas 1 acre and upwards.)

District.	Number of Occupiers.	Acres Occupied.				
		For Agricultural Purposes.	For Pasture.		Other Purposes and Unproductive.	Total.
			Sown Grasses, Clover, or Lucerne.	Natural Grasses.		
Central ...	12,121	302,214	171,340	2,079,605	35,474	2,588,633
North Central	5,121	166,801	54,129	1,647,914	16,175	1,885,019
Western ...	9,472	254,102	180,017	5,904,459	124,834	6,463,412
Wimmera ...	5,577	1,252,988	577	3,945,465	87,207	5,286,237
Mallee ...	2,858	874,885	5,382	3,436,924	1,668,155	5,985,346
Northern ...	9,640	1,233,484	28,436	3,716,361	26,826	5,005,107
North-Eastern	4,347	122,473	1,711	2,987,824	335,260	3,447,268
Gippsland ...	7,275	87,606	654,050	3,018,698	887,983	4,648,337
Total ...	56,411	4,294,553	1,095,642	26,737,250	3,181,914	35,309,359
		PERCENTAGE OF TOTAL OCCUPIED IN EACH DISTRICT.				
Central ...	...	11·67	6·62	80·34	1·37	100·00
North Central	...	8·85	2·87	87·42	·86	100·00
Western ...	...	3·93	2·79	91·35	1·93	100·00
Wimmera ...	...	23·70	·01	74·64	1·65	100·00
Mallee ...	...	14·62	·09	57·42	27·87	100·00
Northern ...	. .	24·64	·57	74·25	·54	100·00
North-Eastern	...	3·55	·05	86·67	9·73	100·00
Gippsland ...	...	1·89	14·07	64·94	19·10	100·00
Total ...	...	12·16	3·10	75·73	9·01	100·00
		PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE.				
Central ...	21·48	7·04	15·64	7·78	1·12	7·33
North Central	9·08	3·88	4·94	6·16	·51	5·34
Western ...	16·79	5·92	16·43	22·08	3·92	18·30
Wimmera ...	9·89	29·18	·06	14·76	2·74	14·97
Mallee ...	5·07	20·37	·49	12·86	52·43	16·95
Northern ...	17·09	28·72	2·59	13·90	·84	14·18
North-Eastern	7·71	2·85	·16	11·17	10·53	9·76
Gippsland ...	12·89	2·04	59·69	11·29	27·91	13·17
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 24 per cent. of land occupied in the Wimmera and Northern districts is devoted to agriculture, and each of these districts supplied 29 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 60 per cent. of the sown grasses in the State are found to be there.

In the next table the distribution of cattle and sheep on pastoral lands in March, 1907, is given.

AREA CULTIVATED AND STOCK, 1906-7.

District.	Acres Occupied for		Number of		Stock—Equivalent of Sheep—per 100 acres used for Pasture.*
	Agriculture.	Pasture.	Cattle.	Sheep.	
Central	302,214	2,250,945	290,584	1,169,606	129
North Central ...	166,801	1,702,043	141,055	942,025	105
Western	254,102	6,084,476	353,228	4,618,985	111
Wimmera ...	1,252,988	3,946,042	63,095	2,243,299	66
Mallee	874,885	3,442,306	45,733	431,698	21
Northern ...	1,233,484	3,744,797	253,653	2,002,262	94
North-Eastern ...	122,473	2,989,535	232,798	750,104	72
Gippsland ...	87,606	3,672,748	424,177	779,461	91
Total ...	4,294,553	27,832,892	1,804,323	12,937,440	85

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

The area occupied does not include 3,181,914 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 12,937,400 in March, 1907, as against 11,455,115 a year earlier. The increase is spread over all the districts, but the largest increases are in the Northern (397,476), Gippsland (230,259), and Wimmera (181,617) 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 29 per cent., and it is among the small holders that the substantial increase has taken place.

World's supply and consumption of mutton.

In connexion with the pastoral industry in Victoria, it is advisable to point out that the number of sheep in the principal sheep countries of the world is decreasing, while the populations of those countries are increasing.

NUMBER OF SHEEP IN THE PRINCIPAL SHEEP-PRODUCING COUNTRIES OF THE WORLD, 1887 AND 1903.

Countries.	1887.	1900-3.
United Kingdom	28,900,000	30,000,000
Other European countries ...	168,800,000	141,000,000
Total	197,700,000	171,000,000
United States	43,500,000	52,000,000
Australian States and New Zealand	96,600,000	*76,000,000
Cape Colony	13,100,000	11,500,000
Canada	2,600,000	2,500,000
Argentine Republic	70,450,000	80,500,000
Uruguay	10,550,000	14,500,000
Total	236,800,000	237,000,000
Grand Total	434,500,000	408,000,000

* The number of sheep in the Australian States and New Zealand has since increased to 104,000,000.

ESTIMATED POPULATION OF THE PRINCIPAL SHEEP-PRODUCING COUNTRIES OF THE WORLD, 1887 AND 1903.

Countries.	1887.	1903.
United Kingdom	36,600,000	42,371,000
Other European countries ...	303,320,000	344,256,000
Total for Europe	339,920,000	386,627,000
Other principal countries ...	72,370,000	97,108,000
Grand Total	412,290,000	483,735,000

It will be seen that the decrease in the number of sheep in Europe in the sixteen years was 26,700,000, and that the other countries, taken together, remained about stationary. At the same time, the population increased by 71,445,000.

The following additional figures, bearing upon the question, have been extracted from Mulhall's *Dictionary of Statistics*. No later figures than those for 1895 and 1896 are available, but there is no reason to suppose that, in recent years, the decline in production and the increase in consumption have not continued in the countries named:—

UNITED KINGDOM—PRODUCTION AND CONSUMPTION OF MUTTON, 1875 AND 1895.

Year.	Production Tons.	Imports Tons.	Consumption. Tons.
1875	370,000	55,000	425,000
1895	320,000	230,000	550,000
Increase (+) or Decrease (−)	−50,000	+175,000	+125,000

UNITED STATES—PRODUCTION OF MUTTON.

Year.	Tons.
1876	360,000
1886	480,000
1890	440,000
1896	380,000

It will be seen that there is great opportunity in Victoria for expansion in the sheep industry. At present there is practically no fodder grown for sheep, yet wonderful results have been achieved in that direction in New Zealand.

PERSONS ENGAGED IN RURAL PURSUITS.

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

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:—

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	—
Total	4,516	462	5,671	1,138	8,396	400	4,446	5,566	322	3

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	1,099	15,096	1,693	—	—	16,361	13,238	—	—
Farm Manager, Overseer	—	—	—	—	359	6	—	—	3	—
Farm Servant, Agricultural Labourer	—	—	—	—	20,204	599	—	—	956	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	—
Total	15,071	1,190	18,312	1,841	26,229	720	17,609	13,625	1,318	

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 four years the particulars are as follow:—

NUMBER OF PERSONS EMPLOYED UPON FARMING, DAIRYING, AND PASTORAL HOLDINGS, 1903 TO 1906.

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

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 last year 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 1906-7. The information has been furnished by the occupiers of holdings:—

WAGES, AGRICULTURAL AND PASTORAL, 1906-7.

Occupations.	Range.	Prevailing Rate.
Ploughmen	12s. 6d. to 30s. per week ..	20s. per week
Farm labourers	10s. to 30s. „ ..	15s. „
Threshing machine hands ..	6d. to 1s. per hour ..	6d. per hour
Harvest hands	3s. 4d. to 8s. per day ..	5s. per day
Milkers	7s. to 20s. per week ..	15s. per week
Maize pickers (without rations)	4d. to 6d. per bag ..	4d. per bag
Hop pickers „ „	2½d. to 6d. per bushel ..	4d. per bushel
Married couples	15s. to 40s. per week ..	30s. per week
Female servants	5s. to 20s. „ ..	10s. „
Men cooks	12s. 6d. to 30s. „ ..	20s. „
Stockmen	£39 to £68 per annum ..	£52 per annum
Boundary riders	£25 to £65 „ ..	£45 „
Shepherds	£26 to £52 „ ..	£40 „
Hut keepers	£26 to £52 „ ..	£40 „
Generally useful men ..	10s. to 30s. per week ..	17s. 6d. per week
Sheep washers	16s. to 30s. „ ..	20s. „
Shearers, hand*	14s. to 20s. per 100 sheep	16s. per 100 sheep
„ machine* ..	14s. to 20s. „	16s. „
Bush carpenters	15s. to 50s. per week ..	30s. per week
Gardeners, market ..	10s. to 25s. „ ..	22s. 6d. „
„ orchard ..	10s. to 25s. „ ..	20s. „
Vineyard hands	10s. to 25s. „ ..	15s. „

* 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, 1904 to 1907:— Area under cultivation.

CULTIVATION OF PRINCIPAL CROPS, 1903-4 TO 1906-7.

Crop.	Year Ended March.			
	1904.	1905.	1906.	1907.
	Acres.	Acres.	Acres.	Acres.
Wheat	1,968,599	2,277,537	2,070,517	2,031,893
Other Grain Crops ...	504,189	415,292	378,987	458,451
Root Crops	55,684	52,038	52,125	62,150
Hay	733,353	452,459	591,771	621,139
Green Forage	33,165	29,902	34,041	36,502
Vines	28,513	28,016	26,402	25,855
Orchards	51,357	52,751	52,274	54,021
Market Gardens	8,455	7,904	7,333	7,906
All other Crops	5,754	5,886	6,512	5,669
Land in Fallow	632,521	853,829	1,049,915	990,967
Total Cultivation ...	4,021,590	4,175,614	4,269,877	4,294,553

The area under cultivation, exclusive of permanent and artificial grasses, increased from 50 acres sown down with wheat in 1836 to 4,294,553 acres, which were under crops of various kinds and in fallow in 1906-7. 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 and uninterrupted progress has been made. The area of land in fallow has also been increasing since 1858-9, and in recent years the increase has been very marked.

For the eleven years—1896-7 to 1906-7—the total area under cultivation, its proportion to the area of the State—56,245,760 acres—and the yearly increase or decrease, actual and centesimal, were :—

AREA UNDER CULTIVATION, 1896-7 TO 1906-7.

Year ended March.	Area under Tillage (exclusive of area under artificial Grass).		Yearly Increase (+) or Decrease(-).	
	Total.	Percentage of Area of Victoria.	Total.	Percentage.
	Acres.		Acres.	
1897 ...	2,925,416	5·20	...	...
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

The land under cultivation, including land in fallow, but excluding land under artificial grasses, in 1896-7, was 2,925,416 acres, and in 1906-7, 4,294,553—an increase of 1,369,137 acres in the eleven years, or 47 per cent. The increase has been fairly and almost constantly maintained. There are, however, two years in which a slight reduction appears. The area of land actually under crops of various kinds in 1906-7 was 3,303,586 acres.

Cultivation per head in Australasia.

The average area in cultivation (exclusive of artificial grasses) to each person, in each of the Australian States and New Zealand, on the last day of each of the years 1902 to 1906 was as follows :—

CULTIVATION PER HEAD IN AUSTRALASIA, 1902 TO 1906.

State.	1902.	1903.	1904.	1905.	1906.
	Acres.	Acres.	Acres.	Acres.	Acres.
Victoria	3·10	3·33	3·45	3·50	3·47
New South Wales ...	1·99	2·14	2·19	2·25	2·18
Queensland	·93	1·21	1·18	1·18	1·12
South Australia ...	8·61	8·83	8·83	8·84	8·46
Western Australia .	1·06	1·61	1·68	1·83	2·15
Tasmania	1·56	1·66	1·43	1·48	1·55
New Zealand ...	2·04	2·14	2·15	2·09	1·95

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

AGRICULTURAL PRODUCTION, 1904-5 TO 1906-7.

Produce.	Year ended March.		
	1905.	1906.	1907.
Wheat ... ... bushels	21,092,139	23,417,670	22,618,043
Other Grain ... ... ,,	7,932,987	9,229,879	11,113,463
Root Crops ... ... tons	125,884	163,757	216,622
Hay ... ... ,,	514,316	864,177	881,276
Vines ... cwt. of grapes	452,433	498,590	752,826
Green Forage ... £	74,755	85,103	91,255
Orchards ... ... £	376,585	379,424	486,085
Market Gardens ... £	197,600	183,225	197,650
Other Agricultural Produce £	141,620	84,946	85,423

Regarding the production of the State in 1906-7 as a whole, the returns show a continuance of the improvement experienced in the preceding year.

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

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 seasons there was a decline in the area, 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 1906-7, the area under wheat was 2,031,893 acres, which yielded 22,618,043 bushels, or 11.13 bushels per acre. With two exceptions, the total crop in 1906-7 was the highest ever obtained. Wheat.

An estimate of the area under wheat was made on 31st July, 1906, and an estimate of the wheat yield on 28th November following. The following were the results:— Estimated wheat yield, 1906-7.

Estimated area under wheat for grain ...	2,088,900 acres
,, ,, hay ...	200,000 ,,
Total ...	2,288,900 acres
Estimated produce of grain	24,540,800 bushels
Average per acre	11.75 ,,

Disappointing results in the counties of Rodney and Moira accounted for the yield being lower than anticipated.

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, 1905, 1906, AND 1907, IN COUNTIES.

Districts and Counties.	Year ended March.								
	Area.			Produce.			Average per Acre.		
	1905.	1906.	1907.	1905.	1906.	1907.	1905.	1906.	1907.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushls.	Bushls.	Bushls.
Central—									
Bourke ..	3,184	2,712	2,568	48,972	51,763	41,065	15.38	19.09	15.99
Grant ..	7,190	8,784	11,500	111,766	192,215	206,587	15.54	21.88	17.96
Mornington ..	129	150	58	1,205	1,457	850	9.34	9.71	14.66
Evelyn ..	33	144	136	710	2,739	2,357	21.52	19.02	17.33
North-Central—									
Anglesey ..	1,383	1,375	1,224	20,143	25,040	13,164	14.56	18.21	10.75
Dalhousie ..	6,720	5,257	3,704	81,694	106,266	44,592	12.16	20.21	12.04
Talbot ..	24,082	19,903	17,804	384,531	399,648	281,115	15.97	20.08	15.79
Western—									
Grenville ..	2,420	3,673	4,997	39,018	72,416	92,296	16.12	19.72	18.47
Polwarth ..	254	89	40	2,936	1,619	329	11.56	18.19	8.23
Heytesbury ..	8	21	30	189	332	521	23.63	15.81	17.37
Hampden ..	483	1,328	1,391	7,795	19,230	19,629	16.14	14.48	14.11
Ripon ..	58,272	60,168	68,087	965,719	998,484	1,018,873	16.57	16.59	14.96
Villiers ..	414	937	880	7,816	16,286	14,889	18.88	17.38	16.92
Normanby ..	719	794	745	11,466	14,931	12,298	15.95	18.81	16.51
Dundas ..	3,399	2,603	1,866	61,963	43,503	26,756	18.23	16.71	14.34
Follett ..	974	941	631	16,157	16,273	9,629	16.59	17.29	15.26
Wimmera—									
Lowan ..	165,977	162,585	164,440	1,878,996	2,020,407	1,763,348	11.32	12.43	10.72
Borung ..	380,492	309,884	317,055	4,198,169	4,216,774	4,445,954	11.03	13.61	14.02
Kara Kara ..	122,512	119,140	111,710	1,531,858	1,738,093	1,635,021	12.50	14.59	14.64
Mallee—									
Millewa ..	..	..	..	..	..	..	..	..	..
Weeah ..	20,756	22,105	25,105	150,234	166,566	231,263	7.24	7.54	9.21
Karkarooc ..	360,881	321,511	326,998	1,345,789	1,856,110	2,666,564	3.30	5.77	8.15
Tatchera ..	342,022	312,380	286,138	1,146,768	1,664,361	2,576,608	3.35	5.33	9.00
Northern—									
Gunbower ..	43,555	40,000	33,543	381,872	427,831	354,722	8.77	10.70	10.58
Gladstone ..	107,534	104,475	102,807	1,328,792	1,405,429	1,483,018	12.36	13.45	14.43
Bendigo ..	110,926	100,966	103,257	1,490,773	1,527,351	1,501,076	13.44	15.13	14.54
Rodney ..	131,822	128,048	123,107	1,634,132	1,968,618	1,278,327	12.40	15.37	10.38
Moira ..	328,811	295,402	279,123	3,572,725	3,754,598	2,509,387	10.87	12.71	8.99
North-Eastern—									
Delatite ..	11,520	10,877	8,744	153,758	163,874	67,554	13.35	15.06	7.73
Bogong ..	36,972	29,667	29,962	451,349	417,983	231,592	12.21	14.09	7.73
Benambra ..	1,013	795	681	15,750	14,510	11,380	15.55	18.25	16.71
Wonnangatta	24	32	27	424	682	269	17.67	21.31	9.96
Gippsland—									
Croajingolong	88	77	65	1,092	1,269	1,076	12.41	16.48	16.55
Tambo ..	16	50	22	147	997	521	9.19	19.94	23.68
Dargo ..	17	22	..	189	750	..	11.12	34.09	..
Tanjil ..	2,743	3,448	3,306	44,340	105,239	72,983	16.16	30.52	22.08
Buln Buln ..	192	174	142	2,902	4,026	2,430	15.11	23.14	17.11
Total ..	2,277,537	2,070,517	2,031,893	21,092,139	23,417,670	22,618,043	9.26	11.31	11.13

It will be observed that the area harvested for wheat last season was 38,624 acres less than in the previous one. The falling-off was principally in the counties of Moira and Tatchera. On the other hand, there has been a large addition to the wheat area in the county of Ripon, where there were 68,087 acres in 1906-7, compared with 60,168 in the previous season.

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, Karkarooc, and Tatchera; and the northern, comprising Gunbower, Gladstone, Bendigo, Rodney, and Moira. Of the total wheat harvested in 1906-7, that in the counties enumerated was 1,873,283 acres, or 92 per cent. of the total, producing 20,445,288 bushels, or 90 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 1906-7, the average per acre was more than 2½ bushels per acre better than 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 1906–7.	
		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	68,087	14·96
Wimmera Dist.—									
Lowan ..	3,181,440	1871–2	232	16·69	1892–3	257,685	8·58	164,440	10·72
Borung ..	2,740,480	1871–2	4,590	15·59	1903–4	424,224	13·67	317,055	14·02
Kara Kara ..	1,472,640	1871–2	7,987	14·34	1899–00	125,345	9·68	111,710	14·64
Mallee Dist.—									
Weeah ..	2,562,560	1891–2	40	21·00	1906–7	25,105	9·21	25,105	9·21
Karkarooc ..	3,797,120	1879–80	233	10·87	1902–3	371,069	·22	326,998	8·15
Tatchera ..	2,138,240	1871–2	2	12·00	1904–5	342,022	3·35	286,138	9·00
Northern Dist.—									
Gunbower ..	862,720	1871–2	181	13·36	1880–1	75,114	9·29	33,543	10·58
Gladstone ..	1,153,280	1869–70	7,988	17·46	1904–5	107,534	12·36	102,807	14·43
Bendigo ..	1,247,360	1869–70	21,038	16·26	1904–5	110,926	13·44	103,257	14·54
Rodney ..	1,087,360	1855–6	63	26·66	1898–9	132,273	13·92	123,107	10·38
Moira ..	1,986,560	1871–2	14,936	15·93	1904–5	328,811	10·87	279,123	8·99

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, 1897-8 TO 1906-7.

District and County.	Average Yield of Wheat per Acre (in Bushels) during Year ended March.									
	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Western District—										
Ripon	15.17	15.57	19.17	16.75	18.13	9.60	15.32	16.57	16.59	14.96
Wimmera District—										
Lowan ..	4.27	8.88	5.90	7.43	8.53	3.21	13.47	11.32	12.43	10.72
Borung ..	3.95	10.15	6.41	8.83	7.22	.47	13.67	11.03	13.61	14.02
Kara Kara ..	7.81	11.29	9.68	10.10	10.19	1.38	15.97	12.50	14.59	14.64
Mallee District—										
Weeah ..	2.38	7.70	4.70	9.80	5.65	.46	12.39	7.24	7.54	9.21
Karkarooc ..	.99	3.38	2.93	6.41	3.77	.22	10.76	3.30	5.77	8.15
Tatchera ..	4.15	4.48	5.19	4.83	3.22	.10	11.99	3.35	5.33	9.00
Northern District—										
Gunbower ..	9.74	5.80	6.33	9.56	3.93	.27	14.54	8.77	10.70	10.58
Gladstone ..	8.06	12.27	8.95	9.79	8.49	1.25	16.68	12.36	13.45	14.43
Bendigo ..	12.12	12.90	10.26	12.31	8.35	1.40	18.54	13.44	15.13	14.54
Rodney ..	13.81	13.92	11.07	13.04	10.82	4.37	17.40	12.40	15.37	10.38
Moira	11.06	9.77	8.68	11.70	9.27	1.15	17.18	10.87	12.71	8.99

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 :—

DECLINE OF WHEAT CULTIVATION IN CERTAIN 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 1905–6.		Cultivation in 1906–7.	
	Year.	Area.	Average Yield Per Acre.	Area.	Average Yield Per Acre.	Area.	Average Yield per Acre.
		Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Central District—							
Bourke	1861–2	30,268	17·12	2,712	19·09	2,568	15·99
Grant	1861–2	35,349	15·86	8,784	21·88	11,500	17·96
Mornington	1860–1	3,153	14·03	150	9·71	58	14·66
Evelyn	1859–60	1,789	15·43	144	19·02	136	17·33
North-Central District—							
Anglesey	1874–5	4,146	12·96	1,375	18·21	1,224	10·75
Dalhousie	1869–70	25,124	21·47	5,257	20·21	3,704	12·04
Talbot	1871–2	76,555	13·81	19,903	20·08	17,804	15·79

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

WHEAT RETURNS, 1896-7 TO 1906-7.

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

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, and in 1906-7 on 18,077 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. In addition to 2,031,893 acres, harvested for grain, there were also 231,408 acres of wheat cut for hay, so that the total area sown with wheat in 1906-7 was 2,263,301 acres; from information received from growers it is estimated that the corresponding area for the season 1907-8 is 2,133,000 acres, or a reduction of over 130,000 acres, the most notable decrease being in the northern district. Apparently the wheat growers there are now giving more attention to sheep, as a reference to the live stock returns shows that in March last the number of sheep in that district was nearly 400,000 more than in the previous year. 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; and 62¾ lbs. in 1906-7.

Experiments in cultivation of wheat.

With a view of improving wheat production in Victoria, the Agricultural Department is supervising experimental work in the direction of improved methods of cultivation, use of fertilizers, and the introduction of new varieties of seed. The experiments will

cover a term of seven years, and, during the season 1906-7, the second series of these were conducted in twenty-three fields located in different parts between the Wimmera, 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 bluestone, 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.

Population and breadstuffs.

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 for 1907 :—

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.

Disposal of breadstuffs.

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

DISPOSAL OF BREADSTUFFS.

Year.	Wheat and Flour.				
	How disposed of—				
	Quantity available for Home Consumption.	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 1906-7, but it is estimated that about 8,000,000 bushels are required locally for food and seed, which will leave 14,600,000 bushels of Victorian wheat for export during the year. Information as to the stocks of wheat and flour on hand on 30th June, 1907, has been received from holders, and is as follows:—

WHEAT AND FLOUR ON HAND, 30TH JUNE, 1907.

Where Located.	Quantity in Bushels.		
	Wheat.	Flour (equivalent in Wheat).	Total.
Railway Stations and in transit ...	167,405	106,800	274,205
Sites leased from Railways	3,725,096	37,050	3,762,146
Mills and Stores (other than on Railways)	2,749,346	917,550	3,666,896
Farms	1,542,831	...	1,542,831
Total	8,184,678	1,061,400	9,246,078

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

WHEAT PRODUCTION OF THE WORLD, 1904 TO 1906.

Continent.	1904.	1905.	1906.
	Bushels.	Bushels.	Bushels.
Australasia	82,041,000	63,659,000	75,320,000
Europe	1,744,844,000	1,802,662,000	1,825,608,000
Asia	475,468,000	420,602,000	444,786,000
Africa	50,496,000	39,070,000	48,404,000
America, North ...	637,006,000	811,420,000	871,875,000
,, South ...	155,185,000	176,745,000	155,337,000
Total	3,145,040,000	3,314,158,000	3,421,330,000

In 1906-7, the land under oats in Victoria was 380,493 acres, from which a yield of 8,845,654 bushels was obtained, giving an average of 23.25 bushels to the acre. The following return shows the harvest results for this crop for the last eleven years :— Oats.

OATS GROWN, 1896-7 TO 1906-7.

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

In addition to the area shown for the last season, there were also 377,887 acres of oats cut for hay, so that the total area under oaten crop was 758,380 acres in 1906-7. In June, 1907, it was estimated that the area under this crop for 1907-8 is 931,700 acres, or an increase of over 173,000 acres.

The area under barley was 52,816 acres in 1906-7, 30,052 acres being under malting barley, and 22,764 acres under other barley. There is a remarkable fluctuation in the area of land sown under barley, which seems strange, seeing that the market Barley.

for this product is uniformly good. The following shows the return for the last eleven years. It will be noticed that the average per acre in 1905-6 is the best for the period covered by the table:—

BARLEY RETURNS, 1896-7 TO 1906-7.

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

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 1906-7 was 55,372 acres, and the produce 166,839 tons, or 3.01 tons per acre. The following table shows the potato returns for the last eleven years:—

POTATOES GROWN, 1896-7 TO 1906-7.

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

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 and produce were in 1903, when 733,353 acres were cut for 1,233,063 tons; next in 1901, with 659,239 acres for 884,369 tons; and next in last year, when 621,139 acres were harvested for 881,276 tons, being an increase over the previous year of 29,368 acres in the area and of 17,099 tons in the produce. The quantity

of straw returned for the season 1906-7 was 151,625 tons. The following is a return of the hay crop for the last eleven years :—

HAY RETURNS, 1896 TO 1906.

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

The five principal crops.

The area under the five principal crops during the last eight 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 :—

AREA, PRODUCTION, AND AVERAGES PER HEAD OF POPULATION OF FIVE PRINCIPAL CROPS, 1899-1900 TO 1906-7.

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
	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

AREA, PRODUCTION, AND AVERAGES PER HEAD OF POPULATION OF FIVE PRINCIPAL CROPS, 1899-1900 TO 1906-7—*continued.*

Year ended March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	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
	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

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, 1906-7.

District.	Percentage in each District of Area under—						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
Central	.70	9.72	34.70	39.21	20.05	36.37	2.78
North-Central	1.12	11.34	10.45	22.13	9.48	4.91	1.65
Western	3.87	9.26	16.68	20.61	12.51	7.88	2.98
Wimmera	29.20	21.54	1.46	.58	18.47	3.87	45.99
Mallee	31.41	9.33	5.02	.02	6.77	5.42	14.90
Northern	31.59	31.10	24.85	.09	22.04	11.83	30.69
North-Eastern	1.94	5.01	1.05	3.97	5.75	10.92	.79
Gippsland	.17	2.70	5.79	13.39	4.93	18.80	.22

NOTE.—For counties contained in each district, see table on page 534.

This statement shows that during last season 92 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; three-fifths of that under barley was in the Central and Northern districts; and 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, 1906-7.

District.	Percentage of Total Cultivation under—						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
Central	4.72	12.23	6.06	7.18	41.20	19.48	9.13
North-Central	13.63	25.86	3.31	7.35	35.28	4.76	9.81
Western	30.96	13.86	3.47	4.49	30.57	5.02	11.63
Wimmera	47.34	6.54	.06	.03	9.16	.50	36.37
Mallee	72.95	4.06	.30	..	4.81	1.00	16.88
Northern	52.04	9.59	1.06	.01	11.10	1.55	24.65
North-Eastern	32.19	15.58	.45	1.79	29.15	14.43	6.41
Gippsland	4.04	11.75	3.49	8.46	35.00	34.73	2.53
Total of Victoria ..	47.31	8.86	1.23	1.29	14.46	3.77	23.08

NOTE.—For counties contained in each district, see table on page 534.

It is apparent that the area cultivated was almost wholly 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 nine years was:—

PROPORTION TO TOTAL CULTIVATION OF LAND UNDER EACH CROP, 1898-9 TO 1906-7.

Year ended March—	Proportionate Area to Total Cultivated Land of— (Exclusive of Area under Artificial Grass.)						
	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Other Crops.	Fallow.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
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

It is shown on page 532, 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 nine 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 nine years:—

PRICES OF PRODUCE, 1899 TO 1907.

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.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
1899	2 2	1 7¾	4 2½	2 2¼	34 5	73 0	36 5	
1900	2 5	2 1	3 2½	2 3½	40 9	41 11	26 11	
1901	2 5¾	1 6½	2 10¾	1 11¼	39 4	73 11	55 10	
1902	2 10¼	2 4	3 9¼	2 9¼	55 5	77 7	84 4	
1903	6 0	3 2¾	4 5¾	3 8	100 1	91 3	47 1	
1904	2 8	1 1½	2 10½	1 9½	27 2	52 6	26 1	
1905	2 11½	1 6	3 2½	2 1	33 6	110 0	84 0	
1906	2 10½	1 10½	3 11	2 8½	38 0	115 6	101 5	
1907	2 9	1 10¼	4 2	2 2¾	38 2	59 1	37 6	

In Melbourne the price of wheat has been good, ranging from 3s. 1d. to 3s. 5¼d. per bushel throughout last year, the latter price being reached in July. After August the price declined, and in December was as low as 3s. 1d. Apart from such temporary fluctuations, the course of the market has been determined throughout the greater part of the year by the movements of the European markets, the fluctuations of which have been within comparatively narrow limits. The highest and the lowest prices in Melbourne during each month in 1906 were as follows:—

PRICES OF WHEAT IN MELBOURNE, 1906.

Month.	Price per Bushel.	
	Highest.	Lowest.
	s. d.	s. d.
January	3 3¾	3 2½
February	3 2½	3 1½
March	3 3	3 1½
April	3 3½	3 2½
May	3 5	3 4¼
June	3 5	3 3¾
July	3 5¼	3 4½
August	3 5	3 3
September	3 3¾	3 2½
October	3 3½	3 2½
November	3 2	3 1½
December	3 2	3 1

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, 1907 :— Yield of crops in Australasia.

YIELD OF PRINCIPAL CROPS IN AUSTRALASIA 1898-9 TO 1906-7.

Year ended March.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
WHEAT.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1899 ...	19,581,304	9,276,216	607,012	8,778,900	870,909	2,303,512	13,073,416
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	1,585,097	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	17,145,796	2,758,567	651,408	5,605,252
OATS.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1899 ...	5,523,419	278,007	4,047	304,002	55,854	2,271,070	16,511,388
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	1,404,554	28,884	896,166	457,155	1,979,574	11,201,789
BARLEY.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1899 ...	1,112,567	64,094	34,865	234,135	29,295	184,225	1,677,908
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	51,487	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
POTATOES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1899 ...	161,142	61,900	16,413	14,445	5,698	88,166	298,561
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
HAY.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1899 ...	723,299	334,297	70,235	258,518	77,297	82,448	151,240
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	395,766	158,112	104,797	140,402*

* Estimated.

Other crops.

The following table shows the area and production under other than principal crops since March, 1901:—

OTHER THAN PRINCIPAL CROPS, 1901-2 TO 1906-7.

Crop.	1901–2.		1902–3.		1903–4.	
	Area.	Production.	Area.	Production.	Area.	Production.
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize	10,020	615,472	10,906	750,524	11,810	904,239
Rye	828	14,418	1,487	21,179	2,021	29,586
Peas and Beans ..	8,297	169,971	8,085	141,888	8,960	213,735
		Tons.		Tons.		Tons.
Mangel-wurzel ..	865	9,679	1,392	17,174	1,564	21,305
Beet, Carrots, Parsnips, and Turnips	561	4,140	747	5,600	1,014	9,879
Onions	4,151	20,859	5,565	27,467	4,176	25,218
Green Forage ..	32,795	..	31,145	..	33,165	..
		Bushels.		Bushels.		Bushels.
Grass and Clover Seeds	1,877	60,144	1,568	15,836	2,749	35,660
		Cwt.		Cwt.		Cwt.
Hops	307	2,249	213	1,572	214	2,447
Tobacco ..	103	345	171	781	129	848
Vines—Grapes ..	28,592	497,269	28,374	444,966	28,513	654,965
Flax	200	268 fibre, 842 seed	233	320 fibre, 990 seed	259	61 fibre, 1,226 seed
Gardens and Orchards	58,807	..	58,415	..	59,812	..
Minor Crops ..	2,991	..	2,201	..	2,403	..
Land in Fallow ..	681,778	..	492,305	..	632,521	..
Artificial Grasses	162,954	..	565,635	..	962,665	..

Crop.	1904–5.		1905–6.		1906–7.	
	Area.	Production.	Area.	Production.	Area.	Production.
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Maize	11,394	623,736	11,785	641,216	11,559	704,961
Rye	2,267	30,578	1,959	28,893	1,571	20,770
Peas and Beans ..	11,523	201,145	12,253	265,206	12,012	286,636
		Tons.		Tons.		Tons.
Mangel-wurzel ..	1,441	13,894	1,657	16,400	1,360	16,139
Beet, Carrots, Parsnips, and Turnips	823	6,149	909	6,408	713	5,644
Onions	2,862	12,969	4,889	25,597	4,705	28,000
Green Forage ..	29,902	..	34,041	..	36,502	..
		Bushels.		Bushels.		Bushels.
Grass and Clover Seeds	2,249	27,300	2,767	33,281	1,859	17,494
		Cwt.		Cwt.		Cwt.
Hops	251	1,449	313	1,906	323	2,787
Tobacco ..	106	1,112	169	1,405	133	†
Vines—Grapes ..	28,016	452,433	26,402	498,590	25,855	752,826
Flax	564	320 fibre, 781 seed	500	332 fibre, 2,357 seed	655	1,116 fibre, 4,853 seed
Gardens and Orchards	60,655	..	59,607	..	61,927	..
Minor Crops ..	2,716	..	2,763	..	2,699*	..
Land in Fallow ..	853,829	..	1,049,915	..	990,967	..
Artificial Grasses	953,543	..	1,040,335	..	1,095,642	..

* For details see page 557. † Not yet available.

In the year 1901-2 there were 10,020 acres under maize, from which a return of 615,472 bushels was obtained. The area of land under this crop was 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; and in 1906-7, 11,559 acres produced 704,961 bushels, of which Tangil produced 244,896 bushels, Tambo, 176,334 bushels, Dargo, 113,997 bushels, Croajingalong, 118,341 bushels, Bogong, 19,149 bushels, Benambra, 13,486 bushels, Delatite, 11,936 bushels, and Buln Buln 4,066 bushels. Other districts of the State also grow maize, but not to any great extent. Maize

In 1906-7, the area under rye was 1,571 acres, from which 20,770 bushels were obtained. The area and yield of this crop have been decreasing during the last three seasons. Rye was last season grown all over the State, except in Borung, Kara Kara, Gladstone, and the Mallee counties of Millewa, Weeah, Karkarooc, and Tatchera. In Delatite, the quantity grown was 8,159 bushels, in Bogong, 1,914 bushels, and in Benambra, 1,360 bushels. In Bourke, Talbot, and Normanby, the produce exceeded 1,000 bushels; but in the other counties of the State it was under 1,000 bushels. Rye.

In the area under peas and beans there was an increase from 8,297 acres in 1901-2 to 12,253 acres in 1905-6, and 12,012 acres in 1906-7. The production in the six years has substantially increased, the yields being 169,971 bushels in 1901-2, and 286,636 bushels in 1906-7. Peas and beans are generally grown in all the counties except those in the Mallee, the principal crops last season coming from Bourke, where 54,623 bushels were obtained; Grant supplied 51,661 bushels; Buln Buln, 36,194 bushels; Tangil, 29,821 bushels; Talbot, 22,930 bushels; and Dalhousie, 20,608 bushels. Peas and beans.

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

The cultivation of beet, carrots, parsnips, and turnips, exclusive of those grown in market gardens, increased by 27 per cent. in area and 36 per cent. in production in the six years ended 1906-7. In 1901-2, the land sown was 561 acres; in 1905-6, 909 acres; and in 1906-7, 713 acres. The produce was 4,140 tons, 6,408 tons, and 5,644 tons, in the respective years named. Beet, carrots, parsnips, and turnips.

Onions are grown in nearly every county south of the Dividing Range. The counties yielding the largest crops last season were—Bourke, Grant, Polwarth, Mornington, and Grenville. In Bourke the yield was 6,429 tons from 980 acres; in Grant it was 4,826 tons from 971 acres; in Polwarth, 3,890 tons from 594 acres; in Mornington, 3,141 tons from 609 acres; in Grenville, 3,001 tons from 489 Onions.

acres; in Buln Buln, 2,260 tons from 360 acres; in Villiers, 1,856 tons from 316 acres; and in Hampden, 1,609 tons from 231 acres. The total area under onions in 1906-7 was exceeded in previous years, but the production—28,000 tons—was the highest recorded. The following is a return for the last twelve years:—

ONION CULTIVATION, 1895-6 TO 1906-7.

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

Green forage.

During the last six seasons the area devoted to green forage was lowest in 1904-5, when it was 29,902 acres. In 1905-6, it increased to 36,502 acres, which is the highest for the period.

Grass and clover seed.

The area under grass and clover for seed shows a decline, that for 1906-7 being only 1,859 acres, which is with one exception the lowest during the last eighteen years. The product returned was 17,494 bushels or an average of nearly 9½ 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-two years. In 1906-7 there were only 53 growers, whose return from 323 acres was 2,787 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. Last year there were 72 growers, and the area still further 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. Results have shown that in Victoria the cultivation of this crop will return handsome profits. Up to the present time, the drawback has been principally the want of machinery to treat the product: but this difficulty has been overcome as several mills are now established, chiefly in the Gippsland district. The industry has also been established at

Pentridge, as the growing of a few acres there has been found so remunerative that the Penal Department has erected machinery, and are now purchasing largely—from farmers—the product as it comes from the field. Out of last season's crop upwards of 300 tons have been delivered there, and are under treatment. The prices obtained by farmers were highly satisfactory, with the result that a great impetus has been given to cultivation, and it is reported that a much larger area has been sown this season. This satisfactory position is the result principally of information and instruction given by the Agricultural Department, which with the aid of a complete plant for treating flax, also gave demonstrations in various districts, and in many cases enabled the farmer to test his crop, and to ascertain its profitable nature. 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 1906, imports into Victoria included linseed to the value of £2,640; linseed oil, £42,168; and fibre, £86,423. 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. Last season 6 acres, and this season 44 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.

Tobacco.

As well as the Government tobacco experimental station (see page 505), there are plantations in the counties of Delatite, along the banks of the King River, and in Bogong. The number of growers in the State, the area of land cultivated, and the produce for the last eleven years, were:—

CULTIVATION OF TOBACCO, 1896-7 TO 1906-7.

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	..

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. 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 341,140 cwt. of grapes; Rutherglen, 197,120 cwt.; and Yackandandah, 27,345 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 20,412 cwt. of grapes were produced in 1906-7. At Mildura, the crop was principally dried for raisins and currants. The results of eleven years' operations are as follow:—

VINE PRODUCTION, 1897 TO 1907.

Year ended June.	Number of Growers.	Area.	Produce.			
			Grapes Gathered.	Wine made.	Raisins Made.	Currants Made.
		Acres.	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

Of the total quantity of grapes gathered in 1906-7, 292,119 cwt. were used for making wine, 357,035 cwt. for raisins and currants, and 103,672 cwt. for table consumption and export. Of the 98,127 cwt. of raisins made, 43,284 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 19,800 cwt., so there are over 78,000 cwt. of the production in 1907 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 them also, production must extend largely before local requirements are met.

The total number of persons in the State growing fruit for sale was 5,367 in 1906-7, as against 5,163 in 1905-6, and 5,341 in 1904-5. The area under such orchards in these years was 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 12,164 acres; Bourke, 10,016 acres; Mornington, 6,357 acres, Rodney, 2,942 acres; Talbot, 2,563 acres; Bendigo, 2,043 acres; Karkarooc (including Mildura), 1,709 acres; Grant, 1,483 acres; Borung, 1,257 acres; and Buln Buln, 1,122 acres. Orchards growing fruit for sale.

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 1904-5:—

RETURN SHOWING THE NUMBER OF FRUIT TREES, PLANTS, ETC., IN ORCHARDS AND GARDENS WHERE FRUIT IS GROWN FOR SALE, 1904-5.

Fruit.	Number of Trees, Plants, &c., 1904-5.		
	Not Bearing.	Bearing.	Total.
Apples	831,921	1,026,477	1,858,398
Pears	203,836	188,843	392,679
Quinces	17,900	54,299	72,199
Plums	201,811	237,016	438,827
Cherries	140,657	212,160	352,817
Peaches	115,426	261,295	376,721
Apricots	62,027	226,149	288,176
Nectarines	1,988	5,052	7,040
Oranges	12,773	37,466	50,239
Lemons	22,223	53,870	76,093
Loquats	3,991	3,812	7,803
Medlars	68	191	259
Figs	9,235	35,125	44,360
Passion	4,243	4,525	8,768
Guavas	1,088	397	1,485
Pomegranates	117	144	261
Persimmons	402	771	1,173
Total Large Fruits ..	1,629,706	2,347,592	3,977,298
Raspberries	..	..	4,576,767
Strawberries	..	..	3,896,109
Gooseberries	..	..	455,514
Mulberries	..	..	1,986
Olives	..	..	4,402
Currants (Red, White, and Black) ..	..	..	107,776
Almonds	12,266	21,114	33,380
Walnuts	5,085	3,570	8,655
Filberts	1,078	1,347	2,425
Chestnuts	552	521	1,073
Total Nuts	18,981	26,552	45,533

Particulars of the number of fruit trees, &c., are not collected every year, and no collection has been made since March, 1905.

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 49,086 acres in 1906-7, which is the largest area returned up to date. Details of the produce from orchards growing fruit for sale during the last seven years are as follow :—

ORCHARDS GROWING FRUIT FOR SALE, 1900-1 TO 1906-7.

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

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

	SMALL FRUITS GATHERED.					NUTS GATHERED.			
	Raspberries.	Strawberries.	Gooseberries.	Currants (Red, Black, & White).	Others.	Almonds.	Walnuts.	Filberts.	Chestnuts.
	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

NOTE.—In previous issues of this work the quantities of large fruits were given in cases, it being understood that a case was equal to about a bushel.

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 1904-5:—

PRODUCE OF FRUIT TREES.

Fruit Trees.	AVERAGE PER TREE.			
	1898-9.	1901-2.	1904-5.	
			All Trees.	Bearing Trees.
	Cases.	Cases.	Cases.	Cases.
Apples	·90	·77	·55	·99
Pears	·59	1·00	·48	1·00
Quinces	1·48	1·43	1·26	1·67
Plums	·46	·54	·28	·51
Cherries	·37	·40	·23	·39
Peaches	·56	·52	·61	·88
Apricots	·69	·83	·65	·82
Nectarines	·32	·92	·57	·79
Oranges	·51	·88	·68	·91
Lemons	·65	·87	1·07	1·52
Loquats	·97	·49	·07	·14
Medlars	·40	1·53	·27	·37
Figs	·60	·69	·53	·67
Passion Fruit ..	·20	·43	·20	·39
Guavas	·14	·09	·15	·57
Pomegranates ..	·13	1·13	1·38	2·50
Persimmons ..	2·70	·63	·32	·49
Total Large Fruits only ..	·64	·72	·52	·88
	lbs.	lbs.	lbs.	lbs.
Almonds	2·22	2·78	2·42	3·82
Walnuts	2·99	1·52	3·27	7·93
Filberts	1·34	1·73	·72	1·30
Chestnuts	6·89	6·40	4·16	8·44

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 1904-5, *i.e.*, when taking all trees into consideration; and this is probably due to the large planting of young trees during recent years, as well as to a bad season in 1904-5, in which year returns for bearing trees alone have been obtained for the first time.

In addition, large quantities of melons, rhubarb, and tomatoes were produced in these orchards, the following being the quantities returned for 1906-7:—Melons, 12,586 cwt.; rhubarb, 35,572 dozen bundles, and tomatoes, 30,125 cwt. There were also 4,935 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 serious doubt was entertained as to the accuracy of this estimate, and during the last three 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, and £451,672 in 1906-7. 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. This has already caused a most useful outlet for apples, as during last season one Melbourne firm secured up to 40,000 gallons of cider, while a grower in the Diamond Creek district recently manufactured 9,000 gallons at his own mill.

Market gardens.

The area under market gardens for the year 1906-7 was 7,906 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 close upon £200,000. This does not include crops of one acre and over of potatoes, onions, mangel wurzel, beet, carrots, parsnips, and turnips grown in market gardens, such crops being tabulated under their respective heads in the returns relating to agriculture.

Dried fruit.

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 last season present a notable improvement when compared with those for 1905-6. The details for the last seven seasons are as follow:—

DRIED FRUIT, 1900-1 TO 1906-7.

Year ended June.	Apples.	Prunes.	Peaches.	Apricots.	Figs.	Total.
	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

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 1906-7, there were 4,829,328 lbs. of sultana raisins made, which represent an increase of 2,655,538 lbs. on the figures for the previous year.

Minor crops.

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

MINOR CROPS, 1905-6 AND 1906-7.

Crop.	1905-6.		1906-7.	
	Area Sown.	Produce.	Area Sown.	Produce.
	Acres.		Acres.	
Artichokes	2	80 cwt.	5	80 cwt.
Chicory	244	189 tons (dry)	191	114 tons (dry)
Flowers	94	...	116	...
Garlic	3	60 cwt.	2	51 cwt.
Millet—Broom ...	263	1,215 cwt. fibre 883 cwt. seed	283	1,498 cwt. fibre 1,246 cwt. seed
Nursery	295	...	473	...
Opium poppies ...	13	200 lbs.	8	95 lbs.
Pumpkins	1,794	13,901 tons	1,487	14,029 tons
Rape for seed	12	...	...	...
Rice	...	...	17	...
Seeds—Agricultural and garden	32	...	15	...
Sunflowers	11	88 bushels	102	6,890 bushels
Total... ...	2,763		2,699	

Land in fallow.

The fallowing of land commenced in 1858-9, when 6,000 acres 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, and 990,967 acres in 1906-7. 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 the experiments made by the late Chemist for Agriculture on manured land, it would appear that, when fallowed in alternate years, there is a gain in wheat crops of from 3 to 5 bushels per acre, and on unmanured land the gain is nearly 3 bushels per acre.

Characteristics of Victorian soils.

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 have given us 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, with the exception of certain places in the south, 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 analyses has been, its value will be made more manifest once 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.

Use of artificial manures.

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.

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 months 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. 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 1½ per cent. insoluble would cost per ton in Victoria, £4 11s. 6d., as against £5 3s. 10½d. 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 quantity of manure used for fertilization has in recent years very considerably increased, and to show the position clearly the following table is presented.

MANURE USED FOR FERTILIZATION, 1898 TO 1906.

Year.	Farmers using.	Area used on.	Natural Manure used.	Artificial Manure used.
		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

In order to ascertain the value of manuring, extensive information has been collected with respect to the results during the past three years. For the purposes of the comparison, cases of areas manured and areas not manured in the same localities have been taken in eleven of the principal wheat-growing counties of the State, so that a comparison may be made between areas of the same class of land. The last two seasons were somewhat similar in regard to the yield of wheat, and their results were as follow:—

WHEAT MANURED AND UNMANURED, 1905-6 AND 1906-7.

Counties in Wheat-growing Districts.	Manured.			Not Manured.		
	Area.	Produce.	Average per Acre.	Area.	Produce.	Average per Acre.
1905–6.	Acres.	Bushels.	Bushels.	Acres.	Bushels.	Bushels.
Lowan ..	6,898	88,275	12·80	6,978	72,794	10·43
Borung ..	30,938	423,265	13·68	30,498	328,782	10·78
Kara Kara ..	3,801	41,560	10·93	3,507	23,417	6·68
Weeah ..	4,568	42,974	9·41	4,480	31,877	7·11
Karkarooc ..	39,573	237,750	6·01	37,778	189,437	5·01
Tatchera ..	25,830	178,246	6·90	27,620	135,570	4·91
Gunbower ..	11,398	132,328	11·61	8,155	71,427	8·76
Gladstone ..	31,404	380,170	12·11	1,753	15,804	9·01
Bendigo ..	44,828	695,372	15·51	2,785	28,916	10·40
Rodney ..	32,653	506,318	15·51	11,369	146,407	12·87
Moira	52,571	714,819	13·60	63,175	675,444	10·69
Total ..	284,462	3,441,077	12·10	198,098	1,719,875	8·68
1906–7.						
Lowan ...	2,340	26,269	11·23	2,160	16,604	7·69
Borung ...	11,583	144,040	12·44	11,066	98,560	8·91
Kara Kara ...	3,458	49,054	14·19	3,137	31,333	9.99
Weeah ...	2,039	19,527	9·58	1,435	11,059	7·71
Karkarooc ...	29,740	286,415	9·63	29,717	207,689	6·99
Tatchera ...	20,659	221,822	10·74	19,084	144,501	7·57
Gunbower ...	2,628	29,639	11·23	2,625	20,680	7·88
Gladstone ...	1,581	25,189	15·93	1,394	13,912	9·98
Bendigo ...	3,206	49,733	15·51	2,725	31,530	11·57
Rodney ...	7,769	96,442	12 41	6,047	60,553	10·01
Moira ...	14,099	144,463	10·25	13,704	100,593	7·34
Total ...	99,102	1,092,593	11·03	93,094	737,014	7·92

Reliable averages of areas manured and unmanured in the same localities have been obtained to only a limited extent in each county for 1906-7. The figures, however, as in previous years, show that manuring had the effect of improving the yield by over 3 bushels per acre. From the facts disclosed it would seem that wheat manuring, so far as has been attempted, has cost about 3s. per acre, which in turn gave an increased yield to fully the extent in value of 9s. per acre in each of the last two seasons.

During 1906 the quantity of manure imported into Victoria was 1,353,731 cwt., and its value £199,631, while that exported was 297,083 cwt. valued at £61,801.

Farm implements.

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, 1906 AND 1907.

Districts.	Number of—													
	Engines.		Horse-works.	Harvesters.	Threshing Machines.	Winnowing Machines.	Reapers and Binders.	Strippers.	Ploughs.	Harrows.	Cultivators.	Grain Drills.	Chaff-cutters.	Cream Separators.
	Steam.	Oil.												
1906.														
Central ..	390	93	1,614	48	73	265	2,539	19	13,376	9,730	4,319	1,327	4,663	3,696
North Central	233	32	1,051	102	46	327	1,939	64	5,233	3,745	1,090	980	2,011	1,530
Western ..	184	161	1,432	379	64	258	2,036	187	7,086	5,132	1,224	1,042	2,444	1,220
Wimmera ..	104	55	2,891	1,426	62	2,545	2,761	3,927	8,171	5,687	2,743	3,150	3,439	1,130
Mallee ..	90	8	605	398	14	1,530	811	2,704	3,413	1,786	1,757	1,111	839	630
Northern ..	515	54	2,031	3,019	156	3,416	4,921	3,633	12,641	8,339	4,488	3,813	3,001	3,207
North-Eastern	214	17	805	141	46	321	1,151	339	4,511	2,886	805	485	1,419	893
Gippsland ..	373	36	565	31	51	107	564	4	6,170	4,634	1,542	323	1,557	3,494
Total ..	2,103	456	10,994	5,544	512	8,769	16,722	10,877	60,601	41,939	17,968	12,231	19,373	15,710
1907.														
Central ..	440	158	1,652	55	77	306	2,591	37	13,864	10,089	4,355	1,538	4,815	4,089
North Central	262	58	1,043	132	38	290	1, 20	43	5,308	3,986	1,147	1,039	2,020	1,986
Western ..	226	244	1,524	453	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	3,831	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	4,585	4,203	2,895	3,994
North-Eastern	231	41	807	176	39	337	1,223	336	4,605	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	19,501	13,696	19,823	19,446

Compared with 1906, the only decreases shown by the figures for 1907 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 considerably in numbers. The Western, Wimmera, and Gippsland districts are mainly responsible for a marked increase in cultivators, and there is also shown a more popular use of grain drills throughout

the State. The most marked increase, however, is in cream separators, which are much more numerous, each district having contributed its share towards the alteration.

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

DAIRY COWS, 1903 TO 1906.

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

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 100 lbs. of butter in 1904 and 1906 against an average of 92 lbs. in 1905 and 97 lbs. in 1903.

The numbers of horses, cattle, sheep, and pigs, in each census year 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.

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

Stock.	1861. Population 540,322.		1871. Population 731,528.		1881. Population 862,346.		1891. Population 1,140,405.		1901. 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	564,534	·77	957,069	1·11	1,387,689	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. The actual increases are thus shown:—

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 census 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 the holdings, and the sheep, further classified in different sized flocks, in March, 1906, will be found on pages 524 and 571:—

LIVE STOCK IN VICTORIA, 1905 TO 1907.

Live Stock.	1905.	1906.	1907.
Horses (including foals)...	372,397	385,513	406,840
Cattle—			
Dairy Cows	632,493	649,100	701,309
Other (including calves)	1,053,483	1,088,590	1,103,014
Sheep	10,167,691	11,455,115	12,937,440
Pigs	286,070	273,682	220,452

It will be seen that there has been an increase over the previous year's figures in all classes except pigs. The increase in cattle is principally in dairy cows which numbered 52,209 more than in March, 1906, one-fourth of this increase being in the Gippsland district. An increase in sheep occurred in every county with the exception of Follett and Millewa, the largest increases being in the counties of Moira, Buln Buln, and Borung. During the year, horses which include 49,952 foals reared, show an increase of 21,327, and as there was a net export of 2,640, the number which died is about 26,000, or 6¾ 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, and, as they are now 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 1905 and 1906. The information has been extracted from the Melbourne *Stock and Station Journal*:— Prices of stock.

PRICES IN MELBOURNE OF LIVE STOCK, 1905 AND 1906.

Stock.	Prices in 1905.									Prices in 1906.								
	Average.			Range.						Average.			Range.					
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.		£	s.	d.	
Horses.																		
Extra heavy draught	43	0	0	40	0	0	to	47	10	0	47	12	0	38	10	0	to	55	10	0
Medium ..	30	11	0	26	5	0	to	35	0	0	32	17	0	22	10	0	to	40	0	0
Delivery Cart } Order Cart .. }	13	10	0	12	5	0	to	17	10	0	24	3	0	15	0	0	to	35	0	0
											15	0	0	12	0	0	to	18	10	0
Indian Remounts ..	30	11	0	25	0	0	to	34	0	0	30	18	0	25	10	0	to	40	0	0
Saddle and Harness	10	8	0	7	10	0	to	13	0	0	11	13	0	7	10	0	to	16	0	0
Carriage, per pair ..	160	4	0	120	15	0	to	178	10	0	65	16	0	110	0	0	to	231	0	0
Ponies	20	10	0	15	0	0	to	25	0	0	22	1	0	15	0	0	to	30	0	0
Fat Cattle.																		
Bullocks—																		
Extra Prime ..	12	14	0	11	0	0	to	14	8	6	13	5	6	10	10	0	to	16	10	0
Prime	11	3	0	10	0	0	to	12	15	0	11	7	10	9	5	0	to	13	15	0
Good	9	10	0	8	10	0	to	10	15	0	9	9	0	7	15	0	to	12	0	0
Good Light and Handy Weights ..	8	3	0	7	2	6	to	9	12	6	7	16	6	7	10	0	to	10	5	0
Second	6	12	6	5	0	0	to	8	2	6	6	8	2	5	0	0	to	8	15	0
Cows—																		
Best	8	0	0	6	0	0	to	9	10	0	8	1	3	6	10	0	to	10	0	0
Others	5	13	0	4	0	0	to	7	15	0	5	14	0	4	0	0	to	8	0	0
Calves—																		
Prime Steers and Heifers ..	4	14	0	3	12	6	to	5	16	0	4	11	4	3	10	0	to	6	0	0
Prime Calves ..	2	15	3	2	2	6	to	3	15	0	2	14	5	2	0	0	to	3	10	0
Other Good ..	1	14	8	1	2	6	to	2	10	0	1	16	2	1	7	0	to	2	10	0
Dairy Cattle.																		
Best Milkers ..	9	18	0	8	12	6	to	11	17	6	10	2	5	9	0	0	to	12	15	0
Good	7	17	3	6	15	0	to	8	17	6	8	0	7	7	0	0	to	9	15	0
Medium	6	0	0	5	0	0	to	6	12	6	6	2	0	5	0	0	to	7	10	0
Inferior	4	13	0	3	10	0	to	5	10	0	4	2	0	4	0	0	to	4	15	0
Springers, best ..	8	5	9	7	0	0	to	10	7	6	8	9	4	7	10	0	to	10	10	0
Heifers, best Springers	6	7	3	4	11	0	to	7	10	0	6	14	4	5	5	0	to	8	2	6
Dry Cows	4	9	0	3	12	6	to	5	0	0	4	12	6	3	15	0	to	5	0	0
Stores	2	15	6	2	5	0	to	3	17	6	2	16	0	2	15	0	to	4	0	0

PRICES IN MELBOURNE OF LIVE STOCK, 1905 AND 1906—*continued.*

Stock.	Prices in 1905.									Prices in 1906.								
	Average.			Range.						Average.			Range.					
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.		£	s.	d.
Fat Sheep.																		
Wethers (cross)—																		
Extra Prime ..	1	2	5	0	16	3	to	1	8	6	1	2	8	0	17	0	to	1	8	3
Prime	1	0	3	0	15	6	to	1	4	3	0	19	9	0	15	0	to	1	3	6
Good	0	17	0	0	13	3	to	0	19	6	0	17	9	0	12	6	to	1	3	0
Ewes (cross)—																				
Extra Prime ..	1	0	3	0	14	6	to	1	5	6	0	19	10	0	14	0	to	1	5	4
Prime	0	17	10	0	13	3	to	1	2	0	0	17	8	0	13	6	to	1	2	6
Good	0	15	3	0	12	3	to	0	19	0	0	14	10	0	12	0	to	1	0	0
Wethers (merino)—																				
Prime	0	19	1	0	14	9	to	1	3	9	0	18	9	0	14	0	to	1	4	6
Good	0	16	2	0	12	6	to	1	0	0	0	15	7	0	12	0	to	1	0	0
Ewes (merino) ..	0	13	2	0	8	3	to	0	19	0	0	13	7	0	10	6	to	0	19	9
Fat Lambs.																				
Extra Prime ..	0	17	1	0	14	9	to	1	1	0	0	16	9	0	13	0	to	1	2	3
Prime	0	14	8	0	12	10	to	0	17	3	0	14	5	0	11	6	to	0	17	0
Good	0	12	5	0	10	6	to	0	15	0	0	12	3	0	9	0	to	0	15	0
Second	0	10	2	0	7	9	to	0	12	0	0	10	1	0	7	6	to	0	13	6
Pigs.																				
Back Fatters—																				
Extra Heavy Prime ..	3	19	6	3	2	6	to	4	11	3	3	15	0	2	15	0	to	4	16	0
Extra Prime and Weighty ..	2	12	4	2	5	0	to	3	1	0	2	11	4	2	5	0	to	3	2	0
Baconers—																				
Extra Prime ..	2	10	3	1	19	0	to	3	6	6	2	11	2	2	0	0	to	3	6	0
Prime	2	3	0	1	10	6	to	2	17	0	2	4	8	1	15	0	to	2	10	0
Porkers	1	3	11	0	19	0	to	1	9	6	1	6	3	0	19	0	to	1	15	0
Stores	0	13	6	0	11	6	to	0	17	0	0	14	2	0	10	0	to	1	3	0
Slips .. .. Suckers	0	6	4	0	3	9	to	0	10	0	0	6	7	0	4	0	to	0	13	0

Compared with 1905 the average prices in 1906 point to an improved value for horses and dairy cattle, but in other lines of stock, though there have been slight variations, taken as a whole the prices rule at about the same figure. The range of prices in both years denotes a great unevenness in the quality of all clases of stock.

Stock slaughtered.

The return of the stock slaughtered for 1906 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.

STOCK SLAUGHTERED: 1900 TO 1906.

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

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

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	134,190	1,578	291	72
1906	2,170,581	251,004	96,618	651,914	8,009	2,580	2,522	1,476	175,120	1,127	545	73

The most noticeable figures in these tables are those relating to the sheep—a large proportion of which were lambs—and cattle slaughtered for freezing. They point emphatically to the growing importance of the frozen-meat trade in Victoria. There has also been a large increase in the number of pigs slaughtered, 274,391 in 1906, against 191,311 in 1904. Pigs slaughtered, both for private use and for preserving and salting, are resuming the proportions of four years previously.

Gain or loss in live stock.

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

LIVE STOCK IMPORTED AND EXPORTED, 1906.

	Number of			
	Horses.	Cattle.	Sheep.	Pigs.
Imported	7,353	79,277	1,481,192	4,456
Exported	9,993	121,793	651,273	216
Net Imports ...	...	...	829,919	4,240
Net Exports ...	2,640	42,516	...	...

The information in this table combined with that of stock held at end of year and stock slaughtered during the year show that there has been no serious mortality among live stock in 1906, and that any losses are probably due to unavoidable causes—accidents and age. By adding the net increase in stock held at end of 1906, 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 24,000 horses, 370,000 cattle, 3,480,000 sheep, and 217,000 pigs.

Wool production.

In the last two 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 1906-7.

Districts.	Wool Clip, 1906-7.		
	Sheep.	Lambs.	Total.
	lbs.	lbs.	lbs.
Central	5,514,356	607,259	6,121,615
North Central	4,604,480	555,422	5,159,902
Western	27,224,747	2,495,054	29,719,801
Wimmera	11,877,684	1,027,545	12,905,229
Mallee	2,234,435	183,083	2,417,518
Northern	10,085,620	1,057,867	11,143,487
North-Eastern	3,373,591	361,914	3,735,505
Gippsland	3,028,871	451,272	3,480,143
Total Clip* 1906-7	67,943,784	6,739,416	74,683,200
Total Clip* 1905-6	58,919,314	5,258,557	64,177,871

—	1905-6.	1906-7.
	lbs.	lbs.
Wool clip	64,177,871	74,683,200
Estimated quantity of wool stripped from Victorian skins	3,938,935	4,288,186
Estimated quantity of wool on Victorian skins exported	7,621,497	9,462,910
Total production	75,738,303	88,434,296
Total value	£3,313,550	£3,869,000

NOTE. – In the Statistical Register a return will be found showing the details in counties.

*The average weight of the fleece in 1906-7 is—sheep, 6.76 lbs ; lambs, 2.45 lbs. ; sheep and lambs combined, 5.84 lbs.

Wool imported, exported, 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 eight calendar years:—

QUANTITY AND VALUE OF WOOL IMPORTED, EXPORTED, AND USED LOCALLY—1899 TO 1906.

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	100,516,094	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	4,493,041	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

Wool production—Australasia.

The quantity and value of wool produced in 1905 in the various Australian States and New Zealand, estimated on the import and export returns, were:—

	Quantity. (Greasy, Washed, and Scoured.) lbs.	Value. £
Victoria	.. 61,738,399 ..	2,705,273
New South Wales ..	.. 264,700,910 ..	12,339,017
Queensland	.. 53,185,157 ..	2,655,351
South Australia ..	.. 35,442,796 ..	1,356,595
Western Australia ..	.. 17,489,402 ..	594,872
Tasmania	.. 9,542,625 ..	390,987
New Zealand	.. 143,307,869 ..	5,511,199

The 1905 figures have been inserted, as the information for some of the other States for 1906 is not procurable.

Prices of wool.

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, 1904-5 TO 1906-7.

Class of Wool.	Average Value per lb. in—		
	1904–5.	1905–6.	1906–7.
GREASY MERINO.			
Extra Super (Western District) .	up to 17¾d.	up to 17½d.	up to 18½d.
Super ... ,, ,, ..	13½d. to 15d.	13d. to 15d.	15½d. to 16½d.
Good	10½d. to 12d.	11d. to 12½d.	14d. to 14½d.
Average	9½d. to 10½d.	10d. to 10½d.	10½d. to 11½d.
Wasty and Inferior	6½d. to 8½d.	7d. to 8½d.	7½d. to 8½d.
Extra Super Lambs	up to 17¾d.	up to 20¼d.	up to 20¼d.
Super Lambs	11½d. to 13½d.	11½d to 14½d.	12½d. to 15½d.
Good Lambs	10d to 11d.	10d to 11d.	10½d. to 11¾d.
Average Lambs	8½d. to 9½d.	8½d. to 9½d.	8d. to 9½d.
Inferior Lambs	4½d. to 6d.	5½d. to 6½d.	5½d. to 7½d.

PRICES OF WOOL, 1904-5 TO 1906-7—*continued.*

Class of Wool.	Average Value per lb. in—		
	1904-5.	1905-6.	1906-7.
GREASY CROSSBRED.			
Extra Super Comebacks ...	up to 15¼d.	up to 16½d.	up to 17½d.
Super Comebacks	12d. to 13d.	13d. to 15d.	15½d. to 16d.
Fine Crossbred	10½d. to 11½d.	11d. to 13d.	15d. to 15d.
Medium Crossbred	9d. to 10½d.	9½d. to 11d.	12½d. to 13½d.
Coarse Crossbred and Lincoln ...	9d. to 10d.	9d. to 9½d.	9½d. to 11½d.
Super Fine Crossbred Lambs ...	11d. to 13d.	11½d. to 14½d.	13d. to 14½d.
Good Crossbred Lambs ...	9d. to 10½d.	10d. to 12d.	11½d. to 12½d.
Coarse and Lincoln Lambs ...	7½d. to 8½d.	8½d. to 9½d.	9½d. to 10½d.
SCOUREDS.			
Extra Super Fleece	up to 23¼d.	up to 24½d.	up to 24¾d.
Super Fleece	21d. to 22d.	21½d. to 23d.	22d. to 24d.
Good Fleece	19d. to 20d.	20d. to 21d.	20½d. to 21½d.
Average Fleece	18d. to 19d.	19d. to 20d.	19½d. to 20½d.
RECORD PRICES FOR THE SEASON.			
Greasy Merino Fleece ...	17¾d.	17½d.	18¼d.
" Comeback Fleece ...	15¼d.	16½d.	17½d.
" Merino Lambs ...	17¾d.	20¼d.	20½d.
" Comeback Lambs ...	13d.	14¾d.	14¾d.
Scoured Fleece	23¼d.	24½d.	24¾d.

Flocks of sheep.

Returns tabulated for the first time gave full information as to the flocks of sheep in Victoria in March, 1906. The number of flocks and of sheep then in the different districts were as follow:—

NUMBER OF FLOCKS AND SHEEP IN DISTRICTS, 1906.

District.	Number of—		Average Number of Sheep in a Flock.	Percentage to Total of—	
	Flocks.	Sheep.		Flocks.	Sheep.
Central ..	1,618	1,036,363	641	10.07	9.14
North-Central ..	1,337	811,783	607	8.32	7.16
Western ..	3,563	4,399,511	1,235	22.18	38.80
Wimmera ..	3,267	2,038,068	624	20.33	17.97
Mallee ..	551	335,704	609	3.43	2.96
Northern ..	3,220	1,592,939	495	20.04	14.05
North-Eastern ..	1,266	578,517	457	7.88	5.10
Gippsland ..	1,245	547,237	440	7.75	4.82
Total ..	16,067	11,340,122	706	100.00	100.00

The figures do not include 114,993 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 39 per cent. of the total sheep in the State, though only possessing 22 per cent. of the total flocks. In the Northern, North-Eastern, and Gippsland districts, which supply 36 per cent. of the flocks, but only 24 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. 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, 1906.

Size of Flocks.	Number of—		Percentage to Total of—	
	Flocks.	Sheep.	Flocks.	Sheep.
Under 500	11,647	1,709,472	72.49	15.07
500 to 1,000 ..	2,407	1,671,223	14.98	14.74
1,001 „ 2,000 ..	1,112	1,557,476	6.92	13.73
2,001 „ 3,000 ..	326	814,763	2.03	7.18
3,001 „ 5,000 ..	213	850,454	1.33	7.50
5,001 „ 7,000 ..	99	581,360	.62	5.13
7,001 „ 10,000 ..	82	694,651	.51	6.13
10,001 „ 15,000 ..	75	905,966	.46	7.99
15,001 „ 20,000 ..	50	867,279	.31	7.65
Over 20,000 ..	56	1,687,478	.35	14.88
Total	16,067	11,340,122	100.00	100.00

Flocks of over 20,000, though not very numerous, being only about one in every 300, accounted for almost as many sheep as those in the most general size—that under 500—which formed 72½ per cent. of the total flocks. Of the largest flocks, 38 containing 1,149,324 sheep belong to the Western District counties, and 4, containing 151,086 to the Central District counties. Flocks of the second largest size were also chiefly confined to the Western District, where 34 of them, representing 578,745 sheep, were found—a proportion in each of over two-thirds of the respective totals of this size in the State. The Western District has, altogether, nearly 39 per cent. of the total sheep in Victoria, but only 13 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, 45; North-Eastern, 44; Wimmera, 44; Gippsland, 41; North Central, 36: Mallee, 35; and in the Central, 28.

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 carcases, were shipped. In two years the trade had increased tenfold, and it augured well for its future prosperity.

For 3 or 4 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 1906 there were exported 531,731 carcases of lamb and 142,530 carcases 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, with small holdings, and the adoption of intense culture methods, lamb raising is certain to become a very extensive industry. Oversea markets for lamb and mutton 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 ever persistently increasing, while the supplies of these commodities are ever relatively decreasing, in consequence of the continuous growth and spread of population, and the progressive inability of stock owners in old countries to augment their flocks, in consequence 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 open expanses exist, and where population, sparsely distributed, has not as yet threatened limitation of flocks. 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 breaking up of large estates and the settlement of ever 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 are 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. At present we have about 12,900,000, and our genial climate and our productive soil should warrant our readily doubling that number. The carrying capacity of a farm is increased by growing special fodder crops, yet, at the present time, although unlimited markets exist abroad, it is not the practice for graziers to make any 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. In 1906 the United Kingdom imported fresh mutton and lambs to the value of £7,646,000, of which less than 5 per cent. was from 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 ever 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.

In connexion with the export of meat products from Victoria, it is well to draw attention to the fact that the State assumes direct control of the inspection of all meats exported, and all inspectors associated with the work are officials of the Crown under the control of Dr. A. A. Brown, the Inspector of Foods for Export.

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 1906, are as follow:—

LIVE STOCK IN AUSTRALASIA, 1906.

State.	Horses.	Cattle.		Sheep.	Pigs.
		Milch Cows.	Other.		
	Total Number.				
Victoria	406,840	701,309	1,103,014	12,937,440	220,452
New South Wales	537,762	713,049	1,836,095	44,132,421	243,370
Queensland ..	452,916	3,413,919		14,886,438	138,282
South Australia* ..	206,212	97,137	227,757	6,655,150	107,337
Western Australia..	104,922	34,822	655,189	3,332,983	56,203
Tasmania ..	38,299	49,132	161,985	1,729,394	42,985
New Zealand ..	342,608	543,927	1,307,823	20,108,471	242,273
	Number per Square Mile.				
Victoria	4.63	7.98	12.55	147.21	2.51
New South Wales	1.73	2.30	5.92	142.19	.78
Queensland ..	.68	5.11		22.27	.21
South Australia* ..	.54	.26	.60	17.51	.28
Western Australia..	.11	.04	.67	3.42	.06
Tasmania ..	1.46	1.87	6.18	65.97	1.64
New Zealand ..	3.28	5.19	12.49	191.97	2.31

* Exclusive of Northern Territory.

The most striking feature in the figures presented in this table is an all-round decrease in the number of pigs as compared with the preceding year. The reduction was as much as 25 per cent. in Tasmania and Western Australia, 22 per cent. in New South Wales, 20 per cent. in Victoria, 16 per cent. in Queensland, 9 per cent. in South Australia, but only 3 per cent. in New Zealand. There is no apparent reason for these reductions, as the rearing of pigs is, especially now, a most profitable adjunct to farming or dairying. Other classes of stock show an increase in every case, excepting two small losses in milch cows, viz.:—189 in Western Australia, and 486 in Tasmania. The stock, in proportion to area, is evidently most numerous in New Zealand, which possesses horses, cattle, and sheep equal to about 331 sheep to the square mile; Victoria comes next with 317; then follow New South Wales, 209; Tasmania, 129; Queensland, 60; South Australia, 28; and Western Australia, with the lowest average, having stock equivalent to less than 9 sheep to the square mile.

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," published as Bulletin No. 8 of the Department of Agriculture of Victoria, 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 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. Ensilage.

Notwithstanding the importance of this means of preserving food for stock, the returns for Victoria show that in the last two seasons there has been a reduction in the number of farmers who made ensilage and in the material used, compared with 1904-5 or 1903-4.

The following figures show how little has been done in this direction up to the present:—

ENSILAGE RETURNS, 1900-1 TO 1906-7.

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

Bee-keeping.

The returns for 1905-6 show that there were 5,300 bee-keepers, owning 23,382 frame and 18,398 box hives, producing 948,305 and 260,839 lbs. of honey respectively, and 21,844 lbs. of beeswax. In 1906-7, 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.

The number of bee hives increased from 21,412 in 1900-1 to 49,120 in 1904-5, and 48,005 in 1906-7. 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 three years indicate that the industry is making rapid progress. The production of honey and wax in 1906-7 was more than double that in 1905-6, the increase being most pronounced in the counties of Borung, Dundas, Talbot, Kara Kara, Gladstone, Villiers, and Bendigo.

BEE-KEEPING, 1900-1 TO 1906-7.

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

It is considered that the large increase shown last season in the production of honey and beeswax is due in a large measure to an improved method of collecting the statistics relating to bee-keeping.

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:— Poultry production

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

Taking the above figures as a basis, it is estimated that the gross value of poultry production for the year 1906 was £1,500,550.

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 has been a falling off in the number of poultry-owners between 1891 and 1901, and although fowls show a slight increase, there has been a diminution in the other kinds of poultry. The United Kingdom imports annually over £6,000,000 worth of eggs, and over £1,000,000 worth of poultry and game, nearly all of which comes from foreign countries. Every encouragement exists in these figures for expansion in poultry production.

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, 1906, sums amounting to £464,797 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		

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 £464,797, 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, repayable in ten years, and in 1896 a loan of £50,000 was advanced on similar terms, except that 3 per cent. interest was added. 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 and wild-fowl received at Melbourne market.

The number of pairs of rabbits and brace of wild-fowl received at the Melbourne Market, the number sold, and the number condemned, during the last seven years, were as follow:—

RABBITS AND WILD-FOWL, 1900 TO 1906.

Year.	Pairs of Rabbits.			Brace of Teal and Duck.		
	Sold.	Condemned.	Total.	Sold.	Condemned.	Total.
1900 ..	480,519	5,727	486,246	35,610	728	36,338
1901 ..	596,610	2,717	599,327	59,156	930	60,086
1902 ..	471,964	4,472	476,436	32,756	232	32,988
1903 ..	316,462	3,810	320,272	13,130	80	13,210
1904 ..	402,944	3,952	406,896	49,556	178	49,734
1905 ..	364,066	2,349	366,415	47,348	331	47,679
1906 ..	275,166	1,238	276,404	28,610	372	28,982

In 1906, there were also received at the Melbourne market 551 brace of hares—of which 16 brace were condemned, and the others sold. During the seven years tabulated in the preceding table, a great increase took place in the exports to the United Kingdom and other oversea countries of frozen rabbits and hares, which amounted to 2,826,794 pairs in 1900, 2,068,915 pairs in 1901, 3,213,376 pairs in 1902, 3,447,077 pairs in 1903, 4,045,036 pairs in 1904, 5,093,952 pairs in 1905, and 4,622,307 pairs in 1906. The value of such exports in 1906 amounted to £221,064.

The fishing industry.

In the following tables some information is given regarding the fishing industry. The first shows the various fishing districts round the coast—with Echuca, Kerang, Nathalia, and Swan Hill in connexion with 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 1905 and 1906.

FISHERIES—MEN AND BOATS EMPLOYED, 1906.

District.	1906. Number of Men.	Boats. Number.	Boats. Value.	Value of Nets and other Plant.
			£	£
Anderson's Inlet	11	8	190	170
Barwon Heads and Ocean Grove ..	33	17	713	196
Brighton	7	5	83	72
Corner Inlet, Welshpool, and Toora ..	53	37	4,150	691
Dromana	21	17	470	179
Echuca	6	4	40	52
Frankston	8	7	83	60
Geelong	50	26	644	551
Gippsland Lakes	295	189	4,346	2,505
Kerang	7	5	12	20
Lorne	10	4	69	53
Mentone	10	9	75	64
Mordialloc	10	12	282	77
Mornington	23	15	354	339
Nathalia	28	9	27	..
Portarlington and St. Leonards ..	58	34	1,228	391
Portland	39	24	1,110	500
Port Albert	57	32	724	612
Port Fairy	57	37	1,875	569
Port Melbourne	36	28	808	589
Queenscliff	106	55	4,160	573
Sandringham	19	17	494	53
Sorrento, Portsea, and Rye	27	21	605	120
St. Kilda	6	3	55	60
Swan Hill	2	2	8	8
Warrnambool	8	7	142	58
Western Port, Cowes, Hastings, Flinders, San Remo, and Tooradin ..	105	55	1,145	863
Williamstown	28	14	280	182
Total	1,120	603	24,182	9,607

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, 1905 AND 1906.

—	1905. Quantity.	1905. Value.	1906. Quantity.	1906. Value.
		£		£
Fresh Fish (Victorian) lbs.	10,750,085	58,230	10,271,260	55,640
Crayfish (Victorian) .. doz.	19,662	7,496	20,517	8,720
Imported Fish .. lbs.	1,619,810	20,248	1,603,485	20,100
Oysters .. .. bushels	31,542	12,617	30,855	12,340
Total	..	98,591	..	96,800

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, 1905 AND 1906.

		1905.		1906.	
		Quantity.	Value.	Quantity.	Value.
			£		£
Fish—					
Fresh	lbs.	339,291	3,745	557,568	5,520
Smoked, &c. ..	,,	872,000	10,651	678,380	8,550
Fresh Oysters ..	cwt.	25,744	12,594	25,824	12,428
Potted, &c. ..	..	..	1,463	..	2,532
Preserved, in tins, &c.	lbs.	5,121,163	117,304	4,837,563	108,338
N.E.I.	cwt.	7,210	12,166	7,274	12,911
Total		..	157,923	..	150,279

Of the most important item in this table—fish preserved in tins and other air-tight vessels—more than three parts came from the United Kingdom, Canada, and the United States.

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

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 1901 to 1905 :—

AVERAGE ANNUAL IMPORTS INTO THE UNITED KINGDOM, 1901 TO 1905.

Articles.	Annual Value of Imports into United Kingdom from—				
	Victoria.	Other States of Australia.	Other British Possessions.	Foreign Countries.	All Countries.
	£	£	£	£	£
Butter	812,010	543,594	2,315,927	16,993,784	20,665,315
Cheese	..	..	4,555,434	1,820,052	6,375,486
Eggs	..	..	187,028	6,206,044	6,393,072
Meats — Bacon and Hams	..	..	2,174,422	14,624,881	16,799,303
Meats—All other ..	505,239	879,582	4,102,441	16,483,713	21,970,975
Poultry and Game	..	6,052	25,269	1,060,448	1,091,769

AVERAGE ANNUAL IMPORTS INTO THE UNITED KINGDOM, 1901 TO 1905—*continued.*

Articles.	Annual Value of Imports into United Kingdom from—				
	Victoria.	Other States of Australia.	Other British Possessions.	Foreign Countries.	All Countries.
	£	£	£	£	£
Fruit — Fresh and Preserved ..	22,219	239,298	1,092,304	10,138,135	11,491,956
Flax and Hemp ..	..	..	857,948	6,326,336	7,184,284
Maize	..	..	669,296	10,900,268	11,569,564
Wheat	1,060,700	1,114,968	8,116,037	19,637,841	29,929,546
Wheatmeal and Flour	106,777	118,907	896,745	7,336,417	8,458,846
Wine	52,587	68,828	16,834	4,354,762	4,493,011
Leather	146,069	277,000	2,411,116	5,291,976	8,126,161
Skins, Furs, and Hides	252,427	506,268	2,740,689	4,613,323	8,112,707
Tallow and Stearine	97,524	545,727	534,766	1,151,720	2,329,737
Wool	2,929,214	7,140,180	7,772,919	3,405,529	21,247,842

In the sixteen articles specified, the requirements of the United Kingdom are to the extent of 70 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 breadstuffs. 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 1906 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, 1906.

——		Victoria.	Great Britain.
Area	acres	56,245,760	56,201,418
Wheat produced	bushels	22,618,043	59,091,768
Oats ,, ...	,,	8,845,654	123,384,840
Barley ,, ...	,,	1,255,442	60,553,432
Potatoes ,, ...	tons	166,839	3,428,711
Horses	No.	406,840	1,568,681
Cattle	,,	1,804,323	7,010,856
Sheep	,,	12,937,440	25,420,360
Pigs	,,	220,452	2,323,461

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.

The following useful and informative paper on "The Economic Minerals and Rocks of Victoria" is furnished by Mr. A. E. Kitson, F.G.S., Department of Mines, Victoria.

The Economic Minerals and Rocks of Victoria.

The minerals of Victoria are diverse in character. Ores of all the commoner metals occur in considerable quantities—a few of them in large masses—in various parts of the State. Some, however, are found either in quantities too small, or in situations where the local conditions render them of doubtful or of no economic value at the present prices of the metals, and the competition with similar ores from Australasia and other parts of the world. In the matter of gold, Victoria occupies a leading position among the mineral countries of the world. Since gold has a standard value, depending on its quality, and is not affected by fluctuations of the market, there is no such drawback to the development of gold mines as is the case with other metals. In the gold mining industry miners have only the local conditions governing cost of production to consider, and can, therefore, work steadily, without anxiety regarding any probable changes in the price of the metal. This has been one cause of the almost entire neglect until recent years of prospecting for other minerals.

Victoria undoubtedly owes to gold its high position as a mineral country. Its general progress also is very largely due to the indirect assistance given by gold to the agricultural and manufacturing industries.

Under the division "Gold" are some details respecting its occurrence and distribution, but the subject is one much too large and important to more than merely scan in this paper. It may, however, be here stated that the total value of gold produced in Victoria since the discovery of that metal in 1851 is £276,500,000. Also in this State was found the largest mass of gold known in the world, the "Welcome Stranger" nugget, 2,280 ozs. in weight, value £9,534, found at Moliagul, in West-Central Victoria, on 5th February, 1869. Hundreds of other very large nuggets have been found, and numbers are still being discovered. The mineral products known to occur in the greatest quantity in Victoria, and to be of special value, are gold, tin, fictile and pigment clays, building stones, limestones, marble, black coal, brown coal and abrasive materials. Most of these have not received anything like the attention their importance demands. This is a matter of vital interest to the State, and one which deserves its serious consideration.

Gold.

The occurrence of gold may be grouped under two main divisions: A—matrix gold; B—re-distributed gold.

A. Gold in the matrix occurs in—

(1) Quartz reefs, of fissure, saddle, contact, and other kinds, traversing Ordovician, Silurian, and Lower Devonian sedimentary rocks, metamorphic rocks—such as schists, gneissic granites, &c.—and granitoid and porphyritic rocks.

(2) Quartz reefs, veins, and lenticles in dykes (igneous rock intrusions), of granitoid, porphyritic, dioritic, and felspathic rocks; or between dykes and the walls of intruded rocks.

(3) Fracture planes or joints in granitoid rocks.

In the whole of the above types of occurrences there are ores (chiefly sulphides) of iron, arsenic and iron, copper and iron, zinc, lead, antimony, silver, &c., associated with the gold, which occurs either as free gold or in mechanical combination with such ores.

B. Gold re-distributed occurs among—

(1) Shallow gravels and sands of existing streams.

(2) Deep leads—the channels of former streams filled up by a succession of stream and lake deposits, or by flows of volcanic rock (basalt), or by both.

(3) Littoral gravels and sands under basalt at sea or lake mouths of old rivers.

(4) Cleavage and joint planes of the bed rock underlying deep leads, or of pebbles in these deep leads, in which gold has been precipitated from a state of solution after the formation of the leads.

In B (1-3) the gold is waterworn, and is frequently accompanied by stream tin ore, precious stones, ilmenite (oxide of iron and titanium), magnetite (oxide of iron), &c.

Distribution of Gold.

On looking at the geological map of Victoria, published by the Department of Mines, one sees a large area coloured pale blue in the eastern portion of the State, extending from the Murray up the basins of the Indigo Creek, the Ovens and Mitta Mitta Rivers, and down those of the Mitchell, Nicholson and Tambo Rivers to near the southern coast. Another area of the same colour in the west-central portion of the State extends from the edge of the Murray Plains on the north to the great western volcanic plains on the south. These are areas of Ordovician rocks, consisting of slates, sandstones, &c., and in them are many of our principal gold-fields, such as Bendigo, Ballarat, Castlemaine, Maldon, Daylesford, Blackwood, Berringa, Steiglitz, Clunes, Creswick, Maryborough, Dunolly, Wedderburn, Inglewood, Avoca, Ararat, Stawell, and St. Arnaud on the west; with Chiltern, Rutherglen, Myrtleford, Harrietville, Dargo, Bulumwaal, Dart River, &c., on the east.

Again, a large area from the Murray plains on the north to the La Trobe and Koo-wee-rup basins in the south forms the east-central portion, coloured brownish-grey on the map. This area consists of Silurian shales, sandstones, mudstones and limestones, and contains the gold-fields of Walhalla, Wood's Point, Foster, Tanjil, Yarra basin, Reedy Creek, Rushworth, Heathcote, and Upper Goulburn basin.

In addition to these principal areas there are large portions of the counties of Bogong, Benambra and Dargo, where metamorphic rocks (schists, gneissic granite, &c.), coloured purplish-drab, occur, and in them gold-fields of limited extent occur in many places. Further, in areas occupied by granitoid rocks, coloured red on map, gold occurs either in the free state or mechanically associated with sulphides of iron and copper along fracture planes through the rock.

The preceding remarks apply specially to those parts of the country where gold is found in quartz reefs, or in the main masses of the hard rocks themselves, but over large areas of volcanic rocks (coloured pink and vermilion), and sedimentary rocks of Cainozoic (Tertiary) to Recent age (coloured brownish-green), gold occurs in a re-distributed state in the clayey gravels and sands of stream deposits. These vary in thickness from a few feet to nearly 500 feet, and consist either wholly of sediments or of basalt in addition. The long strips of pink and vermilion on the blue areas indicate the old auriferous river-valleys, which were filled up by the volcanic flows; while around the edges of these blue areas, contiguous to the plain country, these and other old rivers ran out for miles into the open country of the time, and terminated in the old marine or lacustrine fringe that washed the foot of the slopes during the geological period when the rivers were formed.

Tin.

Next in importance to gold among the metals found in Victoria is tin. It is not present in the metallic state, but only in the form of the oxide (cassiterite), a black, shining, heavy mineral. It occurs both in its original place in lodes, &c., and in a re-distributed form. The matrices of tin are—

(1) Thin veins (*stockwerks*) ramifying granitic and porphyritic rocks.
(2) Dykes of coarsely crystalline rocks (pegmatite and greisen).
(3) Quartz reefs traversing granitic and porphyritic rocks.

In a re-distributed form it is found among the sands and gravels of streams, which have worn down the rocks containing the tin and transported the mineral with the gravel and sand into the channels. This is the alluvial mode of occurrence, and the mineral is called stream tin. Lode tin ore is found in the matrix in various parts of the State, always in areas where granitoid or porphyritic rocks occur, or where pegmatite dykes intrude igneous, sedimentary or schistose rocks. The principal localities are Mt. Cudgewa, Mt. Wills, Pilot Range and Eskdale in the North-Eastern district, and Mt. Singapore on Wilson's Promontory, Southern Gippsland.

Stream tin is much more widely distributed, and occurs at Mt. Wills, Beechworth, Eldorado, Chiltern, Stanley, Koetong, Cudgewa, in the North-Eastern district; Tin Creek and Agnes River, Southern Gippsland; near Bruthen, Eastern Gippsland; Gembrook, Neerim, Darnum, the Bunyip and Tarago Rivers, Western Gippsland; Upper Yarra; and other districts. All streams traversing areas where the bed-rock contains tin ore have it among their gravels. In other cases it is found in the stream deposits along the borders of tin-bearing rocks, and again, as at Agnes River, the deposits containing the tin rest on stratified rocks of the Jurassic coal series, with the nearest known area of granite, likely to contain the tin ore, at Wilson's Promontory, some 12 miles away.

Stream tin has been mined for a great number of years, either for the tin only, or, as is more usually the case, for its associated gold as well. Tin in the matrix is not being mined at present, except at Mt. Cudgewa. With the great price the metal is now—about £200 per ton—increased attention is being paid to prospecting for it, and discoveries are sure to be made.

Tungsten.

This metal is a valuable one, and its chief economic uses are as a hardening agent in the manufacture of steel, a mordant in dyeing fabrics, an agent to render fabrics uninflammable, a hardening agent for plaster of Paris, &c.

The ores of tungsten found in Victoria are wolfram (tungstate of iron and manganese), and scheelite (tungstate of lime).

Wolfram is a mineral very much resembling cassiterite. It occurs in similar rocks to those in which cassiterite is found, and it is also distributed among stream gravels, often associated with gold. Lode wolfram occurs at Maldon; near Chiltern; and on the Buckwong River, in the North-Eastern district, in quartz reefs that traverse metamorphic rocks, such as mica-schist and gneissic granite. Stream wolfram is found in the Upper Yarra district; Nicholson River and Boggy Creek, near Bairnsdale, Central Gippsland, and other places.

Scheelite is a dirty-white to brownish-yellow mineral that occurs in quartz reefs at Maldon, in the Costerfield district in Rodney, at Mt. Cudgewa, and Boggy Creek.

The great increase in the price of tungsten of late years has induced extended prospecting for its ores, with the result that several new occurrences of wolfram have been found, and doubtless the mineral occurs, as yet undiscovered, in various other localities.

Silver.

Native silver, argentite (sulphide) and embolite (chloro-bromide), occur in small quantities in quartz reefs traversing Ordovician slates and sandstones at St. Arnaud and Landsborough, in Kara Kara and Stawell, in Borung. Silver is also found at Gelantipy, Eastern Gippsland, associated with gold, pyrite and oxide of iron. As cerargyrite (chloride) it occurs at Glen Wills and Bulumwaal, and as pyrargyrite (sulphantimonite) also at Glen Wills. Its commonest occurrence, however, is as an alloy of gold. In some gold-fields,

especially those in schistose rocks, such as Mt. Wills, it is present in considerable quantities, when of course the value of the gold is much reduced. During the year 1906, 35,125 ozs. of silver were obtained by refining the gold bought at the Melbourne Mint, out of a total of 848,298 ozs. of gold treated from the whole of the State. Silver is also of common occurrence in association with galena (sulphide of lead). Under lead ores the districts in which it occurs will be specified. Quite recently silver has been found associated with antimony sulphide at the Meerschaum mine, near Glen Wills, where exceptionally rich ore, assaying up to 2,770 ozs. of silver per ton, has been obtained.

Lead.

The ores of lead are distributed throughout those portions of the State in which are present:—(1) Ordovician and Silurian strata; (2) granitic, porphyritic and metamorphic rocks; (3) marine limestones of the Silurian and Middle Devonian periods, at and near their contact with underlying Lower Devonian volcanic ash beds.

Their modes of occurrence may be classified thus:—

(*a*) In quartz reefs, as galena (sulphide of lead), associated with some, or all, of the following minerals:—Free gold, pyrite (sulphide of iron), arsenopyrite (sulph-arsenide of iron), chalcopyrite and bornite (sulphides of copper and iron), and blende (sulphide of zinc), where below the zone of surface decomposition; and as cerussite (carbonate of lead), minium (oxide of lead), pyromorphite (chloro-phosphate of lead), anglesite (sulphate of lead), associated with hydrous carbonates of copper (malachite and azurite), limonite (hydrous oxide of iron), above this zone, where the original galena has been decomposed and converted into these minerals.

In the above forms it occurs in the reefs of most of the known gold-fields of Victoria, especially at Bendigo, Daylesford, and Steiglitz, and in the Omeo and Croajingolong districts, where it is regarded as a promising indication of the proximity of gold.

(*b*) In lodes, associated with the above minerals and quartz, as at Cassilis near Omeo, Dart River, Bethanga, Barnawartha, Costerfield, Buchan, and Mt. Deddick, Eastern Gippsland, and Roseneath in Dundas.

(*c*) In crystals of galena, scattered through the main mass of, or along fracture planes in, granitic and porphyritic rocks in various parts of the State.

(*d*) In vughs, solution cavities, or fractures, in crystalline limestone and contact planes of underlying rocks at Buchan, Murrindal River and Snowy River, in Eastern Gippsland; Wombat Creek, North-Eastern District; Lillydale, near Melbourne.

Silver-lead ore is not at present being mined for the metals, as the deposits are not of sufficient size to be profitable.

Copper.

Copper ores occur in various metamorphic rocks, such as mica-schists, altered granite, &c., and in diabasic and dioritic rocks. They are present in considerable quantities in several places, and are sparsely distributed through the containing rocks in many other localities. They occur either as definite lodes, consisting principally of chalcopyrite and bornite (sulphides of copper and iron), with gold and the sulphides of lead, iron, arsenic, antimony and zinc; or as scattered crystals of the sulphides in quartz reefs.

At Bethanga, in schists, a complex ore of the various sulphides mentioned was mined for many years for copper and its associated gold. At Sandy Creek, in Bogong, it also occurs with pyrite and gold.

In the Walhalla copper mine, on the Thomson River, a valuable deposit of copper ore occurs in a hornblendic diorite dyke traversing Silurian sandstones and mudstones. The ore contains gold up to 2 dwts. per ton, silver up to 18 dwts. per ton, and platinum, 5 dwts. per ton. The mine was worked intermittently years ago, and, even with a rather primitive method of smelting, there are records of nearly 650 tons of copper having been obtained. It is expected that operations will be resumed shortly.

On the Snowy River and at Mount Tara, near Buchan, copper ores occur in quartz reefs in granitoid and porphyritic rocks.

The principal remaining occurrences of these ores are on Snowy Creek and Wombat Creek, in Bogong; Dart River, in Benambra; Mount Camel, near Heathcote; and Cassilis, near Omeo. In addition to the ores already mentioned, tetrahedrite (sulphide of copper and antimony) and bournonite (sulphide of copper, antimony, and lead) occur at Warrandyte near Melbourne, Mount Wills, Walhalla, Steiglitz, and Costerfield in small quantities; while the ores of the oxidized zone, viz., malachite and azurite (green and blue hydrous carbonates), chrysocolla (hydrous silicate), cuprite (red oxide), melaconite (black oxide), chalcanthite (hydrous sulphate), occur as decomposition products of the sulphides.

No mines are at present being worked for their copper contents.

Antimony.

The ores of antimony found in the State are stibnite (sulphide), jamesonite (sulphide of lead and antimony), bournonite (sulphide of copper, lead, and antimony), kermesite (oxy-sulphide), cervantite and valentinite (oxides), derived from the sulphide through its decomposition.

These ores have a wide distribution, occurring both as definite lodes and as patches and veins in quartz reefs traversing Ordovician and Silurian slates, mudstones and sandstones. Stibnite is found in considerable quantities at Costerfield, Tooborac and Heathcote, in Dalhousie; Graytown, Whroo, and Redcastle, in Rodney; Templestowe, Warrandyte and Ringwood, near Melbourne; Reedy

Creek, in Anglesey; Big River, near Enoch's Point, in Wonnangatta. Among other principal localities where found may be mentioned Dunolly, in Gladstone; Bacchus Marsh, Box Hill and Sunbury, in Bourke; Steiglitz, in Grant; Yea, Alexandra and Merton, in Anglesey; Toombullup, in Delatite; and Queenstown, in Evelyn.

The ores invariably contain more or less gold, but, owing to the difficulty of separating the gold from the antimony, the ores are at present being mined for the antimony alone.

Owing to the increased value of that metal, the demand is now brisk, and mines which have been idle for many years are now being, or are about to be, worked.

Iron.

This important metal is very widely distributed throughout almost all the various formations of the State. It occurs as—

(*a*) Scattered crystals, strings and small patches as pyrite (sulphide), pyrrhotite (magnetic sulphide) and siderite (carbonate), in joint planes, and through the main mass of slates, sandstones, shales, mudstones, quartzites, &c., of the Palæozoic period; various granitoid and porphyritic rocks; sparingly in black coal seams and shales of the Jurassic coal measures and brown coal and lignite of the Cainozoic period; also as vivianite (hydrous phosphate) in basalt, shales, and mudstones, principally at the Wannon Falls, in the Western District, where it occurs in lumps in the decomposed basalt.

(*b*) As pyrite in quartz reefs, or as pyritous lodes, through the various sedimentary, metamorphic and igneous rocks of the Palæozoic period, associated with gold and the sulphides of lead, zinc, antimony, copper, &c.

(*c*) Irregular masses, at and near the surface, consisting of the various oxides (hæmatite, limonite, magnetite, goëthite), formed by accretion and segregation after the decomposition of highly ferruginous volcanic ash beds, dolerite and basalt of the Older Volcanic (Cainozoic) series, in various parts of Northern, Western and Southern Gippsland, the Colac and Otway districts, Mornington Peninsula, Phillip Island, &c.

(*d*) Irregular masses and lodes of hæmatite and limonite in the porphyritic rocks of Mount Nowa Nowa and Mount Tara, in Tambo, Eastern Gippsland; the diabasic rocks of Dookie, in the North-Eastern District; the Ordovician slates and sandstones of Lal Lal, near Ballarat; and other places.

(*e*) Surface gravels of pisolite (earthy oxide of iron), covering large tracts of Newer Volcanic (Cainozoic) dolerite and basalt in the Western District, less commonly so on areas of Older Palæozoic ferruginous sandstones,

quartzites, &c., in various parts of the State, and Jurassic sandstones in Southern Gippsland. Usually this pisolite occurs as a loose gravel, the grains with a diameter up to ½ inch, and is called "buckshot gravel"; in other places it is cemented together, and becomes pisolitic conglomerate. It is not of economic value as an iron ore.

The ores occurring under sections (*c*) and (*d*) are in sufficiently large quantities and of such good quality as to lead to the hope of their economic value in the near future; but at present the price at which pig iron can be imported, and the absence of the combined occurrence of suitable fuel and flux close to the locations of the ores, preclude any chance of the establishment of the iron smelting industry on a sound basis, unless with assistance.

Arsenic.

Arsenic occurs in the form of arsenopyrite (sulph-arsenide of iron), and is of wide distribution, especially about Ballarat, where, associated with pyrite (sulphide of iron), it is scattered through the slates, sandstones and quartz reefs. It is known by miners as "white mundic." It also occurs in patches and lumps in some districts, as Bethanga, Cassilis, Granite Peak, in Bogong, and near Romsey. In many places it contains an appreciable amount of gold. As far as known, the mineral is not turned to any economic account, except at Ballarat, where a small amount of the oxide is obtained from the flues of the roasting furnaces. Realgar and orpiment (sulphides of arsenic) occur sparingly in the Deptford district, Eastern Gippsland, and at Stawell.

Zinc.

Ores of zinc do not occur in great quantities in Victoria; neither are they in great variety. Blende (sulphide) is the commonest of the ores, and it has a wide distribution. It is found in many quartz reefs in the various gold-fields, associated with gold, galena, &c., and in highly mineralized lode matter, consisting of the sulphides of copper, iron, lead and antimony.

Smithsonite (silicate) and calamine (carbonate) occur rarely in small crystals, as decomposition products of the blende.

The ores of zinc are not mined for metallic zinc in this State.

Platinum.

The only undoubted occurrence of platinum is at the Walhalla Copper Mine, on the Thomson River, Gippsland, where it has been recently found, by assay of the copper ore, to be present in it to the amount of from a trace to 5 dwts. per ton. The copper ore is not at present being mined. Platinum is also reported as having been found at Turton's Creek, associated with gold and iridosmine.

Iridium—Osmium.

These two metals, so closely allied to platinum, occur in combination as the mineral iridosmine at Turton's Creek near Foster, Stockyard Creek at Foster, and Waratah Bay, Southern Gippsland. It is found as white scales, plates and flattened grains among auriferous gravels resting on Silurian slates and sandstones; and, though occurring in small quantity, it is sufficiently valuable to be collected with the gold. Its matrix has not been discovered, but may be some highly basic dyke traversing the Silurian strata. Iridosmine is also reported from the auriferous gravels of the Upper Yarra.

Other Metallic Minerals.

Among the remaining metallic minerals of economic value are manganese, cobalt, bismuth, mercury, chromium, molybdenum and barium, but, as found, they are not of much importance at the present prices of the metals.

Manganese, Cobalt and Nickel.

The oxides of manganese (pyrolusite and psilomelane) occur in small masses in, and as coatings on, the quartz of reefs in Ordovician and Silurian strata in various parts of the country.

Asbolite (oxide of manganese and cobalt) is found in some quantity among Silurian rocks near Tanjil, Western Gippsland. It also occurs at the Walhalla Copper Mine; Grant, in Dargo; Snowy River, and other places. The oxide of iron and manganese occurs in large masses at Mount Nowa Nowa and Mount Tara, Eastern Gippsland, in porphyry and pre-Ordovician (?) cherts and jaspers.

Cobalt ore, containing nickel, occurs in a lode near Bulumwaal.

Bismuth.

Bismuth ores, comprising bismuthinite (sulphide), bismite (oxide), bismutite (hydrous carbonate), together with metallic bismuth, are found in some quantity among the deposits of Wombat and Snowy Creeks, in the North-Eastern District. The ores also occur in reefs at Moliagul and Kingower, in Gladstone; Linton, in Grenville; St. Arnaud, Maldon, &c. An interesting alloy of gold and bismuth, called maldonite, occurs rarely at Maldon.

Mercury.

Mercury is found near Jamieson, in Wonnangatta. It occurs in chloritic slates of the pre-Ordovician (?) period, as native mercury and as cinnabar (sulphide). The deposit was worked at one time, but unprofitably, owing to the small quantity of the metal present. Small fragments of cinnabar have also been found close to a quartz reef near Bulumwaal, Central Gippsland.

Chromium.

As oxide of iron and chromium (chromite), this metal occurs in considerable quantities in an area of serpentine on the Wellington River, Northern Gippsland. It is, however, in too inaccessible a place to be of economic value at present. Chromite is also found in reefs at Heathcote and at Corryong, North-Eastern District, and among stream sands in parts of the Gippsland, Beechworth and Benalla districts.

Molybdenum.

Molybdenite (sulphide) occurs in certain reefs in the Moliagul district and among granitoid rocks at Yackandandah, in Bogong; Yea, Yarck, in Anglesey; near Euroa, in Delatite; Mafeking, in Ripon, where it coats fracture planes in grano-diorite; and at Maldon, but not in known payable quantities at any of these places.

Barium.

Barytes (sulphate of barium), used as an adulterant of white lead, occurs in different parts of the State. It is in commercially valuable quantities at Mount Tara and Gelantipy, near Buchan, Eastern Gippsland, in porphyry, but is not being worked.

Magnesium.

Magnesite, the carbonate of magnesium, occurs in nodules and lumps scattered among decomposing basalt of the Newer Volcanic series (Cainozoic period) or the soil derived therefrom; or, similarly, in decomposing diabase of the pre-Ordovician period, in the districts where such rocks occur. A good deal of it may be seen in the quarries at Clifton Hill and Richmond, Melbourne, and it also occurs at Costerfield, but its association there is not known. As found, it is of doubtful economic value.

Precious Stones.

Most kinds of precious stones have been found in Victoria; some are of comparatively common occurrence. The principal ones recorded are diamond, corundum, sapphire, ruby, oriental emerald, oriental topaz, garnet, zircon, topaz, rock crystal, turquoise, carnelian, chalcedony, agate with its varieties and chrysolite.

Diamonds have been found in the gravels of streams running through granite country in the Beechworth district; at Kongbool, near Casterton, Western District; and, it is said, also near Mansfield and Toombullup, near Benalla. They are, however, rare, and are usually very small, varying from $\frac{1}{8}$ to $2\frac{1}{2}$ carats. The largest one recorded, found at Beechworth, weighed 17.64 carats.

Corundums, with the coloured varieties—sapphires (blue), oriental emeralds (green)—occur commonly in many localities; oriental topazes (yellow) and oriental amethysts (purplish-pink) are found rarely among stream gravels, derived from granitic and older basalt areas. Most of the larger gems are flawed and not

of good colour, but numbers of fine stones can be obtained. Rubies (red corundums) have been obtained from gravels in the Beechworth district, and near Pakenham and Mornington, but they are very rare and small. The principal localities where the different corundums occur are Beechworth district; Daylesford and Trentham, in Dalhousie; Blackwood, in Bourke; Upper Yarra; Tubba Rubba and Bull Dog Creek, near Mornington; Pakenham, Grantville and Gembrook, in Mornington; Toombullup, in Delatite; Koorooman and Agnes River, in Buln Buln; and Macallister River, in Tanjil.

Garnets, of the red, iron-alumina variety (almandite), are found embedded in various kinds of schistose, granitic and porphyritic rocks. They are not of common occurrence among stream gravels, as they decompose too quickly. They are not of value as found in this State.

Zircons are the commonest gems found in Victoria. They occur in many districts, almost invariably associated with sapphires. In some places, as at Toombullup, Daylesford, Beechworth, they are of large size, and beautiful shades of red and yellow. When cut they make pretty stones, and are the gems usually, though erroneously, called rubies by miners. Zircon sand occurs in considerable quantities among the auriferous gravels, but is not economically valuable for incandescent filaments, owing to the cost of separating it from its associated material.

Topazes have a wide distribution in stream gravels on granitic areas, or in gravels, originally derived from granitic rocks. Fine stones are found in the Beechworth, Maude (in Grant), Dunolly, Maldon and Upper Yarra districts.

Rock crystals are generally distributed among all older Palæozoic sedimentary and plutonic rocks, and in the Cainozoic gravels derived from them. They are found *in situ* in vughs in quartz reefs, and in veins and cavities in plutonic rocks. The yellow variety (cairngorm) and the dark-coloured one (morion or smoky quartz) occur in profusion in the Maldon, Beechworth and Beenak (Upper Yarra) districts. Amethystine quartz is found near Beechworth, Casterton and Mafeking (Western District), and other places, in stream gravels; while a thin vein of it occurs in the bank of Moonee Creek, Brunswick, near Melbourne.

Carnelian, chalcedony and agate, with its varieties, are found in numerous localities—(1) Where older basalt occurs; (2) among stream gravels derived from glacial deposits and older basalt; (3) among glacial conglomerate; (4) in petrified wood in the Jurassic black coal measures of Southern Gippsland and the Otway Ranges.

Among the localities may be mentioned the Dandenong Ranges; Casterton district; Derrinal, near Heathcote; Bacchus Marsh; Glenrowan, near Benalla; Southern Gippsland; Otway coast.

Many of the agates are large, and when cut and polished would make beautiful ornaments; while some very good carnelians are obtainable. Nothing, however, is being done towards devoting them to economic purposes.

Turquoise is found in thin veins in dark carbonaceous Ordovician slates at Edi, in Delatite, and at Tatong, near Benalla. Some of the stone is of rich blue colour, and of high commercial value, but some again is a bluish-green, and practically valueless. The gem is not being mined systematically, owing partly to the want of a satisfactory market, and partly to the thinness of the veins. An interesting feature about it is the fact that it is being deposited at the present time, nails and bits of candles left in the old workings having in some cases been coated with the material, which hardens on exposure to the air.

Chrysolite or olivine is of common occurrence among the basalts of the Cainozoic period, especially among those of the Newer Series of Pliocene age in the Western district. Around the numerous volcanic craters large lumps and small pieces may be seen in the agglomerates and scoriæ, and forming the cores of numerous volcanic bombs. Most of this is valueless as gem stone, as it is of too pale a yellowish-green colour, and is too much cleaved; but there are many pieces of a rich green and not flawed, which would be suitable for cutting. Some good stone, of a rich colour, occurs in the basalt of the Older Cainozoic volcanic necks in Southern Gippsland.

Monazite.

This phosphate of cerium, didymium, lanthanum and thorium occurs in the form of grains, associated with gold or tin oxide, among the sands and gravels derived from the granite contact areas in many parts of the State. Among these places may be mentioned Bonang and Dargo districts, in Eastern Gippsland; Buxton, in Anglesey; Bethanga, and the middle Mitta Mitta River, in the North-Eastern district; Stawell district, in Borung; Glenhope, near Kyneton; and Neerim district, in Western Gippsland. So far as known, however, the cost of separation from the associated sands is too great to admit of its economic working for the quantities as found.

Asbestos.

In the serpentine areas of the Wannon River district, the Howqua River, in Wonnangatta, and the Wellington River district, in Northern Gippsland, there are thin veins of asbestos, but as far as yet known, these are not of economic value.

Diatomaceous Earth (Diatomite).

This earth, so useful for polishing purposes, boiler and steam pipe packings, as bases for dynamite, toilet soaps, &c., occurs in several places in considerable quantities, interbedded with sands and clays in basalt sheets, or lying in hollows on the surfaces of basalt sheets. At Lillicur, near Talbot, it is of exceptional purity, being snow white in colour, light and porous. It has been regularly mined for many years, and is exported to Europe. Near Portland diatomite of rather poorer quality occurs, and is being raised and sent to Melbourne at present. Another occurrence on the Deep Creek, in

the Glengower district, near Clunes, is of good quality, and was worked for some time. It also occurs at Cardigan and Sebastopol, near Ballarat; Lancefield and Donnybrook, in Bourke; Maryborough, Daylesford, Alexandra and Lake Coringle, Snowy River.

Graphite.

Graphite is found in a fairly pure state, but in small quantities only, in Ordovician slates, &c., at Kerrie, near Riddell, in Bourke, and near Wood's Point. In the Ordovician slates of several of the gold-fields, principally Bendigo, Castlemaine and Daylesford, there is a large proportion of graphite; but, as far as known, there are no deposits of commercial value of this mineral.

Salt.

Salt is of general distribution in the Western and North-Western portions of Victoria, where numerous salt lakes and pans dry up, wholly or partially, during the summer. Large quantities of salt are then collected, bagged, and sent throughout the State, and exported as well.

Salterns have been made near Geelong, in which sea water is impounded, evaporated, and the resulting salt collected.

Mineral Manures.

The mineral which is principally used as a manure in Victoria is "copi," an impure gypsum (hydrous sulphate of lime). It occurs in enormous quantities on the surface, and for many feet below it in some places, over a large portion of North-Western Victoria. It is simply collected, ground up, bagged and distributed over the different districts where it is used.

Next in importance to "copi" is limestone. This is chiefly burnt for lime, which is then spread over the ground, but the limestone is also, like the "copi," ground up and distributed in its raw state.

Decomposing basalt and volcanic ash of good quality have a distinct value as fertilizers. They have been used as such with great advantage in some places.

The only other mineral likely to be of use as a manure is phosphate of alumina or wavellite, which will be referred to later.

Phosphatic Rocks.

No phosphate of lime of commercial value is known to occur in the State.

Phosphate of alumina or wavellite is, however, found in several places near Mansfield, interbedded with highly folded rocks, probably of the pre-Ordovician period. The bands of the phosphate of alumina are only a few inches thick, and they are at present being opened up with a view to the utilization of the material as a manure in agriculture.

Building Stones, Macadam.

Victoria is especially rich in building stones, but remarkably indifferent or ignorant regarding its wealth of this kind. Among the more useful stones may be mentioned several varieties of red and grey granite, or, more strictly speaking, grano-diorite; porphyry, of various shades of grey, pink, red, green and brown colours; bluish-grey diorite, dacite, trachyte, dolerite and basalt; variously coloured marble; crystalline and non-crystalline limestone; sandstone; slate; and flagstone. They are widely distributed throughout nearly the whole of the State.

The industry is as yet merely in its infancy, and the principal localities whence building stones are obtained are:—Grey granite, at Harcourt, in Talbot, and Cape Woolamai, on Phillip Island; red granite (so-called syenite), at Gabo Island, near Cape Howe; porphyry, at Mount Cudgewa, in Benambra; basalt, at Footscray and Malmsbury; non-crystalline limestone, at Waurn Ponds and Batesford, near Geelong; sandstone, at Bacchus Marsh and the Grampians, near Stawell; slate and flagstone, at Castlemaine and Gisborne.

The remaining kinds of rocks previously mentioned have not yet been used for building purposes to any extent.

There is an exceptionally wide field of expansion for this industry.

Laboratory experiments have shown that decomposing basalt can be easily fused into a good dark glass, suitable for paving, channelling, and other purposes. If it can be cheaply decolourized there is a possible wide application for its use.

For road purposes as macadamizing, kerbing, channelling, asphalting, great quantities of the Younger and Older Cainozoic basalt and dolerite are broken or crushed in the Melbourne and various other districts. Diorites, porphyries, granites, trachyte, limestones, ferruginous and calcareous grits, &c., make good macadam. They are so used in many districts.

Beach, lake and river sands and gravels are of widespread occurrence, and of varying grades of coarseness. These are very largely used as top dressings to roads and in the manufacture of mortar and cement.

Ferruginous grits are found in many districts among the Cainozoic sediments, and make very serviceable covering to roads with light traffic. Under the action of the weather the material becomes cemented together, and forms a firm surface.

In many parts of Southern Gippsland and the Otway, the Jurassic mudstones, shales and fine sandstones are burnt to a certain extent, and used as dressing to roads. The material sets well, and forms a splendid surface for light traffic.

Marble.

Marble is the crystalline form of limestone, due to its metamorphism. It occurs among strata of Silurian age in several places in the valley of the Thomson River, Walhalla district; and near the source of the Indi River, near Omeo, in the North-Eastern district; while crystalline limestone, which has not been quite so much changed by metamorphism, occurs at Lillydale, near Melbourne, Waratah Bay, Mitta Mitta River, Tyers River (Central Gippsland), and Mansfield. The marble near Omeo is a handsome stone, very varied in colour and character. Some of it is white, of regular and moderately fine texture, and suitable for statuary purposes; other varieties are of various shades of grey, red and pale green. In some cases the fossils are clear and distinct, standing out prominently when polished, and giving to the rock a handsome appearance.

The marble from Marble Creek, Thomson River, near Toongabbie, is chiefly of good grey colour and crowded with fragments of the stems of encrinites. It takes a good polish, when the fossils are displayed to great advantage. Though the localities, especially the Omeo one, are rather remote and not easy of access, it is a matter for surprise that the stone has not yet been commercially raised. It is eminently suitable for monumental and all kinds of decorative and sanitary purposes. Steps are now being taken to bring these marbles before the public, and it is earnestly to be hoped that the attempt will be successful, for at present a great source of wealth lies undeveloped.

Wood Opal, Common Opal, Precious Opal.

This mineral—hydrous silica, stained in streaks, patches and bands of various shades of yellow, brown, red, grey, white and black by impurities, principally oxides of iron—occurs in a number of localities. Wood opal (the mineral in which the original ligneous tissue has been replaced by hydrous silica) occurs among the gravels and sands of old river beds in various parts of the State, such as at Omeo, Dargo, Beechworth, deep leads of the Loddon system, &c.

Common opal is found in large lumps and pieces in the basins of the Buchan, Murrindal and Snowy Rivers, Eastern Gippsland. Some of this material has rich and variegated colouring, and is capable of taking a good polish. Both kinds of opal would make very pretty ornaments, much less liable to scratching than those of kauri gum, and equally as pretty as it, if not more so. They are not, however, yet used for that purpose.

Precious opal has been found in the Beechworth district, but it is very rare.

Jasper.

This is a non-crystalline form of silica. It occurs as beds in various places, such as at Toolleen and Heathcote, in Rodney; Dookie, near Benalla; Waratah Bay; Macallister River; and Buchan, Eastern Gippsland, &c., among pre-Ordovician strata. As pebbles, it occurs in the deposits of streams traversing these districts, or among

glacial deposits and the deposits derived from them. It is usually of red, brown and greenish-grey colours, and is very suitable for manufacture into sanitary fittings and embellishments, ornaments, decorative panels, &c., but it is not yet devoted to any of such purposes.

Serpentine.

Serpentine is a mineral and rock of green colour, which is found among pre-Ordovician rocks in small quantities in the Wannon district, Western Victoria; Waratah Bay, Southern Gippsland; Howqua River, in Wonnangatta; and in the Wellington Valley, Northern Gippsland. The material is valuable for various ornamental purposes, such as mantelpieces, the fittings of bath-rooms, &c. As yet known in this State it is not of commercial value, except for small ornaments and jewellery.

Abrasive, Moulding, Glazing, Cleansing Materials.

Abrasive material.—Many of the sandstones occurring in the Devonian and Carboniferous formations of East-Central Victoria; near Bacchus Marsh, in Bourke; and the Grampians, in Western Victoria, are well suited for grindstones, scythe stones, &c., but they are not yet utilized for those purposes.

Cherts and quartzites occur in great masses in pre-Ordovician and Older Cainozoic strata, and can be utilized for abrasive purposes after being crushed. Diatomite, also, referred to under its own heading, can be used in this way.

Polishing powder is obtained by crushing certain felspathic dyke-rock, near Melbourne, and is found to be of very good quality, and suitable for cutlery, brasses, &c.

Massive dense mudstones, from which first-class hones can be prepared, occur in many parts of the Silurian series of strata, east of the meridian of Melbourne, especially in the Wandong district, on the North-Eastern railway.

Moulding material.—Fine sands, suitable for iron moulding, occur among the freshwater beds of the Cainozoic period in Southern Gippsland; the La Trobe Valley; at Rowsley, near Bacchus Marsh; and elsewhere. At Rowsley there is a bed of especially good sand of fine grade, which is not being utilized. The same may be said of a splendid sand occurring in the Cainozoic deposits at Mildura, North-Western district.

Glazing material.—Felspathic rock occurs in the form of dykes in various parts of the district east of and near Melbourne, and at a depth where not decomposed, the material should be especially valuable for glazing purposes. Principally in the eastern part of Victoria, there are large masses of felspar-porphyry, which are probably of value as glazing material. Felspar occurs also in large

and numerous crystals in granitic masses, notably in the Strathbogie Ranges, near Mansfield. It is not, however, being used.

The purest limestones, silica, kaolin and barytes are also of value as glazes, but they do not as yet seem to be devoted to that purpose.

Cleansing material.—Fuller's Earth has recently been found near Trentham, but has at present none other than a local use. A large deposit of it occurs at Clifton Springs, near Geelong, and it is also recorded from Lillydale.

Pottery Clays.

Kaolin (hydrous silicate of alumina, or pure clay) is found in many parts of the State. There are four types of occurrence, viz. :—

(1) As the completely decomposed felspar constituent of granite in decomposed granite masses.
(2) As decayed felspathic rock of dykes.
(3) As beds in river and lake deposits of the Cainozoic period.
(4) As decayed shales and claystones of the Ordovician and Silurian periods.

Kaolin is being commercially raised in several localities. At Lal Lal, near Ballarat, where it is found in decayed granite, it is being mixed with its associated quartz and made into splendid fire-bricks. There is a similar occurrence at Bulla, near Melbourne, which was worked many years ago for kaolin, obtained by puddling and settling in tanks; but nothing is being done there now. At Egerton, in Grant, very fine material is found in a decomposed felspathic dyke. It is being mined, and a good deal of it is being exported.

A considerable quantity of good material is being produced at Knowsley, near Bendigo, and a large deposit, also of good quality, occurs in Cainozoic lacustrine deposits near Bacchus Marsh, where it is being mined and sent to Melbourne.

At Epsom, near Bendigo, a very fine clay in Cainozoic strata is being utilized in the manufacture of chinaware, and inferior clays in the coarser kinds of pottery. At Stawell, in similar strata, white clays of excellent quality occur. Good kaolin also occurs at Traralgon, Murtoa, Dunolly and Gordon.

Brick and Tile Clays.—These clays have a very wide distribution. There are immense quantities of them in the Silurian and Ordovician mudstones and claystones that occupy vast areas of the State. In various parts of the Melbourne district these rocks are ground up, puddled and made into first-class bricks, drain pipes, tiles, &c. In numerous other localities sedimentary clays of the Cainozoic period occur in great quantities. They are merely excavated, puddled and made into bricks of good quality.

At Mitcham, Tunstall and Brunswick, near Melbourne, good clay, obtained from decayed Silurian claystones and felspathic dykes, is manufactured into white tiles, which are largely used for ornamental building purposes. Various other kinds of pottery are also made here.

Throughout the Jurassic coal-bearing areas of Southern Gippsland, the Otway Ranges, and the Wannon district, there are numerous beds of bluish-grey and olive-grey mudstones, which, after crushing, can be made into splendid bricks and tiles, but though there is a good opening for profitable local enterprise in this direction, no industry has yet sprung up in it. These bricks should not be burnt at a greater heat than about 1200 deg. C., since the material possesses sufficient alkalies to cause fusion at temperatures above 1250 deg. C.

Fire-clay.—Clay, suitable for the manufacture of fire-bricks, occurs among the freshwater beds of the Lower Cainozoic sediments in various parts of Southern and Central Gippsland, and numbers of other districts, but it has not yet come into use, owing partly, it is said, to the high railway freights.

Fire-bricks of good quality are made at South Yarra, Melbourne, from the decayed granite material of a dyke, and at Lal Lal, from decayed granite of a large mass.

Near Bacchus Marsh, clays of fine quality are being raised and manufactured into good fire-bricks, tiles, pipes, &c.

Lime, Cement and Plaster.

Lime of excellent quality is obtained by burning the Silurian marine crystalline limestone at Lillydale, Waratah Bay and Mansfield; also the early Cainozoic marine non-crystalline limestones at Fyansford, Batesford and Waurn Ponds, in the Geelong district; Maude, on the Moorabool River; Portland and Timboon, &c., in the Western district. The Cainozoic limestones are interbedded with nearly horizontally disposed clays and sands. They are highly fossiliferous, and make excellent lime for ordinary purposes, while some of them yield good hydraulic lime and cement.

Freshwater limestone of the late Cainozoic period occurs near Lara (Geelong district) and Bacchus Marsh, where it is converted into a good hydraulic lime.

Selenite (the crystalline form of gypsum) is widely distributed among the Cainozoic clays and marls over many parts of the coastal districts. It occurs in scattered crystals, and in bunches of crystals, and yields a very pure plaster of Paris; but, though available for local uses on a small scale, it is not commercially valuable.

Pigments and Paints.

Throughout the Silurian and Ordovician strata in the State there are claystones, shales and mudstones of various shades of grey, red, pink, yellow and brown which are specially suitable for and make good pigments, both in their raw state and on roasting, when they change their colours. Among the Jurassic strata also there are mudstones and shales, principally of greenish-grey colours when raw, and brick-red when roasted, which are of value as pigments; while among the Cainozoic clays some of good colour, such as fawn, lilac, bluish-grey, and of good quality, occur. Beyond a systematic endeavour at Mulgrave, near Melbourne, to place these pigments on the market, little has been done in this most promising industry.

Among the volcanic ash deposits that cover large areas of Southern and Central Gippsland, red and brown ochreous clays occur. They are suitable for preparation into first-class pigments, while among these ash beds are large deposits of hæmatite and limonite (oxides of iron), which by grinding can be used as paints of splendid quality.

From roasted pyrites obtained from the concentrates of mines a very serviceable purplish-red or brownish-red paint is manufactured at Ballarat, and has a general use throughout the State.

Black Coal.

Coal of first-class quality for steaming and household purposes occurs in the Jurassic coal measures in Southern Gippsland, the Otway Ranges and the Wannon district.

The seams of workable thickness, ranging from 2 ft. 3 in. to 6 ft., occur, so far as known, in the Cape Paterson, Korumburra, Jumbunna, Outtrim, Kilcunda, Woolamai, Coalville, Mirboo and Foster districts, all in Southern Gippsland. In the first four localities mines are now being worked. The black coal mining industry is, however, greatly handicapped by the extremely faulted character of the strata containing the coal. This necessarily greatly increases the cost of mining it, while the cost of transport to Melbourne presses rather heavily against the development of the industry, especially in the districts without railway communication.

Though these coals are not, as a rule, specially suitable for the manufacture of coke, the coal in a 3 feet seam at Kilcunda yields a coke of splendid quality and admits of development into a promising industry.

Brown Coal and Lignite.

The deposits of these fuels in Victoria are of enormous proportions, one district possessing the thickest known masses in the world. They occur among the gravels, sands and clays of the Cainozoic period—principally the Eocene freshwater or estuarine series—over large areas in Southern and Central Gippsland, Mornington Peninsula, Werribee Plains, Gellibrand, Barwon and Moorabool basins. At Morwell, in the Latrobe valley, Central Gippsland, several beds, with a total thickness of over 800 feet out of an aggregate of 1,110 feet of brown coal and associated deposits, have been proved by a bore.

At Altona, near Melbourne, there are two beds, totalling 75 feet in thickness, which thicken to 134 feet near Laverton, some two miles to the south-west, and thin again to 33 feet, some five miles further south-west. The material in most places is of excellent quality, but requires special grates of fine bars, since, if burnt in ordinary grates, it is, owing to its combustibility and friability, rapidly consumed.

Several attempts have been made to manufacture briquettes, and place the fuel in that form on the market. They have, however, resulted in failure, owing probably to several causes, such as cost of production, want of an effective method of manufacture, of management, and of public support.

Mining operations have been carried on at several places, viz., near Morwell (not the thick deposit), Dean's Marsh, and Altona, where the coal was extracted and sold in its raw state but the industry has not been established.

At the present time preliminary work is being done at Altona, and reported to be in prospect at Morwell, with a view to the generation of electrical energy for transmission to Melbourne. There seems no reason to doubt the success of these ventures, assuming there be capable management and proper public support. When one bears in mind the importance of the brown coal industry to other countries of the world, especially Germany, it is a matter for wonderment that these deposits of such great value to the State should for so long have remained undeveloped.

Besides the value of brown coal as a fuel, its use as a base for deodorants should not be overlooked.

Thin beds of lignite and brown coal occur also in numerous localities in Victoria among younger Cainozoic deposits.

In the preceding remarks it has been practicable to give only the merest outline of the mineral resources of Victoria. It will be recognised that there are great probabilities of future discoveries of other valuable mineral deposits in the thousands of square miles of country as yet unprospected; while the development of many of the known deposits will probably take place in a few years.

Mining Development.

Expenditure in aid of mining industry.

In addition to the sums annually voted, £271,665 have been apportioned from loan receipts towards mining enterprise. Of this sum £83 were expended during 1905-6, making a total of £271,022 expended up to 30th June, 1906, and leaving £643 yet to be expended. Particulars of the amount spent are shown in the following statement:—

Loan Money Expended on Mining Enterprise to 30th June, 1906.

Loan Act.	Allocated under Act.	Purpose for which Allocation was made.	Amount Expended.
			£
1451	1461	Advances to companies: draining	58,523
,,	,,	Construction of roads and tracks	42,390
,,	,,	Plant for testing metalliferous material	11,922
,,	,,	Construction of races and dams	5,708
,,	,,	Advances to miners for prospecting	17,011
,,	,,	Disseminating information: exhibition expenses	3,368
,,	1806	Removal and re-erection of testing plants	436
1564	1566	Draining: advances to companies for pioneer work	18,008
,,	,,	Construction of races and dams	249
,,	,,	Advances to miners for prospecting	3,152
,,	,,	Purchase of Cyanide process patent rights: equipment of Schools of Mines; developing pigments, &c.	23,043
,,	1882	Advance to mining company for pioneer operations	230
1623	1566	Draining: advance to company, and expenses	3,862
,,	,,	Construction of roads and tracks	20
,,	,,	Construction of races and dams	704
,,	,,	Advances to miners for prospecting	1,562
,,	,,	Disseminating information and equipping Schools of Mines	2,860
,,	1882	Advances to miners, companies: draining and track-cutting: and disseminating information	1,690
1659	1566	Advances to companies: draining	18,768
,,	,,	Construction of roads and tracks	9,247
,,	,,	Construction of races and dams	810
,,	,,	Advances to miners for prospecting	4,381
,,	,,	Disseminating information: Schools of Mines equipment, &c.	5,998
,,	1767	Purchase and equipment of building for metallurgical work	40
1753	1566	Advances to companies: draining	4,650
,,	,,	Construction of roads and tracks	1,634
,,	,,	Construction of races and dams	682
,,	,,	Advances to miners for prospecting	55
,,	,,	Disseminating information: Schools of Mines equipment	540
,,	1767	Purchase and equipment of building for metallurgical work	630
1800	1806	Purchase and equipment of building for metallurgical work	1,777

LOAN MONEY EXPENDED ON MINING ENTERPRISE TO 30TH JUNE, 1906 —*continued.*

Loan Act.	Allocated under Act.	Purpose for which Allocation was made.	Amount expended.
			£
1800	1806	Advances to companies: draining	20,032
,,	,,	Construction of roads and tracks	4,245
,,	,,	Construction of races and dams	107
,,	,,	Advances to miners for prospecting	1,670
,,	,,	Disseminating information: Schools of Mines equipment	1,018
		Total	271,022

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: 1901-2 TO 1905-6.

—	1901–2.	1902–3.	1903–4.	1904–5.	1905–6.
	£	£	£	£	£
Mining Department ...	36,305	35,815	23,702	24,526	25,431
Mining boards ...	3,500	3,500	3,500	2,916	
Victorian coal—Allowance to Railway Department on carriage of ...	9,946	5,568	5,099	8,847	10,807
Diamond drills for prospecting	2,546	2,798	4,993	10,823	11,231
Testing plants ...			2,358	2,664	2,463
Geological and underground surveys of mines	5,809	5,245	5,450	5,616	5,469
Miscellaneous ...	1,396	1,035	873	963	777
Total ...	59,502	53,961	45,975	56,355	56,178

The expenditure under the heading Mining Department prior to 1903-4 included also the Water Supply Department. In 1904, however, the departments were separated, and the figures for the three

latter 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 232 of this work.

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 annually by the Mining Department, and the figures for the seven years ended with 1906 are subjoined:— Gold miners.

NUMBER OF MEN EMPLOYED IN GOLD MINING, 1900 TO 1906.

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

The number of men employed in each mining district in 1906 was: — Ararat and Stawell, 1,425; Ballarat, 5,010; Bendigo, 5,290; Beechworth, 4,452; Castlemaine, 3,987; Gippsland, 1,891; and Maryborough, 3,249.

The following table shows the quantity and value of the metals and minerals produced in Victoria up to the end of 1906:— Mineral produce.

TOTAL MINERAL PRODUCTION TO 31ST DECEMBER, 1906.

Metals and Minerals.	Recorded prior to 1906.		Recorded during 1906.		Total Recorded to end of 1906.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Gross.		Gross.		Gross.	
	ozs.	£	ozs.	£	ozs.	£
Gold	68,367,403	273,236,500	834,775	3,280,478	69,202,178	276,516,978
Silver ..	27,184	7,446	..	..	27,184	7,446
	1,195,804*	186,069*	35,125*	4,980*	1,230,929*	191,049*
	tons.		tons.		tons.	
Coal, black ..	2,514,134	1,388,269	160,631	80,283	2,674,765	1,468,552
,, brown ..	48,416	19,582	..	..	48,416	19,582
Lignite	12,923	3,086	..	..	12,923	3,086
Ore—copper ..	17,470	206,895	..	..	17,470	206,895
,, tin ..	15,216	734,512	106	11,644	15,322	746,156
,, antimony ..	22,972	177,736	205	,075	23,177	180,811
,, silverlead ..	793	5,760	..	..	793	5,760
,, iron ..	5,434	12,540	..	..	5,434	12,540
Diamonds ..	..	108	..	..	..	108
Sapphires, &c. ..	..	630	..	..	..	630
Gypsum ..	11,509	7,259	1,389	348	12,898	7,607
Magnesite ..	6	12	..	..	6	12
Kaolin	2,572	8,017	383	383	2,955	8,400
Diatomaceous earth	1,608	7,302	280	1,120	1,888	8,422
Building stones, various ..	..	3,226,755†	..	63,272	..	3,413,937
Limestone ..	..	123,910‡				
Salt (crude) ..	..	34,216‡	12,365	9,273	..	43,489
Total ..	..	279,386,604	..	3,454,856	..	282,841,460

* 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 1906, amounts to 69,202,178 ounces gross, or 65,097,592 ounces fine, valued at £276,516,978. The value is based on the average value of the gold received at the Melbourne Mint, which in 1906 was £3 18s. 4d. per ounce. The yield of gold for 1906, 834,775 ounces gross, or 772,290 ounces fine, is 25,124 ounces fine, more than the yield of 1905, and has only been exceeded three times since 1876.

Mining district gold yields.

In the following return will be found the yield of gold from alluvial workings, and from quartz reefs during 1905 and 1906, in each mining district of the State, as estimated by mining registrars :—

GOLD DERIVED FROM ALLUVIAL WORKINGS AND QUARTZ REEFS, 1905, AND 1906.

Mining District.	1905.			1906.		
	Alluvial.	Quartz.	Total.	Alluvial.	Quartz.	Total.
	oz.	oz.	oz.	oz.	oz.	oz.
Ararat and Stawell ...	11,496	12,156	23,651	8,638	16,261	24,899
Ballarat	40,316	105,014	145,331	51,881	112,184	164,065
Beechworth	101,439	32,147	133,587	103,514	31,298	134,812
Bendigo	12,744	199,721	212,465	9,270	211,917	221,187
Castlemaine ...	34,066	56,139	90,205	32,990	66,396	99,386
Gippsland	8,584	65,049	73,633	8,778	88,402	97,180
Maryborough... ...	46,384	39,385	85,768	38,595	41,672	80,267
Total	255,029	509,611	764,640	253,666	568,130	821,796

Deep shafts, gold mining.

At Bendigo thirteen mine shafts had attained great depths by 31st December, 1906, namely, the Victoria Quartz, 4,254 feet; the Lazarus New Chum, 3,777 feet; the New Chum Railway, 4,318 feet; the New Shenandoah, 3,276 feet; the New Chum and Victoria, 3,375 feet; Lansell's 180, 3,354 feet; New Chum Consolidated, 3,099 feet; North Johnson's, 3,500 feet; Great Extended Hustlers, 3,081 feet; the Eureka Extended, 3,060 feet; the Princess Dagmar, 3,040 feet; the Ironbark, 3,250 feet; and the Victoria Consols, 3,000 feet.

Dredge mining and hydraulic sluicing have reached considerable dimensions in recent years, and the following tables show the position of the industry at the 31st December, 1906. Dredge mining and hydraulic sluicing.

DREDGE MINING AND HYDRAULIC SLUICING, 1906.

District.	Number of Plants.	Gold won during 1906.	Dividends paid during 1906.*
		oz.	£
Ararat	1	33	..
Ballarat	20	11,270	2,025
Beechworth	44	41,790	36,315
Bendigo	4	1,611	1,200
Castlemaine	38	23,724	5,915
Gippsland...	4	2,231	175
Maryborough	14	4,612	...
Total	125	85,271	45,630

* These figures are merely approximate, as such information is not furnished in connexion with some privately-owned plants which are known to pay handsomely.

DESCRIPTION OF PLANTS.

District.	Bucket Dredges.	Hydraulic Pump Sluices.	Jet Elevators.	Rotary Hydraulic Machine.	Total.
Ararat	...	1	...	...	1
Ballarat	4	16	...	...	20
Beechworth	26	13	5	...	44
Bendigo	...	4	...	...	4
Castlemaine	2	35	1	...	38
Gippsland	4	...	...	...	4
Maryborough	...	13	..	1	14
Total	36	82	6	1	125

The number of men employed in connexion with these plants was 2,667, and the wages paid, £200,443.

In addition to the above, twelve plants engaged in gravitation hydraulic sluicing, employing 146 men, produced 4,115 ounces of gold, and paid £10,500 in wages during 1906, and the mining registrars returned an additional 3,500 ounces, won by small parties working under miners' rights.

Value of machinery on gold-fields.

The following is a return showing the value of machinery used in alluvial and quartz mining for the seven years ended 1906:—

VALUE OF MACHINERY ON GOLD-FIELDS, 1900 TO 1906.

Year.	Approximate Value of Machinery Employed in—		
	Alluvial Mining.	Quartz Mining.	Total.
	£	£	£
1900	562,690	1,375,350	1,938,040
1901	534,420	1,446,140	1,980,560
1902	523,320	1,435,240	1,958,560
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

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, 1901 TO 1906.

Mining District.	Amount Distributed.					
	1901.	1902.	1903.	1904.	1905.	1906.
	£	£	£	£	£	£
Ararat and Stawell ...	13,353	13,900	15,105	10,167	102	...
Ballarat	101,650	114,408	123,900	77,315	66,700	62,700
Beechworth ...	10,263	18,100	48,159	57,511	70,413	65,599
Bendigo	184,771	213,458	319,370	382,321	228,028	251,727
Castlemaine ...	42,250	28,050	15,138	17,240	35,465	37,701
Gippsland	25,360	46,840	34,700	41,844	28,504	56,897
Maryborough ...	50,350	37,400	44,780	37,000	25,219	10,069

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

YIELDS AND DIVIDENDS: 1900 TO 1906.

Year.	Value of Gold Produced.	Dividends Paid.
	£	£
1900	3,190,940	453,333
1901	3,102,753	427,997
1902	3,062,028	472,136
1903	3,259,483	601,152
1904	3,252,045	623,398
1905	3,173,744	454,431
1906	3,280,478	484,693

The dividends paid in the years mentioned range from 14 to 19 per cent. of the gold produced, the average for the seven years being about 16 per cent.

Gold raised in Australasia.

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, 1851 TO 1906.

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	23,334,267	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	3,925,620	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
	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	253,984	544,636	14,077	1,794,547	60,023	534,617
	4,503,672	1,523,654	3,683,798	127,751	11,372,347	399,862	2,829,399

* Quantity received at Melbourne and Sydney Mints.

The figures in this table have been revised since last publication, and the yields since 1900 are now given in fine ounces, thus making an accurate comparison possible. The total production of Australasia from 1851 to 1900, inclusive, amounts to 114¾ million ounces (gross), more than half of which was produced in Victoria. The Australasian production for the six years, 1901 to 1906, amounts to about 24½ million ounces (fine), to which Western Australia contributed over 11⅓ million ounces.

World's production 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 1905, together with the approximate stocks of gold, silver, and paper money in the principal countries at the close of 1905, as set out in the following tables, have been extracted principally from the annual

report issued in 1906, 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. The information contained in the fourth table, relating to the coinage of gold and silver, has been taken from the report of the Director of the British Mint:—

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	16,755,900	71,912,700	168,390,200	20,347,200
1905	18,202,600	77,319,200	157,340,000	19,722,000
Total	350,619,500	1,508,440,800	4,512,382,000	828,819,400

WORLD'S PRODUCTION OF GOLD AND SILVER—PRINCIPAL COUNTRIES, 1905.

Country.	Gold.		Silver.	
	Ounces—Fine.	Value.	Ounces—Fine.	Value—Commercial.
		£		£
Africa	5,482,300	23,287,600	619,600	77,700
Australasia	4,156,300	17,653,600	12,561,600	1,574,600
Austria-Hungary	118,900	505,000	1,860,200	233,200
British India	563,800	2,395,000	...	...
Canada	700,800	2,976,800	5,974,900	748,900
Germany	3,200	13,700	5,820,900	729,600
Japan	161,100	678,200	2,409,900	302,100
Mexico	738,300	3,136,000	54,652,900	6,850,600
Peru	22,900	97,100	5,169,700	648,000
Russia	1,078,400	4,580,600	205,000	25,700
United States	4,265,700	18,119,900	56,101,600	7,032,100
Other Countries	910,900	3,875,700	11,963,700	1,499,500
Total	18,202,600	77,319,200	157,340,000	19,722,000

Approximate Stocks of Money in the Principal Countries of the World at the close of 1905.

World's stocks of money.

Country.	Value of—		
	Gold.	Silver.	Uncovered Paper.
	£	£	£
Argentine	20,549,000	*	60,269,000
Austria-Hungary ...	63,146,000	21,597,000	20,097,000
Belgium	6,267,000	5,076,000	22,994,000
British Empire—			
Australasia ...	29,672,000	1,253,000	*
Canada	10,911,000	1,377,000	13,377,000
India	56,920,000	124,073,000	6,658,000
South Africa ...	10,583,000	4,110,000	*
United Kingdom ...	114,888,000	22,994,000	23,960,000
Egypt	17,877,000	3,082,000	*
France	212,185,000	84,475,000	24,288,000
Germany	188,513,000	43,090,000	43,953,000
Italy	38,940,000	5,754,000	32,220,000
Japan	14,364,000	8,898,000	20,199,000
Mexico	1,767,000	11,672,000	*
Netherlands	8,425,000	11,117,000	11,117,000
Russia	175,670,000	16,829,000	*
Spain	15,227,000	35,693,000	23,939,000
Turkey	10,274,000	8,219,000	*
United States ...	291,955,000	141,128,000	119,614,000
Other Countries ...	44,139,000	102,188,000	308,004,000
Total	1,332,272,000	652,625,000	730,689,000

* No information.

World's Coinage of Gold and Silver during the Year 1906.

World's coinage.

Country.	Gold.	Silver.
	£	£
United Kingdom	12,589,700	1,822,400
Australasia	11,474,700	...
India (*a*)	...	13,334,300
British Colonies and Dependencies (*b*)	...	214,100
Austria-Hungary	1,519,600	170,700
France and Tunis	13,277,600	130,000
Germany and German East Africa ...	8,612,400	3,211,700
Japan	1,538,500	1,511,800
Mexico	4,890,300	902,200
Russia	...	904,300
Turkey	3,329,300	151,400
United States and Philippines (*a*) ...	11,042,100	999,000
Other Countries	436,100	4,224,400
Total	68,710,300	27,576,300

(*a*) Financial Year, 1905–6.
(*b*) Inclusive of coins struck at Calcutta and Bombay (during the Financial Year, 1905–) and at the "Mint," Birmingham.

Coal production.

The following return shows the total quantity of coal raised in Victoria:—

BLACK COAL RAISED TO 31ST DECEMBER, 1906.

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	155,135
1906	160,631
Total	2,674,765

Brown coal raised to date, 48,416 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, the Jumbunna Company, and the Coal Creek Proprietary Company.

Output of collieries.

There were seven collieries working at the end of 1906, the output of each for that year being as follows:—

OUTPUT OF BLACK COAL COMPANIES, 1906.

Company	Tons.
Outtrim-Howitt	74,812
Jumbunna	64,222
Coal Creek Proprietary	13,214
Silkstone	3,977
New Extended Co-operative	2,186
Strezlecki	2,000
San Remo	220
Total	160,631

No dividends were paid during 1904, 1905, and 1906.

There was an increase in the number of miners employed in coal mining in 1906, as compared with the preceding three years. This will be seen by the following figures:— Coal miners.

NUMBER OF COAL MINERS EMPLOYED, 1900 TO 1906.

Year.	Number of Miners at Work.
1900	807
1901	877
1902	1,303
1903	377
1904	589
1905 ...	640
1906	693

These figures include men engaged in mining for brown coal.

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 160,631 tons in 1906 is lower than that of any year in the period 1894-1902.

In consequence of the labour troubles, and depression in the coal industry, a Royal Commission was appointed at the end of 1905 to inquire into— Royal Commission on the coal industry.

(1) The conditions under which miners are engaged to work in the coal mines of Victoria.

(2) The wages paid to the said miners, and the conditions under which they labour.

(3) The regulation of the selling price of coal, and generally as to the circumstances connected with the industry of coal mining in Victoria.

The report states that the general conditions of employment in the mines are unsatisfactory, that the ruling wages are inadequate remuneration for the work, and that the ventilation in all the mines is inefficient, and in some cases defective. It is recommended that a board somewhat on the lines of the Wages Boards be appointed to frame conditions, terms, and rules of employment, and also for the purpose of settling differences between managers and men; that the minimum wage for efficient and capable miners be not less than 8s. 4d. per shift of eight hours; that attention be directed to the improvement of the ventilation in all the mines; and that a coal Mines Bill be submitted to Parliament.

The present depression is stated to be due to labour troubles; difficulties through faults, displacements, and thin seams; the low selling price of coal; insufficient capital to thoroughly develop the areas under lease, and the neglect of the companies to provide a reserve fund during the period of prosperity. To further develop the industry, the Commission recommend that the Government, for five years from the 1st January, 1908, give a bonus of 6d. per ton to any company whose production is 20 per cent. more than its average output during the quinquennium, 1898-1902, and that the bonus be not paid on that portion of the production which exceeds an increase of 20 per cent. on the average annual output as stated. In the case of the three smaller companies, it is recommended that the bonus be calculated upon their output during 1905. The Commission also recommend that the companies reserve 10 per cent. of their net profits for the purpose of creating a fund for exploratory and developmental work; that the prices for Victorian coal supplied to the Railways during the next five years be not less than 12s. 6d. per ton for the best, and 11s. 6d. per ton for the second quality; that no freight higher than a half-penny per ton per mile be imposed, with a concession in freight for the small coal as compared with the large. Manufacturers are urged to purchase a proportion of their requirements from Victorian mines, in order to encourage an industry of such great importance to them. Attention is also directed to the necessity of reserving timber supplies for future requirements of the mines, and the companies are recommended to equip their mines with the most suitable appliances in coal-cutters and other labour-saving machinery.

Coal produced and imported

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

BLACK COAL PRODUCED AND IMPORTED, 1900 TO 1906.

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

* 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 1,078,000 tons, the increase occurring in the imports.

Coal raised in Australasia.

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 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	..	1,729,536

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

Coal Production of the World.

The total known coal production of the world (exclusive of brown coal and lignite) in 1905 was about 840 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, 1905.

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	155,135	10 2	+701,300	634
New South Wales ...	6,632,138	6 1	−3,450,500	14,137
Queensland	529,326	5 10½	+20,000	1,223†
Western Australia ...	127,364	8 8	+152,100	383†
Tasmania	50,464	9 8	+62,300	166
New Zealand	1,585,756	10 7	+46,200	3,269
Austria-Hungary	13,530,000	6 11¾*	+5,860,000	66,072‡
Belgium	21,506,000	10 8*	−1,845,000	134,980
Canada	7,836,000	9 3	+5,193,000	15,736*
France	34,778,000	10 10½*	+11,268,000	168,319*
Germany	119,349,000	8 9½	−12,634,000	490,604*
Japan	11,630,000	5 3½*	−2,164,000	88,330*
United Kingdom	236,129,000	6 11½	−67,112,000	837,100
United States	350,821,000	5 8	−7,541,000	594,768*

NOTE.—Some of these figures are provisional.

* Figures for 1904. † Census Figures, 1901. ‡ Austria only.

Stone quarries.

There were 82 stone quarries at work in 1906 employing 671 hands, and paying £46,730 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 seven years are set forth in the following table:—

STONE QUARRIES: 1900 TO 1906.

Year.	Quantity of Stone Operated on—			Approximate Total Value of Stone Raised.
	Bluestone.	Sandstone, Freestone, Slate, &c.	Granite.	
	c. yds.	c. yds.	c. yds.	£
1900	252,870	1,263	400	44,513
1901	270,126	2,400	1,500	45,447
1902	328,485	3,964	3,099	53,395
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

Diamond drills.

During 1906 the Mining Department had five steam diamond drill machines at work, which put down 14 bores for gold and 10 bores for coal. These gold bores totalled 5,372 feet, and the coal bores 8,026 feet in depth. Three percussion drills having oil for their motive power were also at work, and sunk 75 bores—67 for gold, totalling 4,449 feet in depth, and 8 for water, totalling 1,557 feet in depth. In addition there were 4 hand-boring plants, which sunk 84 bores for gold, totalling 7,781 feet.

Government Batteries.

During 1906 Government batteries were located in 20 districts, and treated 3,483 tons of ore, which yielded 2,254 ounces of gold, the net cost to the Mining Department being £2,362.

Mining Accidents

There was an increase in the number of accidents in connexion with gold mining during 1906, as compared with previous years back to 1898. In the last twenty years the average number of men employed in gold mining was 27,081, and the average yearly number of accidents 107; 32 persons per annum being killed, and 83 injured, or 1.2 and 3.05 respectively per thousand employed. In coal mining during the eighteen years, 1889-1906, there were 27 persons killed and 99 injured.

MANUFACTORIES.

Definition of a factory.

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, 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.

Classification of factories.

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

FACTORIES—HANDS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1906.

(excluding working proprietors), and the value of the machinery, plant, land, buildings, and improvements for the year 1906:—

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.				
													£	£	£
Class I.—Treating Raw Material, the Product of Pastoral Pursuits, or Vegetable Products, not otherwise Classed.															
1. *Animal Products.*															
Boiling down	12	12	..	..	..	..	136	6	81	..	..	9.3	5,448	10,924	7,696
Bone milling	21	18	1	..	(1)2	..	476	16	91	..	1	8.0	6,334	26,483	15,405
Catgut, sausage skins	4	..	..	..	..	..	..	4	99	..	..	12.0	7,097	740	1,979
Tanning, fellmongering, woolwashing	84	55	1	(4)3	3	5	1,152	88	1,567	..	2	10.4	123,677	114,951	157,294
2. *Vegetable Products.*															
Bark milling	2	100	37	9	(1)37	1	1,323	196	678	6	6	5.0	38,003	58,353	120,248
Chaff cutting, corn crushing	182											7.3			
Class II.—Oils and Fats, Animal and Vegetable.															
Oil, grease, glue	5	2	..	1	..	..	44	1	47	..	1	10·6	3,138	5,572	10,080
Soap, candle	15	12	1	..	..	..	215	9	499	..	15	12·0	41,635	104,244	96,000

Class III.—Processes relating to Stone, Clay, Glass, &c.																
Brick, pottery, earthenware	123	36	2	..	4	76	1,527	134	1,537	1	31	8.9	145,725	109,345	169,175
Cement, including cement pipes	4	2	..	..	1	..	440	1	142	..	1	12.0	10,656	26,549	7,350
Lime	11	4	..	..	2	..	52	11	131	..	..	9.6	8,236	4,660	8,970
Asbestos	1	1	3	..	..	..	70	9	581	..	1	11.7	47,083	25,227	24,630
Glass (including bottles)	9											10.5			
Glass bevelling	16	4	2	4	..	..	52	14	167	..	1	11.7	15,507	4,374	20,240
Marble, stone dressing	37	5	4	5	..	..	107	44	320	..	2	11.4	32,726	11,871	32,156
Filter (stone)	2	1	1	..	..	..	5	8	73	..	..	8.1	5,575	1,275	6,090
Modelling in plaster, cement, &c.	5											12.0			
Class IV.—Working in Wood.															
Cooperage	10	..	2	..	..	..	10	16	66	..	..	12.0	6,293	2,178	11,181
Cork-cutting	2											11.5			
Dairy, domestic implements	4	3	..	3	..	..	47	4	105	..	1	11.3	8,840	5,193	7,255
Bellows	2											11.8			
Saw-milling, forest	112	110	..	..	..	2	1,605	129	1,487	..	1	7.9	105,017	90,305	10,454
Saw-milling—moulding, joinery, &c.	101	43	33	17	1	..	2,225	112	1,891	..	8	9.7	169,005	102,399	162,484
Mantelpiece	6	1	..	..	..	..	14	8	170	..	..	11.6	12,222	1,067	6,050
Woodcarving, turnery	33	5	(2)15	10	2	..	148	41	175	..	3	11.3	11,697	10,345	25,872
Class V.—Metal Works, Machinery, &c.															
Agricultural implement	53	34	(1) 5	..	(1 8	1	683	62	1,681	..	4	11.7	148,610	62,808	70,600
Engineering, boilermaking, iron foundry	251	112	(5)91	(7)24	(2)17	1	2,615	331	5,289	..	23	11.5	478,805	445,667	335,419
Railway workshop	15	9	3	..	..	..	511	..	2,285	..	5	12.0	281,597	164,802	259,414
Cutlery, tool	13	1	9	2	1	..	47	14	34	..	..	11.5	2,792	5,095	10,330
Nail	7	5	2	..	..	..	243	4	164	1	1	12.0	14,234	34,405	9,180
Iron safe, door	3	1	..	..	..	..	4	3	31	..	..	11.9	2,197	940	5,860
Sheet iron, tin (including japanning)	60	4	17	(1) 3	..	1	131	63	983	..	6	11.6	64,049	42,554	90,137
Oven, range	10	..	4	2	..	..	38	13	180	..	2	12.0	13,879	3,880	17,564
Pattern	7	..	2	3	(1) 2	..	18	7	27	..	..	12.0	2,260	983	2,673

For footnotes see end of table.

FACTORIES—HANDS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1906—*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.				
													£	£	£
Class V.—Metal Works, Machinery, &c.—continued.															
Meter	3	1	1	..	..	..	22	1	80	..	..	12.0	6,103	3,570	4,060
Spring	3	3	..	..	..	..	30	3	55	1	1	12.0	3,266	5,150	6,050
Brass, coppersmithing	47	1	21	17	3	..	162	62	536	..	13	11.6	40,302	26,715	56,839
Lead, shot, pewter, zinc, &c.	4	3	1	..	..	..	225	4	52	..	1	11.9	4,500	7,685	13,060
Wireworking	14	3	5	2	1	..	85	19	201	..	11	12.0	13,713	13,331	21,376
Metallurgical	9	3	..	5	..	1	35	14	20	..	..	9.6	1,193	4,239	4,814
Smelting	2	4	1	..	..	..	97	6	70	..	..	12.0	6,577	10,500	5,750
Pyrites	3											9.6			
Cyanide	96	24	1	..	(2)21	15	231	129	566	..	..	9.3	44,965	47,391	5,903
Class VI.—Connected with Food and Drink, or Preparation thereof.															
1. *Animal Food.*															
Bacon-curing	28	26	2	(1)	(2)	..	196	32	301	..	5	10.5	25,606	28,217	35,171
Butter, cheese	221	206	(1) 6	(4) 4	(2) 3	2	1,965	64	1,391	2	33	11.7	116,639	307,935	242,467
Butterine	1											12.0			
Creameries†	202	200	..	..	2	..	887								
Meat freezing, preserving	41	12	(1)	(5)	..	..	1,755	13	508	1	..	9.8	36,818	93,568	198,956

2. *Vegetable Food, including Products not Foods, but usually associated with the Manufacture of Foods.*															
Biscuit	4	4	(2)	(2)	..	..	119	5	704	..	358	12.0	52,534	42,946	47,530
Flour	64	64	..	..	..	(3)	3,356	44	740	..	4	10.1	80,261	243,149	222,862
Jam, pickle, sauce, vinegar	26	18	(3)	(1) 1	(1)	..	281	17	831	1	439	11.3	63,702	39,541	88,882
Oatmeal, maizena, starch, arrowroot	18	3	5	(1) 4	1	1	841	17	221	..	141	11.3	24,252	68,363	120,313
Macaroni	3	..	2	1	..	..	10	2	23	1	13	11.3	1,075	1,675	4,085
Sugar, treacle, refining	2	10	(4) 6	(5) 2	..	..	949	28	909	1	566	12.0	107,905	122,812	141,338
Confectionery	23											11.6			
3. *Drinks and Stimulants.*															
Aerated water, cordial, &c.	137	69	(1)44	(2) 4	(1)13	4	320	139	931	6	13	10.2	63,377	82,806	138,056
Malt	18	4	(1)10	(1)	2	..	146	13	150	..	2	10.8	16,108	19,732	113,506
Brewing	39	38	(2)	(3)	1	..	1,012	27	1,001	1	1	11.7	126,352	235,980	487,967
Distilling	9	9	..	..	..	..	179	7	74	..	..	6.2	2,188	62,871	81,928
Condiments, coffee, chicory, cocoa, chocolate, mustard, spice, &c.	11	5	(1) 6	(1)	..	..	485	9	175	..	107	10.2	19,053	27,165	62,535
Ice	13	2	..	(1)	1	..	311	7	92	1	..	8.6	5,606	22,688	23,369
Salt	3	1	1	..	(1) 1	..	54	1	51	..	..	7.4	5,124	4,656	32,292
4. *Narcotics.*															
Tobacco, cigar, snuff	12	2	..	(1) 3	..	..	256	13	790	..	1,043	10.8	111,169	78,522	150,668
Class VII.—Clothing and Textile Fabrics, and Fibrous Material.															
1. *Textile.*															
Woollen mill	9	8	1	(2)	..	..	2,137	4	720	..	710	12.0	76,901	236,988	104,335
2. *Dress.*															
Clothing, tailoring	316	..	15	(2)30	..	..	155	277	1,487 ‡63	19	5,513 ‡308	11.5	360,789	32,083	359,179
Corset	4	..	..	..	..	..	..	..	2	4	35	12.0	1,718	93	5,060

footnotes see end of table.

FACTORIES—HANDS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1906—*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.				
													£	£	£
Class VII.—continued.															
2. *Dress*—continued.															
Dressmaking, millinery, &c.	501	..	5	(2)19	..	..	85	34	114	430	7,789 ‡102	11.1	219,120	25,818	327,909
Underclothing, shirt	115	3	(1)13	(1)27	..	..	200	38	154	83	3,229 ‡848	11.3	129,313	33,491	122,611
Hat, cap	32	8	(1) 4	(1)11	..	1	243	29	497 ‡3	7	786 ‡32	11.1	77,386	24,588	55,156
Hosiery	16	..	4	(1) 3	..	..	36	9	25	8	330 ‡17	10.5	12,805	19,428	15,983
Oilskin, waterproof clothing	5	..	1	3	..	..	9	3	44	..	181 ‡1	12.0	10,524	2,439	18,180
Boot, shoe	134	4	46	(4)26	1	..	543	169	3,629 ‡40	8	1,897 ‡12	11.1	332,538	99,042	154,394
Fur	6	..	1	..	..	..	1	6	14 ‡3	6	41 ‡2	11.2	2,903	270	3,220
Umbrella	8	..	2	4	..	..	6	6	66	1	160	11.9	11,616	1,270	14,830
Dyeing	3	2	(1)	..	..	..	25	4	40	..	134	11.7 11.4	7,913	5,296	10,050
Feather Dressing	1														
3. *Fibrous Materials and Textiles, n.e.i.*															
Rope, twine, mat, bag, and sack ..	14	3	2	(1)	..	1	637	18	350	..	266	11.5	30,912	47,499	48,618
Tent, sail, tarpaulin	9	..	1	3	..	..	7	7	49	..	16	12.0	4,448	932	9,899

Class VIII.—Books, Paper, Printing, Engraving, &c.																
Printing (including newspapers), paper-bag, lithographic, electrotyping, stereotyping	267	5	(3) 158	(17) 59	(2)13	4	1,342	309	4,055	9	752	11.9	480,651	526,401	562,875
Photo lithography	3	..	1	2	..	..	4	4	43	..	1	12.0	5,586	4,650	3,590
Account-book, stationery, and rubber stamp	19	1	6	(1) 2	1	..	204	16	580	..	750	11.1	67,862	67,683	114,465
Ink, printing ink	6	..	4	..	..	..	29	5	40	..	2	12.0	3,241	1,705	6,874
Paper, strawboard, millboard	3	3	..	..	..	..	690	..	164	..	19	9.1	14,128	59,000	33,500
Fancy box, &c.	15	2	2	5	..	..	36	10	120	1	354	11.5	17,892	8,897	19,265
Die-sinking, engraving, medals, &c. ..	12	..	2	8	1	..	29	20	116	..	1	11.3	10,584	7,110	22,640
Class IX.—Musical Instruments.																
Organ, pianoforte	3	..	1	1	..	..	7	3	29	..	..	11.8	2,203	1,312	5,440
Class X.—Arms and Explosives.																
Ammunition	1											11.6			
Blasting powder, dynamite, lithofracteur, &c.	1	3	..	(1)	(1)1	..	127	2	95	..	233	8.0	15,595	44,206	28,282
Fireworks	1											12.0			
Fuse	2											11.8			
Class XI.—Vehicles and Fittings, Saddlery, Harness, &c.																
Coach, carriage, waggon	253	24	15	4	9	1	278	314	2,247	..	12	12.0	155,979	44,651	203,325
Carriage lamp	2											11.8			
Cycle	50	..	15	23	..	..	77	42	411	..	9	11.5	25,416	10,725	56,019
Perambulator	4	..	1	..	..	..	1	5	42	1	..	10.9	3,630	475	3,080
Saddle, harness	48	..	..	3	..	..	3	50	332	..	32	12.0	26,719	3,039	61,045
Saddle-tree, saddlers' ironmongery, &c. ..	3	2	..	..	..	..	10	6	15	..	1	11.9	1,221	850	2,386
Whip	1											12.0			

For footnotes see end of table.

FACTORIES—HANDS, WAGES, AND VALUE OF MACHINERY, PLANT, LAND AND BUILDINGS, 1906—*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.				
													£	£	£
Class XII.—Shipbuilding, Fittings, &c.															
Ship, boat	4	2	..	..	..	..	11	6	19	..	..	12·0	1,772	125	1,930
Docks, slips	7	7	..	..	..	..	1,160	4	105	..	..	9·3	1,1491	54,680	391,380
Class XIII.—Furniture, Bedding, &c.															
Upholstery, bedding, flock	34	4	4	(1)1	..	..	119	18	326	2	124	11·7	30,760	14,722	51,489
Bedstead	1											12·0			
Curled hair	2	..	2	..	..	..	16	2	36	..	8	12·0	2,407	890	1,280
Cabinet, including billiard table	121	8	(1)18	13	..	..	264	159	1,194	2	32	11·5	104,514	18,504	161,899
Picture frame	20	..	2	(1)13	..	..	25	21	164	1	37	11·6	10,503	2,444	23,387
Venetian blind	5	2	..	1	..	..	13	8	34	..	..	11·9	1,977	1,464	7,110
Class XIV.—Drugs, Chemicals, and By-products.															
Blacking, blue, washing powder, &c.	13	3	(1) 3	(1) 2	1	..	96	18	160	1	111	11·9	13,758	8,224	29,409
Chemical	30	13	(1) 6	(3) 2	..	..	950	23	558	1	102	11·8	55,119	101,482	170,963
Essential oil	15	11	..	..	..	..	40	11	122	2	2	8·5	5,200	2,945	6,025
Paint, varnish, white-lead	3	2	..	(1)1	..	..	16	2	35	..	..	9·0	3,172	2,020	7,850

Class XV.—Surgical and Scientific Appliances.																
Philosophical instrument	6	..	..	5	..	..	6	4	22	..	2	11·2	1,427	962	5,659
Surgical instrument	5	..	2	3	..	..	4	2	15	..	3	10·8	1,272	520	2,492
Class XVI.—Timepieces, Jewellery, and Platedware.																
Goldsmithing, jewellery, gold-beating, electroplating	55	2	9	(1)22	1	1	96	61	552	..	38	11·8	54,171	15,972	85,070
Class XVII.—Heat, Light, and Energy.																
Electric apparatus	6	..	2	(1) 4	..	..	27	4	66	..	..	11·9	5,935	4,924	8,512
Electric light	9	9	..	(2)	..	..	9,130	..	363	..	..	12·0	38,398	491,171	144,529
Gas,§ coke	48	5	(2) 2	..	..	..	554	3	1,122	..	..	12·0	138,701	1,239,651	463,107
Match	1											9·6			
Fire kindlers	1	2	..	..	..	..	48	2	21	..	76	11·8	3,595	2,130	3,162
Ironfounders' charcoal dust	1											12·0			
Hydraulic power	2	2	..	..	..	..	800	..	16	..	..	12·0	2,140	42,522	30,589
Class XVIII.—Leatherware (except Saddlery and Harness).																
Fancy leather	11	4	(1) 2	2	..	..	89	15	171	..	79	12·0	14,731	5,115	10,386
Leather belting	5	..	2	1	..	..	18	8	40	..	5	11·9	3,846	2,890	8,360
Portmanteau, trunk	6	..	..	2	..	..	2	6	55	..	10	12·0	4,013	830	6,345
Class XIX.—Minor Wares, not elsewhere included.																
Basket, wicker	7	..	1	..	..	..	3	11	43	1	1	11·6	2,325	244	6,644
Bellows (see Class IV.).																
Brush, broom	18	..	6	5	..	..	24	24	178	1	50	11·3	15,804	4,437	18,625
Rubber goods	8	6	(3) 1	(1)	..	..	386	6	446	..	158	10·3	41,061	43,150	32,335
Total	4,360	1,255	709 (39)	439 (85)	155 (20)	118 (3)	48,765	3,834	52.396 ‡109	611	26,957 ‡1,322	..	5,468,470	6,450,355	8,062,110

NOTE.—Where the number of factories is braced the information has been combined in order to conceal the contents of individual schedules. The figures in parentheses indicate engines worked in conjunction with those of a different description.

* The figures in this column apply to purchased land only. Two hundred and eight establishments (including twelve creameries and seventy cyanide works) were carried on upon Crown lands; in these cases, no valuation of the land has been given.

† Creameries are not counted as separate establishments, but are regarded merely as branches of butter factories. The number of hands employed was 243 males. ‡ Factory workers, working at their own homes. § Including one Pintsch gas-works.

Classification according to hands employed.

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

Under 4 hands	632 factories	1,753 hands.
4 hands	501 ,,	2,004 ,,
5 to 10 hands	1,626 ,,	11,373 ,,
11 to 20 hands	776 ,,	11,353 ,,
21 to 50 hands	517 ,,	16,038 ,,
51 to 100 hands	164 ,,	11,197 ,,
101 hands and upwards ...	144 ,,	31,511 ,,
Total	4,360 ,,	85,229 ,,

Of the 4,360 establishments, 2,676 used steam or other power, and employed 66,221 hands; and 1,684 used manual labour only, and employed 19,008 hands.

Factories, metropolitan and country.

In the next return will be found particulars for the years 1905 and 1906, of the factories operating in the metropolitan and country districts. In 1906 there were 95 more factories in the metropolis than in 1905, but country factories increased by one only:—

FACTORIES AND HANDS EMPLOYED, METROPOLIS AND COUNTRY: 1905 AND 1906.

Nature of Industry.	1905.			1906.		
	No. of Manufactories.	Average Number of Persons Employed.		No. of Manufactories.	Average Number of Persons Employed.	
		Males.	Females		Males.	Females
Metropolitan Area.						
1. Treating raw material, the product of pastoral pursuits, &c.	86	1,540	4	73	1,519	3
2. Oils and fats, animal and vegetable ..	12	467	12	10	479	15
3. Processes relating to stone, clay, glass, &c.	82	2,154	7	88	2,310	8
4. Working in wood	115	2,133	5	119	2,308	9
5. Metal works, machinery, &c. ..	322	8,133	52	340	9,381	55
6. Connected with food and drink, &c. ..	163	5,514	2,315	176	5,992	2,606
7. Clothing and textile fabrics, &c. ..	869	6,361	18,817	899	6,530	19,857
8. Books, paper, printing, engraving, &c.	207	4,257	1,630	212	4,367	1,785
9. Musical instruments	2	27	..	3	32	..
10. Arms and explosives	2	46	153	2	61	200
11. Vehicles, &c., saddlery, harness, &c. ..	169	1,668	30	178	1,820	36
12. Shipbuilding, fitting, &c.	8	89	..	9	116	..
13. Furniture, bedding, &c.	158	1,719	177	168	1,856	203
14. Drugs, chemicals, and by-products ..	43	720	213	44	749	215
15. Surgical and scientific appliances ..	8	31	4	11	43	5
16. Timepieces, jewellery, and plated ware	46	552	35	49	591	38
17. Heat, light, and energy	23	1,119	102	23	1,368	76
18. Leatherware, except saddlery and harness	19	251	96	22	295	94
19. Wares not elsewhere included ..	30	731	236	33	708	211
Total	2,364	37,512	23,888	2,459	40,525	25,416

FACTORIES AND HANDS EMPLOYED—*continued.*

Nature of Industry.	1905.			1906.		
	No. of Manufactories.	Average Number of Persons Employed.		No. of Manufactories.	Average Number of Persons Employed.	
		Males.	Females		Males.	Females
Country Districts.						
1. Treating raw material, the product of pastoral pursuits, &c.	231	1,284	11	232	1,307	12
2. Oils and fats, animal and vegetable ..	12	79	..	10	77	1
3. Processes relating to stone, clay, glass, &c.	122	819	31	120	862	29
4. Working in wood	156	1,876	2	151	1,896	4
5. Metal works, machinery, &c. ..	252	3,441	12	260	3,608	14
6. Connected with food and drink, &c. ..	466	3,304	139	470	3,338	133
7. Clothing and textile fabrics, &c. ..	287	1,400	3,089	274	1,376	3,118
8. Books, paper, printing, engraving, &c.	110	1,071	89	113	1,115	104
9. Musical instruments	..	..	..	..	..	..
10. Arms and explosives	3	37	28	3	36	33
11. Vehicles, &c., saddlery, harness, &c. ..	178	1,592	12	183	1,644	19
12. Shipbuilding, fitting, &c.	2	14	..	2	18	..
13. Furniture, bedding, &c.	15	97	3	15	106	3
14. Drugs, chemicals, and by-products ..	16	153	4	17	180	4
15. Surgical and scientific appliances ..	..	..	..	..	..	..
16. Timepieces, jewellery, and plated ware	6	17	1	6	22	..
17. Heat, light, and energy	44	229	1	45	229	..
18. Leatherware, except saddlery and harness	..	..	..	..	..	..
19. Wares not elsewhere included ..	..	..	..	..	..	..
Total	1,900	15,413	3,422	1,901	15,814	3,474
State.						
1. Treating raw material, the product of pastoral pursuits, &c.	317	2,824	15	305	2,826	15
2. Oils and fats, animal and vegetable ..	24	546	12	20	556	16
3. Processes relating to stone, clay, glass, &c.	204	2,973	38	208	3,172	37
4. Working in wood	271	4,009	7	270	4,204	13
5. Metal works, machinery, &c. ..	574	11,574	64	600	12,989	69
6. Connected with food and drink, &c. ..	629	8,818	2,454	646	9,330	2,739
7. Clothing and textile fabrics, &c. ..	1,156	7,761	21,906	1,173	7,906	22,975
8. Books, paper, printing, engraving, &c.	317	5,328	1,719	325	5,482	1,889
9. Musical instruments	2	27	..	3	32	..
10. Arms and explosives	5	83	181	5	97	233
11. Vehicles, &c., saddlery, harness, &c. ..	347	3,260	42	361	3,464	55
12. Shipbuilding, fitting, &c.	10	103	..	11	134	..
13. Furniture, bedding, &c.	173	1,816	180	183	1,962	206
14. Drugs, chemicals, and by-products ..	59	873	217	61	929	219
15. Surgical and scientific appliances ..	8	31	4	11	43	5
16. Timepieces, jewellery, and plated ware	52	569	36	55	613	38
17. Heat, light, and energy	67	1,348	103	68	1,597	76
18. Leatherware, except saddlery and harness	19	251	96	22	295	94
19. Wares not elsewhere included ..	30	731	236	33	708	211
Total	4,264	52,925	27,310	4,360	56,339	28,890

In the metropolitan district the additional factories established were principally those connected with processes relating to stone, clay, &c. (6); working in wood (4); metal works, &c. (18); food and drinks, &c. (13); clothing, &c. (30); books, printing, &c. (5); vehicles, saddlery, &c. (9); furniture, &c. (10); scientific appliances (3); jewellery, (3); leatherware (3); and rubber goods (3); whilst the class of factories treating raw products such as boiling down, tanning, fellmongering, &c., and chaff-cutting was reduced by 13 during the same period. In the country the noticeable differences between the two years were increases of 8, 4, 3, and 5 respectively under the heads of metal works, &c.; food and drink, &c.; books, printing, &c.; vehicles and saddlery, &c.; and decreases of 5 and 13 respectively under the heads of working in wood; and clothing, &c. The workers in the metropolitan factories have increased by 4,541 since 1905, the industries employing most of the extra hands being metal works, &c. (1,251), clothing, &c. (1,209), and foods, drinks, &c. (769). The country factories employed 453 more hands in 1906 than in 1905, the industry most prominent in connexion with the increase being metal works, &c., with 169 extra hands.

Fac ories and works for five years.

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

FACTORIES—POWER, HANDS, &C.: 1902 TO 1906.

Year.	Number of Factories.	Power Employed.				Actual Horse-Power of Engines Used.
		Steam.	Gas.	Electric, Oil, Water, Wind, or Horse.	Manual.	
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

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

This table reveals considerable progress in the five years. The factories have increased to the extent of 357, the actual horse-power of engines by 4,944, the hands employed by 12,166, of whom 6,681 were males, and 5,485 females; the approximate value of machinery and plant by £1,368,332, and that of buildings, &c., by £78,730. A noticeable feature in connexion with the power employed is the increase in the use of electricity. In 1906 the number of engines worked by electricity was 438, an increase of 279 on the factories using this power in 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 4,994 compared with 1905, and of 8,942 compared with 1904:— Hands employed, male and female.

TOTAL HANDS EMPLOYED.

	1904.	1905.	1906.
Males	50,554	52,925	56,339
Females	25,733	27,310	28,890
Total	76,287	80,235	85,229

CLASSIFICATION OF HANDS EMPLOYED.

	1904.	1905.	1906.
Working Proprietors—			
Males	3,612	3,705	3,834
Females	576	612	611
Managers and Overseers—			
Males	2,213	2,192	2,266
Females	342	377	369
Accountants and Clerks—			
Males	2,085	2,102	2,181
Females	273	322	393
Engine-drivers—			
Males	1,470	1,473	1,493
Workers in Factories—			
Males	37,567	39,680	42,654
Females	23,553	24,834	26,130
Factory Workers working in their own homes—			
Males	79	86	109
Females	912	1,100	1,322
Carters and Messengers—			
Males	2,657	2,774	2,793
All Others—			
Males	871	913	1,009
Females	77	65	65

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 1906:—

VALUE OF WAGES, FUEL, MATERIALS, AND OUTPUT OF FACTORIES, 1906.

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.	180,559	19,379	1,548,121	1,926,353
2. Oils and fats, animal and vegetable ..	44,773	10,377	261.652	381,660
3. Processes relating to stone, clay, glass, &c	265,508	63,659	125,735	583.345
4. Working in wood	313.074	6,820	466,482	986,141
5. Metal works, machinery, &c. ..	1,129,102	76,150	1,639.777	3,469,917
6. Connected with food and drink, &c. ..	857,769	117.283	8.345,800	0,959.250
7. Clothing and textile fabrics, &c. ..	1,278,886	36,673	2,712,521	4,701,238
8. Books, paper, printing, &c.	602.147	25,935	585,225	1,775,446
9. Musical instruments				
10. Arms and explosives	15,595	1,031	55.084	99,733
11. Vehicles, &c., saddlery, harness, &c. ..	212,965	7,850	257,920	606.415
12. Shipbuilding, fitting, &c.	13,263	611	7,705	30.654
13. Furniture, bedding, &c.	150,161	2,702	258,733	488,356
14. Drugs, chemicals, and by-products ..	77,249	6,633	402,860	662.867
15. Surgical and scientific appliances ..	2,699	79	2,020	7,451
16. Timepieces, jewellery, plated ware ..	54,171	1,659	103,473	205,878
17. Heat, light, and energy	188,769	27,547	170,345	728,779
18. Leatherware (except saddlery and harness)	22,590	566	96.797	136,136
19. Wares not elsewhere included ..	59,190	5,013	247,920	352,861
Total	5,468,470	409,967	17,288,170	28,102,480

The total amount of wages paid during the year (£5,468,470) represents a payment per head on the average for all employés of £67 14s., an increase of £1 7s. on the average payment per head in 1905, although the proportion of males and females is the same for 1906 as for 1905, 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 631, which relates to adult workers only, whereas the average payment of £67 14s. 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. It would, therefore, be quite misleading to say from these figures that £67 14s. was the average *rate* of wages per head in factories.

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.

—	1905.		1906.	
	Value.	Proportion per cent.	Value.	Proportion per cent.
	£		£	
Wages	5,039,115	19·9	5,468,470	19·5
Fuel and Light ...	371,996	1·5	409,967	1·4
Materials	15,058,471	59·8	17,288,170	61·5
	20,469,582	81·2	23,166,607	82·4
Articles produced ...	25,200,648	100·0	28,102,480	100·0
Margin for profit and miscellaneous expenses	4,731,066	18·8	4,935,873	17·6

The proportion of the total of the various items of outlay to the value of articles produced and work done has increased to the extent of 1.2 per cent. since 1905—wages, fuel and light showing slight decreases, but value of materials an increase of 1.7 per cent. The proportion that the balance between outlay and output, available for miscellaneous expenses and profit, bears to the output is 1.2 per cent. less than in 1905.

In the following return will be found a statement of the rates of wages obtaining in the various industries in Melbourne during 1906, 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 272 of this work:—

WAGES IN MELBOURNE, 1906.

A.—Wages for Adult Workers in Classified Manufacturing Industries.

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class I.—Treating Raw Material the product of pastoral pursuits or vegetable products not otherwise classed.			
Order 1.—Animal products.			
Boiling down ..	Foremen	..	42s. per week
Bone mill ..	Tallowmen ..	..	40s. ,,
	Labourers ..	..	36s. ,,
	Carters	40s. to 45s. per week	..
Sausage casing	Sausage skin cleaners	..	40s. per week
Tanning, fellmongery, wool-washing, scouring	Curriers	40s. to 60s. per week	48s. ,,
	Tanners	36s. to 45s. ,,	38s. ,,
	Beamsmen	40s. to 50s. ,,	45s. ,,
	Shedsmen	36s. to 45s. ,,	38s. ,,
	Fellmongers ..	30s. to 45s. ,,	36s. ,,
	Woolscourers ..	36s. to 42s. ,,	36s. ,,
Order 2.—Vegetable products.			
Chaff-cutting	Labourers ..	36s. to 39s. per week	37s.6d. per wk

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class II.—Oils and Fats, Animal and Vegetable.			
Oil, grease, glue	Labourers ..	6s. to 7s. per day ..	6s. 6d. per day
Soap, candle	Soap and candle makers	90s. to 95s. per week	..
	Assistant soapboilers ..	..	80s. per week
	Foremen	..	50s. ,,
	In charge of milling-room	..	48s. ,,
	Stillmen ..	..	47s. 6d. ,,
	Acidifiers, glycerine distillers, pressroom gaugers	..	42s. ,,
	Candle-room gaugers ..	..	41s. ,,
	Candle moulders, labourers	..	36s. ,,
	Carters	40s. to 42s. per week	40s. ,,
Class III.—Processes relating to Stone, Clay, Glass, &c.			
Asbestos	Machinists	36s. to 42s. per week	40s. per week.
Asphalt	Asphalters and tar-pavers	7s. to 9s. per day ..	8s. per day
Brick, pottery, earthenware	Patternmakers ..	..	1s. 4½d. per hr.
	Clayhole men ..	..	10½d. ,,
	Setters—Brick ..	..	11½d. ,,
	Burners ,, ..	10½d. to 1s. per hour	..
	Drawers ,, ..	.. ..	1s. 1d. per hr.
	Pipe-burners ..	56s. 3d. to 62s. 6d. per week	..
	Pipe setters and pressers	..	45s. per week
	Tile moulders and pressers	42s. to 45s. per week	..
	Hollow-ware pressers	45s. to 50s. ,,	..
	Stone-ware throwers	..	50s. per week
	Mould makers ..	45s. to 50s. ,,	..
	Placers and others ..	40s. to 45s. ,,	..
Glass (including bottles) ..	Bottlemakers ..	50s. to 80s. ,,	72s. 6d. pr wk.
	Lampware blowers ..	50s. to 55s. ,,	52s. ,,
	,, finishers ..	50s. to 60s. ,,	55s. ,,
Glass bevelling, &c. ..	Bevellers	..	42s. ,,
	Silverers	..	42s. ,,
	Cutters	48s. to 54s. ,,	..
Lime, cement, cement pipes	Labourers	6s. 8d. to 7s. 6d. per day	..
Marble, stone-dressing ..	Building carvers ..	..	1s. 10½d. per hr.
	Carvers and letter cutters	..	1s. 4½d. ,,
	Granite cutters ..	..	1s. 3d. ,,
	Bluestone, marble cutters	..	1s. 2d. ,,
	Polishers	..	10½d., 11d. ,,
	Labourers	..	10d. ,,
Modelling	Modellers	12s. to 14s. per day	..
	Shophands	10s. to 11s. ,,	..
	Pressers	..	42s. per week
Stonefilter	Filtermakers ..	..	35s. ,,
Class IV.—Working in Wood.			
Bellows	Bellows-makers ..	32s. 6d. to 45s. per week	40s. per week
Cooperage	Coopers	56s. to 62s. ,,	56s. ,,
Corkcutting	Corkcutters	30s. to 45s. ,,	37s. 6d. ,,
Dairy implement (churn, &c.)	Box and case makers	..	48s. ,,
	Carpenters ..	..	54s. ,,
Mantelpiece	Mantelpiece makers ..	..	52s. ,,
	Polishers, enamellers	..	50s. ,,
Saw-milling, moulding, joinery, sash, door, box, &c.	Sawyers	45s. to 63s. per week	..
	Pullers-out ..	36s. to 45s. ,,	..
	Carpenters and joiners	54s. to 60s. ,,	..
	Machinists	45s. to 64s. ,,	..
	Woodturners ..	..	54s. per week
	Boxmakers ..	..	48s. ,,

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class IV—continued.			
Saw-milling, moulding, joinery, sash, door, box, &c.	Painters and glaziers	..	51s. per week
	Polishers	..	50s. ,,
	Engine-drivers ..	45s. to 60s. per week	..
	Salesmen, tallymen, ordermen	..	48s. per week
	Draymen and labourers	36s. to 45s. per week	42s. ,,
Wood-carving, turning ..	Carvers	48s. to 54s. ,,	50s. ,,
	Turners	..	54s. ,,
Class V.—Metal Works, Machinery, &c.			
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. ,,
Brass, copper, smithing ..	Brass moulders, finishers	..	48s. ,,
	Brasspolishers ..	..	42s. ,,
	Coppersmiths ..	45s. to 54s. per week	..
Cutlery	Cutlers	60s. to 70s. ,,	60s. per week
	Knifesmiths ..	50s. to 55s. ,,	50s. ,,
	Sawmakers ..	40s. to 60s. ,,	50s. ,,
	Saw and tool grinders	30s. to 55s. ,,	45s. ,,
Engineering, boilermaking, iron foundry	Blacksmiths ..	54s. to 72s. ,,	60s. ,,
	Strikers	39s. to 45s. ,,	42s. ,,
	Fitters and turners ..	54s. 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 ..	45s. to 57s. ,,	..
	Planers and slotters ..	45s. to 63s. ,,	54s. per week
	Drillers	38s. to 45s. ,,	42s. ,,
	Coremakers ..	48s. to 66s. ,,	60s. ,,
	Patternmakers ..	66s. to 75s. ,,	66s. ,,
	Iron dressers ..	40s. to 42s. ,,	40s. ,,
	Carpenters ..	..	60s. ,,
	Labourers	38s. to 44s. per week	42s. ,,
	Furnacemen, engine-drivers	45s. to 60s. ,,	45s. ,,
Bedstead, fender	Blacksmiths ..	42s. to 54s. ,,	42s. ,,
	Fitters	45s. to 54s. ,,	45s. ,,
	Chill fitters ..	48s. to 60s. ,,	54s. ,,
	Chippers	36s. to 42s. ,,	36s. ,,
	Modellers	56s. to 70s. ,,	60s. ,,
	Moulders	42s. to 60s. ,,	48s. ,,
	Grinders and polishers	42s. to 56s. ,,	50s. ,,
	Japanners	36s. to 50s. ,,	36s. ,,
	Electroplaters ..	56s. to 70s. ,,	56s. ,,
Iron safe, door	Fireproof safe, &c., makers	35s. to 80s. ,,	60s. ,,
Lead, shot, pewter, zinc ..	Labourers in lead and shot factories ..	36s. to 45s. ,,	40s. ,,
	Zincworkers ..	48s. to 72s. ,,	60s. ,,
Meter	Instrument fitters ..	48s. to 60s. ,,	54s. ,,
Nail, barbed wire	Nail makers ..	40s. to 70s. ,,	60s. ,,
	Machine feeders (under 21)	20s. to 30s. ,,	25s. ,,
	Labourers	30s. to 35s. ,,	30s. ,,
	Barbed wire workers	32s. 6d. to 48s. ,,	35s. ,,
Pattern making	Pattern makers ..	..	66s. ,,
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. ,,	..

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages. Range.	Wages. General Rate.
Class V.—continued.			
Spring	Spring fitters ..	45s. to 60s. per week	54s. per week
	Springsmiths ..	..	50s. ,,
Stove, range, oven	Stove fitters ..	42s. to 48s. ,,	..
	Oven fitters ..	42s. to 48s. ,,	..
Tinsmithing, galvanized iron, sheet iron, japanning	Tinsmiths	40s. to 44s. ,,	..
	Sheet iron workers ..	..	44s. per week
	Galvanizers ..	42s. to 70s. ,,	42s. ,,
	Canister makers .	38s. to 42s. ,,	..
	Japanners	35s. to 45s. ,,	..
Wire working	Wire workers ..	35s. to 48s. ,,	35s. per week
Wire mattress	Weavers, framemakers	..	48s. ,,
	Weavers (female) ..	..	32s. ,,
	Varnishers	..	45s. ,,
Class VI.—Connected with Food and Drink, or the preparation thereof.			
Order 1.—Animal Food.			
Bacon-curing	Slaughtermen, cutters-up, &c.	40s. to 55s. 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. ,,
Butterine, margarine ..	Labourers ..	30s. to 42s. ,,	36s. ,,
Condensed milk	Condensers ..	50s. to 80s. ,,	60s. ,,
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	45s. to 60s. ,,	50s. per week
	Tinsmiths	50s. to 70s. ,, (piece-work)	..
	Labourers, packers ..	36s. to 48s. ,,	40s. per week
	Chambermen, &c. ..	..	42s. ,,
Order 2.—Vegetable Food, including products not foods but usually associated with the manufacture of foods.			
Biscuits	Factory foremen ..	38s. to 80s. per week	50s. per week
	Forewomen ..	20s. to 32s. 6d. ,,	20s. ,,
	Biscuit makers ..	35s. to 37s. 6d. ,,	35s. ,,
	Cake makers ..	40s. to 54s. ,,	40s. ,,
	Machine hands ..	30s. to 40s. ,,	35s. ,,
	Packers—male ..	32s. to 37s. 6d. ,,	32s. ,,
	,, female ..	..	14s. ,,
Confectionery	Confectioners ..	..	50s. ,,
	Storemen	45s. to 60s. per week	45s. ,,
	,, Assistants ..	..	36s. ,,
	Labourers ..	..	30s. ,,
	Chocolate dippers—Male	..	30s. ,,
	Female	17s. to 20s. per week	17s. ,,
Flour mill	Foremen	..	60s. ,,
	Smuttermen ..	40s. to 44s. per week	40s. ,,
	Wheat shooters ..	..	40s. ,,
	Flour and bran packers	30s. to 38s. per week	36s. ,,
	Engine-drivers, firemen	50s. to 70s. ,,	60s. ,,
Jam, fruit-preserving, pickle, sauce, vinegar	Foremen	55s. to 85s. ,,	60s. ,,
	Tinsmiths	42s. to 45s. ,,	42s. ,,
	Coopers	56s. to 60s. ,,	56s. ,,
	Engine-drivers ..	48s. to 54s. ,,	50s. ,,
	General hands—male	30s. to 35s. ,,	30s. ,,
	,, ,, female	14s. to 21s. ,,	14s. ,,
Oatmeal, cornflour, starch, arrowroot, macaroni	,, ,, male	30s. to 60s. ,,	..
Sugar, treacle refining ..	,, ,, female	12s. to 30s. ,,	..
	Vacuum hands and others	42s. to 115s. ,,	..

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate
Class VI.—continued. *Order 3.—Drinks and Stimulants.*			
Aerated waters, cordials ..	Cordial makers ..	..	60s. per week
	Engine-drivers ..	..	40s. ,,
	Bottlers ..	35s. to 40s. per week	..
	Wirers	..	32s. 6d. per week
	Washers	..	32s.6d. ,,
Brewing	Topmen	44s. to 50s. per week	44s. ,,
	Cellarmen	44s. to 60s. ,,	44s. ,,
	Cask washers ..	44s. to 48s. ,,	44s. ,,
	Storemen	44s. to 50s. ,,	44s. ,,
	Coopers	56s. to 62s. ,,	56s. ,,
	Farriers	44s. to 72s. ,,	44s. ,,
	Carters, stablemen ..	44s. to 47s. 6d. ,,	47s. 6d. ,,
	Rackers, corkers. &c.	..	35s. ,,
	Packers	..	32s. 6d. ,,
	Headers-up	..	30s. ,,
Distilling	Brewers	..	50s. ,,
	,, assistants ..	..	40s. ,,
	Coopers	56s. to 60s. per week	56s. ,,
Condiments, coffee, chicory, cocoa, chocolate, spice, &c.	Store and bottling hands	36s. to 42s. ,,	36s. ,,
	General hands—male	30s. to 60s. ,,	..
	,, ,, female	12s. to 30s. ,,	..
Ice, refrigerating	Storemen	40s. to 60s. ,,	40s. per week
	Chambermen ..	40s. to 45s. ,,	40s. ,,
	Ice pullers	36s. to 42s. ,,	39s. ,,
	Engine-drivers, firemen	42s. to 60s. ,,	48s. ,,
	Carters	42s. to 52s. ,,	45s. ,,
Malt	Maltsters	40s. to 70s. ,,	..
Order 4.—Narcotics.			
Tobacco, cigar, cigarette ..	Tobacco (plug) makers	45s. to 80s. per week	62s. per week
	,, ,, wrappers —female	25s. to 34s. ,,	30s. ,,
	Cigar makers ..	35s. to 65s. ,,	48s. ,,
	Cigarette makers (hand)—female ..	20s. to 30s. ,,	25s. ,,
Class VII.—*Clothing and Textile Fabrics and Fibrous Materials.*			
Order 1.—Textile.			
Woollen cloth, blanket, rug ..	Foremen	40s. to 60s. per week	..
	Pattern weavers, tuners	..	40s. per week
	Power-loom weavers ..	..	22s. 6d. ,,
	Fettlers, yarnmen, spinners	..	36s. ,,
	Wool scourers ..	30s. to 40s. per week	30s. ,,
	Dye house labourers ..	30s. to 40s. ,,	30s. ,,
	Wool dryers, warpers	..	30s. ,,
	Willey house labourers	..	36s. ,,
	Warpers—female ..	..	25s. ,,
	Mule minders ..	20s. to 30s. per week	30s. ,,
Order 2.—Dress.			
Boot, shoe	Makers, finishers, clickers, stuff-cutters, &c.	45s. to 65s. per week	45s. per week
	Machine operators ..	45s. to 70s. ,,	50s. ,,
	Assistant stuff-cutters, lining cutters, and all others	40s. to 50s. ,,	40s. ,,
	Machinists—female ..	20s. to 30s. ,,	20s. ..

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages. Range.	Wages. General Rate.
Class VII.—Order 2—continued.			
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 ..	..	30s. ,,
	Machinists—female ..	20s. to 30s. per week	20s. ,,
	Buttonholers, folders, and brushers	20s. to 25s. ,,	20s. ,,
Corset	Corset makers—female	17s. 6d. to 25s. ,,	22s. 6d. ,,
Dressmaking, millinery ..	Dressmakers in charge	40s. to 160s. ,,	60s. ,,
	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. ,,
Dye works	Dyers	50s. to 100s. ,,	50s. ,,
	Pressers	45s. to 50s. ,,	45s. ,,
	Pressers—female ..	16s. to 30s. ,,	20s. ,,
	Cleaners	40s. to 50s. ,,	40s. ,,
Furrier	Cutters	50s. to 80s. ,,	60s. ,,
	Machinists, &c.—female	16s. to 25s. ,,	18s. ,,
Hat, cap	Body makers, silk hats	50s. to 60s. ,,	55s.
	Finishers ,,	55s. to 70s. ,,	..
	Shapers ,,	55s. to 65s. ,,	60s. per week at piece-work rates
	Crown sewers, silk hats—female	20s. to 30s. ,,	25s.
	Trimmers, silk hats—female	22s. 6d. to 26s. ,,	25s.
	Blockers, felt hats	60s. to 65s. ,,	65s. per week
	Bodymakers ,,	70s. to 90s. ,,	67s. 6d. ,,
	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 ..	50s. to 60s. ,,	50s. ,,
	Machinists, &c.—female	20s. to 30s. ,,	25s. ,,
Ostrich feather	Feather dyers ..	50s. to 63s. ,,	50s. ,,
	,, ,, female	..	35s. ,,
	,, curlers ,, ..	15s. to 35s. per week	25s. ,,

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class VII.—Order 2—continued.			
Shirtmaking, underclothing ..	Shirt makers—female	16s. to 25s. per week	18s. per week
	Underclothing makers—female	16s. to 25s. „	18s. „
	Laundry ironers, &c.—female	16s. to 25s. „	20s. „
Umbrella, parasol	Frame makers ..	40s. to 50s. „	40s. „
	Cutters	40s. to 55s. „	40s. „
	Finishers	25s. to 50s. „	37s. 6d. „
	Machinists—female ..	15s. to 25s. „	20s. „
	Tippers „ ..	15s. to 20s. „	16s. „
Order 3.—Fibrous Materials and Textiles not elsewhere included.			
Bag, sack (including calico bag)	Bagmender	20s. to 45s. per week	32s. per week
Rope, twine	Undefined—males ..	36s. to 70s. „	40s. „
	„ females ..	15s. to 25s. „	18s. „
Tarpaulin, tent, sail ..	Tarpaulin, tent, sail makers	40s. to 60s. „	48s. „
Class VIII.—Books, Paper, Printing, Engraving.			
Die sinking, engraving ..	Die sinkers ..	52s. 6d. to 80s. per week	60s. per week
	Engravers, general ..	52s. 6d. to 80s. „	55s. „
	Process engravers ..	50s. to 90s. „	55s. „
Ink, printing ink	Ink makers ..	45s. to 70s. „	50s. „
Paper bag, box, cartoon, &c.	Box cutters ..	35s. to 52s. „	40s. „
	Makers-up—female	15s. to 23s. „	18s. „
Paper, millboard, strawboard	Paper, &c., makers ..	..	50s. „
	Beatermen	..	42s. „
	Breakermen ..	..	42s. „
	General hands ..	..	36s. „
	Engine drivers ..	..	54s. „
Printing (including lithographic printing, electrotyping, stereotyping)	Printers—Compositors	52s. to 80s. per week	52s. „
	„ machinists	52s. to 60s. „	52s. „
	„ linotype-operators	70s. to 84s. „	..
	Lithographers ..	52s. to 65s. „	52s. per week
	Stereotypers—casters	..	40s. „
	„ moulders	..	60s. „
	„ finishers	..	55s. „
Bookbinding, account book making, stationery, &c.	Bookbinders ..	52s. to 80s. per week	52s. „
	Pagers—female ..	16s. to 17s. 6d. „	16s. „
	Sewers and folders—female	20s. to 30s. „	20s. „
	Paper rulers ..	52s. to 75s. „	52s. „
Class IX.— Musical Instruments.			
Organ, pianoforte	Organ builders, expert	..	84s. per week
	„ „ ordinary	60s. to 72s. per week	60s. „
	Tuners and voicers ..	..	72s. „
	Case makers ..	..	60s. „
	Nickel pipe makers ..	..	60s. „
Class X.—Arms and Explosives.			
Ammunition	Cartridge operators—female	15s. to 25s. per week	18s. 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 ..	33s. to 45s. „	..

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class XI.—Vehicles, Fittings, Saddlery, Harness, &c.			
Carriage lamp	Lamp makers ..	44s. to 60s. per week	44s. per week
Coach, waggon, tramcar, spoke and felloe, wheelwright	Body makers ..	40s. to 60s. ,,	45s. ,,
	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. ,,
Cycle	Cycle builders ..	35s. to 48s. ,,	40s. ,,
	Motor builders ..	50s. to 70s. ,,	60s. ,,
	Turners	50s. to 60s. ,,	60s. ,,
	Filers	30s. to 40s. ,,	35s. ,,
	Platers	45s. to 60s. ,,	45s. ,,
	Polishers	..	42s. ,,
	Smiths	..	48s. ,,
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. ,,
Saddle-tree, saddlers' ironmongery, &c.	Saddle-tree makers ..	37s. 6d. to 60s. ,,	48s. ,,
Whip	Thong makers—males	..	44s. ,,
	,, ,, females	..	30s. ,,
Horse shoeing, &c	Farriers	35s. to 45s. per week	40s. ,,
Class XII.—Ship Building, Fittings, &c.			
Dock, slip	Shipwrights ..	..	12s. per day
	Foundry and shipsmiths	..	11s. ,,
	Labourers and painters	..	8s. ,,
	Stevedore-men and lumpers	..	1s. 3d. per hr.
	Wharf labourers ..	..	1s. ,,
Boat building	Boat builders ..	48s. to 60s. per week	48s. per week
Class XIII.—Furniture, Bedding, &c.			
Bedding, flock, upholstery ..	Bedding and mattress makers	46s. to 50s. per week	46s. per week
	Machinists—female ..	20s. to 22s. 6d. ,,	20s. ,,
	Machine feeders ..	..	25s. ,,
	Sorters, &c.—female ..	..	15s. ,,
	Upholsterers ..	48s. to 70s. per week	48s. ,,
Curled hair	Curled hair, horsehair workers	36s. to 70s. ,,	45s. ,,
Furniture, cabinet making, chair, billiard table	Cabinet makers ..	48s. to 60s. ,,	48s. ,,
	Carvers	48s. to 54s. ,,	48s. ,,
	Turners	48s. to 54s. ,,	48s. ,,
	Polishers	48s. to 54s. ,,	48s. ,,
	Billiard table makers	54s. to 60s. ,,	54s. ,,
	Cushion makers, machinists	..	60s. ,,
	Slate rubbers ..	..	42s. ,,
Picture frame	Frame makers ..	40s. to 60s. per week	42s. ,,
	Mount cutters ..	35s. to 55s. ,,	40s. ,,
	Compo workers ..	35s. to 50s. ,,	40s. ,,
	Fitters-up—female ..	12s. 6d. to 25s. ,,	15s. ,,
Venetian blind, window blind	Venetian blind makers	36s. to 48s. ,,	36s. ,,

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class XIV.—Drugs, Chemicals, By-products.			
Blacking, blue, washing powder, soda	Skilled, undefined ..	40s. to 100s. per week	..
	Unskilled „ ..	25s. to 37s. 6d. „	..
	Wrappers—female ..	12s. 6d. to 20s. „	..
Chemical, drug, horse and cattle medicine	Makers of pharmaceutical preparations	40s. to 75s. per week	50s. per week
	Others working in drugs, &c.	35s. to 45s. „	40s. „
	Disinfectant makers	35s. to 45s. „	40s. „
Essential oil	Essence blending ..	35s. to 55s. „	40s. „
Fertilizer	Chemical manure workers	36s. to 40s. „	36s. „
Paint, varnish, white-lead ..	Paint and varnish makers	40s. to 80s. „	55s. „
Class XV.—Surgical and Scientific Appliances.			
Optical, philosophical instrument, &c.	Opticians, &c. ..	35s. to 60s. per week	45s. per week
Surgical appliance, instrument	Surgical instrument makers	40s. to 80s. „	50s. „
Class XVI.—Timepiece, Jewellery, Platedware.			
Electroplating	Electroplaters and silversmiths	50s. to 70s. per week	55s. per week
	Metal polishers ..	35s. to 48s. „	35s. „
	Lacquerers—female ..	15s. to 30s. „	20s. „
Goldsmithing, jewellery, gold-beating	Goldsmiths, jewellers	50s. to 90s. „	55s. „
	Setters	50s. to 100s. „	80s. „
Watchmaking, &c.	Watchmakers	45s. to 90s. „	55s. „
Class XVII.—Heat, Light, and Energy.			
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. per day	9s. per day
	Dynamo attendants	..	54s. per week
	Electrical fitters ..	9s. to 11s. per day	9s. per day
	Switchboard attendants	..	9s. „
	Linemen	7s. to 8s. per day	7s. „
	Carboners	..	7s. 6d. „
	Patrolmen	..	8s. „
	Wirers	8s. to 9s. per day	8s. „
	Greasers	..	7s. „
Gas and coke	Stokers	8s. to 9s. per day ..	8s. „
	Enginemen ..	8s. to 9s. „ ..	8s. „
	Purifiers	6s. 4d. to 6s. 9d. „ ..	..
	Sulphate workers ..	..	8s. per day
	Stove repairers and fitters	8s. to 11s. 6d. per day	..
	Service layers ..	7s. 10d. to 8s. 2d. „	..
	Main layers ..	7s. to 9s. 6d. „	..
	Inspectors	8s. 9d. to 11s. 6d. „	..
	Labourers	6s. 6d. to 6s. 10d. „	..
Hydraulic power	Enginemen ..	..	8s. per day
	Firemen	..	7s. 6d. „
	Fitters	..	9s. „
	Main layers ..	..	9s. „
	Special labourers ..	..	8s. „
	Ordinary labourers ..	..	7s. „

WAGES IN MELBOURNE, 1906—*continued.*

Industries.	Occupations.	Wages.	
		Range.	General Rate.
Class XVII.—continued.			
Ironfounders' dust, charcoal dust	Labourers ..	42s. to 50s. per week	45 . per week
Match	Vesta makers—female	12s. 6d. to 24s. ,,	16s. ,,
	Box makers—female	12s. to 21s. ,,	14s. ,,
Class XVIII. — Leatherware (excluding Saddlery and Harness.)			
Leather Belting	Belt makers ..	48s. to 60s. per week	48s. per week
	Machinists, putters-up, ..	..	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. ,,
Class XIX.—Wares not elsewhere included.			
Basket, wickerware ..	Wicker workers (piece work)	30s. to 50s. per week	48s. per week
	Pith cane, bamboo workers	48s. to 50s. ,,	48s. ,,
Bellows	Bellows makers ..	32s. 6d. to 45s. ,,	40s. ,,
Broom, brushware	Millet broom makers	35s. to 45s. ,,	40s. ,,
	Hair broom, brush makers	45s. to 60s. ,,	45s. ,,
Rubber goods (including cycle tires)	Rubber workers, expert	60s. to 90s. ,,	60s. ,,
	,, ordinary	35s. to 50s. ,,	37s. 6d. ,,
	Trimmers, finishers, and small rubber goods makers—female	15s. to 25s. ,,	20s. ,,
Quarry	Quarrymen ..	48s. to 54s. ,,	48s. ,,
	Stonebreakers ..	2s. to 2s. 6d. per c. yd. ($2\frac{1}{2}$ in.)	..
	Labourers	..	42s. per week

WAGES IN MELBOURNE, 1906—*continued.*

B.—WAGES FOR SERVANTS AND ADULT WORKERS IN UNCLASSIFIED 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 ,,	..
	Females (elementary)	£20 to £40 ,,	..
	,, (advanced)	£50 to £150 ,,	..
Clerical	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. ,,
,, ,, females	Cooks	15s. to 30s. ,,	20s. ,,
	Laundresses ..	15s. to 20s. ,,	15s. ,,
	Housemaids ..	10s. to 15s. ,,	12s. ,,
	Nursemaids ..	8s. to 15s. ,,	10s. ,,
	General servants ..	10s. to 17s. ,,	14s. ,,
	Girls	5s. to 8s. ,,	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. ,,
,, ,, females ..	Barmaids	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	11s. per day
	Hod-carriers ..	8s. to 9s. ,,	8s. ,,
	Carpenters and joiners	9s. to 10s. ,,	10s. ,,
	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. ,,
Bakehouse	Bakers, bread ..	..	50s. per week
	,, ,, (foremen)	54s. to 80s. per week	..
Butchering	Slaughtermen ..	50s. to 60s. ,,	..
	Shopmen	55s. to 80s. ,,	55s. per week
	General butchers ..	..	45s. ,,
	Small goods men ..	55s. to 80s. per week	55s. ,,
	Drivers	35s. to 45s. ,,	..
Laundry	Laundresses—female	20s. to 24s. ,,	20s. per week
Photography	Operators	50s. to 120s. ,,	..
	Printers	30s. to 60s. ,,	50s. per week
	Retouchers—female ..	20s. to 35s. ,,	20s. ,,
	Finishers	15s. to 30s. ,,	20s. ,,
	Makers of photographic materials	36s. to 80s. ,,	45s. ,,
	Finishers, packers — female	17s. 6d to 25s. ,,	17s 6d. ,,

* With board and lodging.

Tanneries, &c.

The number of tanneries, fellmongery and wool washing establishments was reduced by four during 1906, leaving 84 in operation. The hands employed increased from 1,614 to 1,657. The wages paid last year to the hands (excluding working proprietors) amounted to £123,677. The following table shows the approximate value of the machinery, plant, land, buildings, and improvements during each of the last seven years:—

VALUE OF TANNERIES: 1900 TO 1906.

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

Tanning operations during the past year were carried on in 2,672 pits where 9,520 tons of bark were used. The output for the last seven years was:—

OUTPUT OF TANNERIES, &C.: 1900 TO 1906.

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 ...	496,260	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

The columns under "Hides" and "Skins" include the number of skins dealt with in small tanneries. The work done in these small tanneries in 1906 was the tanning of 2,601 hides, 2,968 calf skins, and 12,134 sheep and other skins. The value of the leather imported into Victoria in 1906 was £282,197; of that exported, £363,712. The export of Victorian leather was valued at £300,106.

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,

84 tanneries, employing 1,657 hands, being in actual existence. In 1906, there were tanned 485,620 cattle hides, 132,210 calf skins, and 518,139 sheep and other skins. Including fellmongery and wool washing, the added value to material operated on during the year was nearly 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 £147,053 in 1906, as against £91,123 in 1905.

The State, recognising that the processes associated with the industry are worthy of investigation, has actively taken up the question, and the Department of Agriculture is conducting researches that will no doubt lead to further improvement in the character of the leathers tanned under its jurisdiction.

Soap and candle works.

There were 15 soap and candle works in operation in 1906—five less than in the previous year. These factories employed 514 hands and 9 working proprietors. The amount of wages paid to the hands in 1906 was £41,635. The value of the machinery, plant, land, buildings and improvements, and the quantity of soap and candles produced in the last seven years were as follow:—

SOAP AND CANDLE WORKS—VALUE AND PRODUCTS: 1900 TO 1906.

Year.	Approximate Value of—			Products Made.	
	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

* 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, 13,369 cwt. in 1903, 7,902 in 1904, 7,185 cwt. in 1905, and 11,706 in 1906.

The quantity of tallow used in the manufacture of soap and candles in factories was 136,733 cwt., and in minor works 4,706 cwt. in 1906.

The quantity of soap, perfumed and other, imported during 1906 was 2,598,417 lbs., valued at £55,631; the quantity exported was 5,398,617 lbs., of which 4,610,268 lbs. were Victorian made. The former was valued at £60,512; and the latter at £43,503. The quantity of candles imported was 1,119,859 lbs., valued at £22,108;

and the exports 1,354,034 lbs., valued at £26,624, including 878,950 lbs. of Victorian-made candles, valued at £17,877.

Brickyards, potteries, earthenware, &c.

The brickyards and potteries at work during the year numbered 123. The hands employed numbered 1,568, and the working proprietors 135. The sum of £145,725 was paid to the employés in wages; and the value of land, plant, buildings, &c., was £278,520. The estimated value of the bricks made in these brickyards in 1906 was £182,620.

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

POTTERY, PIPES AND TILES: 1900 TO 1906.

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

* 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, and 530,500 in 1906.

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

Forest saw-mills, &c.

The number of Forest saw-mills working in 1906 was 112, being 12 less than in 1905. The hands employed in 1906 numbered 1,488, the working proprietors 129, and wages paid amounted to £105,017. The approximate value of machinery, plant, land, buildings, improvements, together with the quantity and value of timber sawn during the last seven years appear in the following statement:—

FOREST SAW-MILLS: 1900 TO 1906.

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

* Value of land occupied by saw-mills only

The other factories working in wood number 158, comprising—cooperage and cork-cutting works (12), employing 82 persons, and paying £6,293 in wages; dairy and domestic implements and bellows (6), employing 110 persons, and paying £8,840 in wages; saw-milling, moulding and joinery works (101), employing 2,011 persons (of whom 112 were working proprietors), and paying £169,005 in wages; mantelpiece (6), employing 178 persons, and paying £12,222 in wages; and wood carving and turnery (33), employing 219 persons, and paying £11,697 in wages. The total amount paid in wages to workers in wood, other than those employed in forest saw-mills, was £208,057; and the approximate value of land, buildings, machinery, &c., in use in the works £334,024.

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 28 establishments connected with this industry in 1906. The hands employed numbered 338, of whom 32 were working proprietors; and the wages paid to employés amounted to £25,606. Further details of the industry for the last seven years are as follow:—

BACON CURING: 1900 TO 1906.

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

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, and 2,680 in 1906; the 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, and 252,348 in 1906.

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, and 4,888,243 lbs. in 1906. The total for the State in 1906 was thus 18,051,166 lbs.

Imports and exports of bacon and hams.

The imports of bacon and hams in 1906 were 223,089 lbs., valued at £6,250; and the exports were 4,368,952 lbs., valued at £139,368, including 3,930,177 lbs., valued at £125,338, cured in Victoria.

Butter and cheese factories.

The number of butter and cheese factories (including 1 butterine factory) exclusive of creameries, was 222 in 1906. Of these factories, 175 made butter, 7 made butter and cheese, 6 made butter and concentrated milk, 33 made cheese only, and 1 made butterine. There were 202 creameries attached to these factories. The number of hands employed was 1,424, and of working proprietors 66, a combined increase of 109 on the previous year. The approximate value of machinery, plant, land, buildings, and improvements was £550,402. 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, an increase of over 24,000,000 gallons on the figures for 1905. The output from butter and cheese factories during the last seven years was:—

BUTTER AND CHEESE FACTORIES: 1900 TO 1906.

Year.	Butter.	Cream Sold.	Cheese.	Concentrated Milk Made.
	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

Butter and cheese made on farms.

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, and 4,856,946 lbs. in 1906; 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, and 2,024,906 lbs. in 1906.

Total butter and cheese made.

Taking the returns of butter from all sources, the largest quantity, 68,088,168 lbs., was made in 1906. The largest quantity of cheese returned was 5,681,515 lbs. in 1903. The total quantity of cheese made in factories and on farms in 1906 was 4,877,593 lbs.

Imports and exports of butter and cheese.

In 1906, butter imported amounted to 1,114,443 lbs., valued at £46,116; the exports in the same year amounted to 46,899,872 lbs., valued at £2,069,596, of which 45,620,166 lbs. were Victorian produce, valued at £2,011,047. The imports of cheese in 1906 amounted to 399,886 lbs. in weight and £10,862 in value; the exports being 1,249,772 lbs. valued at £30,900—1,130,829 lbs., valued at £27,853, being Victorian cheese.

Meat freezing and preserving works.

The works for freezing and preserving meat numbered 14 in 1906, and employed 509 hands and 13 working proprietors, the wages of

the employés amounting to £36,818. The approximate value of machinery, plant, land, buildings, and improvements in 1906 was £292,524. The output of the last seven years was as follows:—

MEAT FREEZING AND PRESERVING: 1900 TO 1906.

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

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	...

NOTE.—As well as the above, 15,249 calves, 1,959 pigs, and 25,952 hares were treated at freezing works in 1905, and 6,247 calves, 2,580 pigs, and 38,397 hares in 1906.

The following statement shows the imports and exports of frozen and preserved meats, exclusive of bacon and ham, during 1906:— Imports and exports of frozen and preserved meats.

—	Imports (including transfers from other States).		Exports.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Frozen—				
Mutton	3,643,792 lbs.	45,576	28,697,517 lbs.	398,421
Beef	39,324 "	501	1,414,467 "	17,096
Pork	83,884 "	2,591	414,650 "	6,993
Rabbits and Hares	6,102 "	33	...	221,566
Poultry	10,784 "	369	...	9,611
Game	3,492 "	348	33,153 "	1,137
Other meats	155,450 "	1,951	217,602 "	3,953
Meats—Fresh and smoked ...	587,660 "	4,501	2,291,004 "	27,429
" Potted and concentrated	...	7,041	...	1,387
" Preserved in tins ...	595,828 "	19,797	1,254,490 "	29,673
" Not elsewhere included	1,208 cwt.	1,783	1,084 cwt.	1,554
Total value ...	...	84,491	...	718,820

Flour mills.

The number of flour mills in 1906 was 64, employing 788 persons, of whom 44 were working proprietors. The wages paid to employés amounted to £80,261. Further particulars for seven years are given in the following table:—

FLOUR MILLS: 1900 TO 1906.

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

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, and 111,719 bushels in 1906.

Import and export of bread-stuffs.

During the year 1906, 2,052,548 lbs. of Victorian biscuits, valued at £39,491, and 79,699 tons of Victorian flour, valued at £582,494, were exported; as well as 171,095 lbs. of biscuits, valued at £3,768, and 1,658 tons of flour, valued at £12,509, received from outside the State. The imports were 324,665 lbs. of biscuits, valued at £8,094, and 1,991 tons of flour, valued at £14,411.

Jam, pickle, and sauce works.

There were 26 manufactories engaged in making jams, pickles, and sauces in 1906, and employing 1,288 persons, of whom 18 were working proprietors. The wages paid to the employés amounted to £63,702, and the value of machinery, plant, land, and buildings was £128,423. The materials used and the output for the last three years were as follow:—

JAM, PICKLE, AND SAUCE WORKS: 1904 TO 1906.

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	444,963
1905 ...	175,119	107,382	192,579	35,395	44,450	2,029,644	312,680
1906 ...	195,902	107,194	203,038	43,138	56,619	2,943,380	288,810

Imports and exports, jams, sauces, &c.

In 1906 2,457,493 lbs. of jams and jellies, valued at £34,832 were imported, as well as preserved fruit valued at £26,869, and pickles valued at £15,732. In the same year the total exports of jams and jellies amounted to 6,568,256 lbs., and of fruit pulped to

267,954 lbs., the value of preserved fruits being £47,597, and of pickles and sauces £20,684. The Victorian produce represented in these exports was 5,617,600 lbs. of jams and jellies, and 212,100 lbs. of fruit pulped, preserved fruit valued at £39,800, and pickles and sauces valued at £16,100.

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

SUGAR REFINERIES: 1900 TO 1906.

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

The raw sugar treated is imported, and during 1906 the imports of cane sugar into Victoria amounted to 1,433,491 cwt., of which 960,671 cwt. was from Queensland, and 410,861 cwt. from Java. During the same year 146,648 cwt. of sugar and molasses was exported, of which 123,109 cwt. was to other States of Australia.

There were 39 breweries in 1906, or five less than in the previous year, but the hands employed, 1,030, were one more than in 1905. The approximate value of the machinery, plant, land, buildings, and improvements, the quantities of materials used, and the beer made during the last seven years were as follow :— Breweries.

BREWERIES: 1900 TO 1906.

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

Distilleries.

The number of distilleries increased from 7 in 1905 to 9 in 1906, the hands employed from 38 to 81, and the estimated value of the machinery, plant, land, buildings, and improvements from £32,782 to £144,799. The increases are due principally to one large distillery having commenced work after being closed down for three years. Although there has been some improvement in the last three 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 seven years were as follow:—

DISTILLERIES: 1900 TO 1906.

Year.	Materials Used.							Spirits Distilled.
	Wine.	Malt.	Wheat.	Maize.	Other Grain.	Sugar and Molasses.	Beer.	
	Gal.	Bush.	Bush.	Bush.	Bush.	lbs.	Gal.	Proo 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	2464	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

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 seven 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, and 60,521 gallons in 1906.

Salt works.

The following table contains particulars relating to salt works for the past seven years:—

SALT WORKS: 1900 TO 1906.

Year.	Number of Manufactories.	Number using Machinery.	Hands Employed.	Approximate Value of—			Crude Salt Raised.	
				Machinery and Plant in use	Land.	Buildings and Improvements.	Quantity.	Value.
				£	£	£	Tons.	£
1900	5	2	76	2,650	700	20,950	5,326	3,995
1901	5	2	72	4,550	700	24,080	7,118	5,339
1902	4	1	59	4,150	410	24,660	7,147	5.360
1903	3	1	63	4,300	400	26,025	9,374	7,030
1904	4	2	54	4,675	690	26,623	2,739	2,053
1905	3	3	52	4,043	404	27,016	13,920	10.440
1906	3	3	52	4,656	2,900	29,392	12,365	9,273

Tobacco, &c. manufactories.

There were 12 tobacco manufactories in 1906, or two more than in the previous year, the number of hands employed was greater by 308, and the value of machinery, plant, land, buildings, and improvements increased from £190,528 to £229,190. The material used and the output also very materially increased, as will be seen from the particulars for the last seven years in the following table:—

TOBACCO FACTORIES: 1900 TO 1906.

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	11,936,45[illegible]	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	14,324,5[illegible]6	103,673,300
1906	3,672,884	4,172,065	431,941	4,650,113	516	18,762,205	131,161,460

NOTE.—The quantity manufactured in small factories (£5 licences) is included in the above table.

Woollen mills.

There were 9 woollen mills working in 1906, or two less than in 1905, but there was a general improvement in the business of the mills; the horse-power of the engines increased from 2,000 to 2,137, the number of hands from 1,315 to 1,434, and the approximate value of the machinery, plant, land, buildings, and improvements from £328,169 to £341,323 during the same period. The quantities of wool and cotton used, and of goods manufactured in the last seven years are as follow:—

WOOLLEN MILLS: 1900 TO 1906.

Year.	Quantity of Scoured* Wool Used	Quantity of Cotton Used.	Goods Manufactured—			
			Tweed and Cloth.	Flannel.	Blankets.	Shawls and Rugs.
	lbs.	lbs	yards.	yards.	No of Pairs	No.
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	49,502	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

Boot and shoe industry.

The boot and shoe industry in Victoria is a very important one, and one that has grown very considerably of late years. The following particulars of the industry generally, and of its growth in Victoria from the earliest times, will, it is thought, be found interesting.

By way of introducing the subject, a brief sketch of the development of boot and shoe making in older countries may not be out of place. Its history may be summed up in four stages, as follows:

First.—The primitive shoemaker, who worked in his home or small shop, making shoes or sandals in single pairs to measure for the community, and held the trade from prehistoric times down to two centuries ago.

Second.—The old-fashioned shoe shops, where boots and shoes were made to measure, and to a small extent for stock, and where from two or three to twenty workmen were employed, and in some cases even more. These flourished in Europe in the eighteenth and first half of the nineteenth centuries, and a few survive to this day, making what are called "bespoke boots" for well-to-do customers, and for wearers with abnormal feet.

Third.—In the early part of the last century, what may be termed the primitive factory was introduced, its first phase being a clicking room, where uppers are cut, and a sole cutting department, the work of "closing" the uppers and "making and finishing" the boot being done by hand outside. It was in the hands of this class of manufacturer that the export trade of the United Kingdom first attained to importance. The introduction of engine power, sole cutting presses, and the pegging and riveting systems of making boots, gradually lessened the practice of home work, and the invention of sewing machines for uppers, and, later, for sole sewing, powerfully contributed to the same result.

Fourth.—In the latter part of the nineteenth century, first in the United States, and then in Europe and elsewhere, the primitive factory system above described gradually gave way to the modern system now in vogue, in which, with the exception of the upper-cutting department, machinery has almost entirely displaced hand methods; and specialisation, and sub-division of labour, are the order of the day. Outside work (except in the bespoke and hand-sewn trade) is a thing of the past, and operations are now conducted in the spacious, well-lighted and well-ventilated factories found in all countries where boots and shoes are manufactured on a large scale.

Early Victorian trade—imports

Turning now to Victoria, the wants of the community in boots and shoes were practically met by imports for the first thirty years after the settlement of Port Phillip in 1837. A complete set of figures would occupy too much space, but it will suffice to say that in 1842 the importations of boots and shoes (inclusive of slippers) reached 25,583 pairs, of the value of £5,457. These figures increased, until the maximum was reached in 1865, when the value of the year's imports reached the large total of £632,488.

In the decade between 1860 and 1870, what is described in the third introductory paragraph as the primitive factory system, was established in Victoria. The boots made were chiefly what are known in the trade as "strong work," that is, kip boots pegged or riveted for country wear, and for outdoor workers in towns and their families. The lighter and more expensive classes of boots and shoes continued to be imported, and it was not until about 1876 that the manufacture of machine-sewn boots was begun. The start of local factories.

The growth of the industry, although somewhat chequered, was fairly rapid. It is shown in the following table:— Number of factories and of operatives.

Year.	Number of Factories.	Number of Operatives.	Value of Land, Buildings and Machinery.	Wages Paid.
			£	£
1866 ...	3	...	...	...
1871 ...	29	1,471	34,019	..
1876 ...	67	2,264	93,372	...
1880 ...	105	3,919	196,809	...
1882 ...	90	3,672	167,424	...
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

As the hold of Victorian manufacturers upon local trade increased, two effects naturally followed. The first was a great decline in the value of imports and the second was the opening of an export trade to the neighbouring States. The latter began in a very small way to the Riverina border towns in 1870, followed later by exports to other Colonies, but the movement was checked by adverse Tariffs between 1882 and 1893. Shortly after that time it moved up again upon the establishment of free-trade in New South Wales, until, as is well known, exports took a great leap after the inauguration of Inter-State free-trade under Federation on 8th October, 1901. Progress of Victorian manufacture.

These latter developments were greatly facilitated by the establishment of the modern factory system between 1890 and 1895, and by the making of "turned" and "welted" boots and shoes from the earlier of these dates. The whole of these movements are

reflected in the particulars of the imports and exports of boots and shoes to and from Victoria in the subjoined tables:—

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
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

Destination of Victorian Inter-State exports.

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 are:—

—	1905.	1906.
	£	£
To New South Wales ...	143,767	138,216
West Australia ...	65,029	81,136
Tasmania	49,803	61,966
South Australia ...	39,947	54,032
Queensland	32,407	34,700
	330,953	370,050

The figures for the first half of 1907 show an increase over the corresponding period of 1906, the respective totals being £183,458 as against £165,631. The trade for the latter half of the year is always greater than for the first six months.

Value of output.

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 1906 was £1,194,575, which is an average of 19s. 6d. per head of the population. The value of the imported boots in that year was £101,308, or 1s. 8d. per head, about half of which was re-exported.

The following table shows the quantities of goods manufactured in each of the last seven years:— Boot factories.

BOOT FACTORIES: 1900 TO 1906.

Year.	Goods Manufactured—	
	Boots and Shoes.	Slippers.
	No. of pairs.	No of pairs.
1900	3,446,809	66,740
1901	3,125,749	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

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.

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 number of electric light works was 9 in 1906, or two more than in 1905, and there was a marked advance in the industry in all other ways. The number of hands employed was 363, against 251 in the previous year, and the horse-power of the engines used was raised from 6,754 to 9,130. Other particulars relating to this class of works for the last seven years are given in the following table:— Electric light works.

ELECTRIC LIGHT WORKS: 1900 TO 1906.

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

Gasworks.

Forty-eight gasworks were in operation in 1906, the same number as in the previous year. The quantities of coal used, of gas made, and of coke produced, during the last seven years are shown hereunder:—

GASWORKS: 1900 TO 1906.

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	1,642,654,799	92,308
1903 ...	166,018	1,628,589,400	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

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, and 154,486 in 1906.

Total production.

The following is a return of the value of Victorian production for the years 1904, 1905, and 1906, which shows a total of £36,549,206 in 1906, an increase on the previous year of £2,613,595, or 8 per cent.

VALUE OF VICTORIAN PRODUCTION: 1904 TO 1906.

Produce.	Value in 1904.	Value in 1905.	Value in 1906.
Cultivation.	£	£	£
Wheat	3,119,878	3,366,290	3,109,980
Oats	465,257	678,040	810,851
Barley, Malting	92,320	126,402	140,425
Barley, Other	31,103	56,426	65,407
Maize	79,967	88,167	70,496
Other Cereals	34,758	52,693	47,391
Grass and Clover Seed ...	6,825	8,320	4,519
Potatoes	417,150	597,426	333,678
Onions	116,721	133,638	79,800
Other Root Crops	35,075	39,914	24,233
Hay	861,479	1,641,936	1,681,768
Straw	96,277	35,384	37,906
Green Forage	74,755	85,103	91,255
Tobacco	1,219	1,944	1,529
Grapes, not made into wine, raisins, &c.	28,678	27,071	38,877
Raisins, ordinary	49,526	43,715	89,577
" sultanas		45,631	90,896
Currants	9,757	11,952	21,994
Wine	83,984	86,322	110,761
Hops	9,419	11,563	12,960

VALUE OF VICTORIAN PRODUCTION: 1904 TO 1906—*continued.*

Produce.	Value in 1904.	Value in 1905.	Value in 1906.
	£	£	£
Cultivation—continued.			
Other Crops...	27,880	27,735	28,509
Fruit grown for Sale in Orchards and Gardens	365,493	359,500	476,215
Fruit in Private Orchards and Gardens	11,092	9,924	9,870
Market Gardens	197,600	183,325	197,650
Total	6,216,213	7,728,421	7,576,547
Dairying and Pastoral.			
Milk Consumed in natural state	648,752	697,276	737,719
Butter made	2,414,695	2,496,580	2,978,860
Cheese made	89,022	102,563	116,860
Cream made (not for butter) ...	8,529	15,580	20,083
Concentrated Milk	39,691	40,654	59,515
Horses produced	198,456	176,267	335,538
Cattle "	1,740,767	2,064,000	2,480,226
Sheep "	1,429,970	1,599,800	1,913,202
Pigs "	380,616	331,140	325,381
Wool "	3,543,810	3,313,550	3,869,000
Total	10,494,308	10,837,410	12,836,384
Mining.			
Gold	3,252,045	3,173,744	3,280,478
Coal	70,208	79,060	80,283
Stone from Quarries (including limestone)	83,585	81,565	63,272
Salt (crude)	2,053	10,440	9,273
Other Metals and Minerals ...	12,245	16,646	21,550
Total	3,420,136	3,361,455	3,454,856
Forest Produce.			
Timber (Forest Saw-mills only)	147,750	142,905	153,309
Firewood (estimated) ...	380,000	380,000	385,000
Bark for Tanning	82,817	63,820	64,260
Total	610,567	586,725	602,569
Miscellaneous.			
Honey and Beeswax	21,408	16,206	39,015
Poultry production (estimated)	1,491,550	1,491,550	1,500,550
Rabbits and Hares	137,590	183,560	164,547
Fish	75,023	69,034	67,775
Total	1,725,571	1,760,350	1,771,887
Total Value of Primary Products	22,466,795	24,274,361	26,242,243
Manufacturing.—Added value*	9,185,238	9,661,250	10,306,963
Grand Total ...	31,652,033	33,935,611	36,549,206

* Exclusive of butter and cheese factories and forest saw-mills (as regards Victorian timbers) included above.

Compared with 1905 a good increase is shown in 1906 under all heads, with the exception of cultivation. The decline in the value of cultivation is due principally to wheat and potatoes, as of the former there was a decreased production of about 800,000 bushels, while of the latter though the production had increased by over 50,000 tons, the market value which was over £5 per ton for the potato crop planted in 1905 fell to below £2 per ton for last season's crop. The value of production per head of the total population in each of the last three seasons is as follows:—

VALUE OF PRODUCTION PER HEAD OF POPULATION: 1904 TO 1906.

Produce.	Value of Produce per head in—		
	1904.	1905.	1906.
	£ s. d.	£ s d	£ s. d.
Cultivation	5 2 11½	6 7 5¾	6 3 6
Dairying and Pastoral... ...	8 13 9¾	8 18 9¼	10 9 2
Mining	2 16 7¾	2 15 5¼	2 16 4
Forest	0 10 1¼	0 9 8	0 9 10
Miscellaneous	1 8 7	1 9 0½	1 8 10
Total Primary Produce	18 12 1¼	20 0 4¾	21 7 8
Manufactures ...	7 12 1½	7 19 4¼	8 8 0
Grand Total	26 4 2¾	27 19 9	29 15 8

During the three years very satisfactory progress was made in the value of produce from pastoral pursuits, and also from manufactories. Other lines of produce, though not showing any remarkable increase, maintain a sound position. The improvement in pastoral products is accounted for by an increased production and value of butter, live stock, and wool.