

Deposits
with
building
societies.

723. The sums deposited with building societies at the end of 1882 amounted in the aggregate to £1,038,000, or fully £200,000 more than was on deposit at the end of 1881.

Total
moneys on
deposit.

724. The following is a statement of the total amount of moneys on deposit at or about the end of each of the last five years with banks of issue, savings banks, and building societies. Other institutions, such as deposit banks, and some of the insurance companies, also receive deposits, but of these no returns are furnished:—

MONEYS ON DEPOSIT AT END OF YEARS 1878 TO 1882.

Amount deposited with—	1878.	1879.	1880.	1881.	1882.
	£	£	£	£	£
Banks	16,106,581	16,426,165	17,972,703	21,151,910	23,625,093
Savings banks ...	1,510,273	1,520,296	1,661,409	2,569,438	3,121,246
Building societies	703,463	742,542	829,941	836,327	1,038,034
Total	18,320,317	18,689,003	20,464,053	24,557,675	27,784,373

Moneys on
deposit,
1882.

725. It will be observed that the moneys known to be on deposit about the close of the last year amounted in the aggregate to over twenty-seven and three-quarter millions sterling.

PART VI.—PRODUCTION.

Sales of
Crown land
by auction.

726. The mode of disposing of Crown lands in Victoria has undergone numerous changes.* At first it was necessary that all lands should be offered at auction before passing into the hands of private individuals, an upset price, according to its value, being placed upon it by the Government. Until 1840 the minimum upset price was 12s. per acre, it was then raised to 20s. Land which had passed the auctioneer's hammer without being bid for was open to be bought by any one at the upset price. Large blocks of land, called special surveys, and a block of a square mile in extent upon each squatting run, were, under certain Orders in Council, exempted from auction, and were permitted to be purchased at £1 per acre.

Special
surveys.

Land Act
1860 (24
Vict. No.
117).

727. In 1860 the system was changed, and a law was passed permitting surveyed country lands to be selected at a uniform upset price of £1 per acre, the only exception being where two or more selectors

* Mr. Arthur Morrah, Secretary for Lands, has been kind enough to verify the facts in this and the next five paragraphs.

applied simultaneously for one block, in which case a limited auction, confined only to such applicants, was to take place. The successful selector had the option of either paying for the whole of his block in cash or only for half; in the latter case, renting the other half at 1s. per acre per annum, with the right to purchase at the same rate per acre as he paid for the first moiety.

728. Another change was made in 1862. Large agricultural areas were proclaimed open for selection, within which land could be selected, at a uniform price of £1 per acre, lot being substituted for limited auction in the event of there being more than one applicant for an allotment. For one-half of the allotment it was necessary to pay at once; but for the remainder the purchase-money was allowed to be paid by instalments of 2s. 6d. each, extending over eight years. No more than 640 acres could be selected by one person in twelve months. Three conditions, to be complied with within twelve months of the date of selection, were imposed upon selectors under this Act:—The first being that the selections be enclosed with a substantial fence; the second, that a habitable dwelling be erected on the land; and the third, that 1 acre out of every 10 acres selected be cultivated.

Land Act
1862 (25
Vict. No.
145).

729. The next change was made in 1865, when an Act was passed providing that agricultural land could be acquired by payment of 2s. per acre per annum during three years, and by effecting improvements to the extent of 20s. per acre within two years of the commencement of the lease. These conditions having been complied with, the lessee might, at the expiration of three years, if he resided upon the land, purchase his holding at £1 per acre; or, if not, he could require his leasehold to be offered at auction at the uniform price of 20s. per acre, with the value of improvements added in his favour. There was also a clause* whereby land adjacent to gold-fields could be occupied in blocks of 20 acres each without having been previously surveyed. This clause was originally framed to meet the demand for the occupation of land adjacent to gold-fields, but its operation was gradually extended by regulation to a circuit of thirty miles around gold-fields, and the same individual was allowed to hold several 20-acre licences for the occupation of adjacent land to the total extent of 160 acres. The licensee, in all cases, was bound either to reside on his holding or to fence and cultivate a certain portion.

Amending
Land Act
1865 (28
Vict. No.
237).

730. The operation of the last-mentioned clause was so successful in leading to the occupation of the land that free selection before survey was the main principle of the next Land Act, which was passed in 1869, and came into operation on the 1st February, 1870. Under it, the area

Land Act
1869 (33
Vict. No.
360).

* The 42nd clause.

allowed to be selected by one person was limited to 320 acres; and it was further provided that the selection should be held under licence during the first three years, within which period the licensee was obliged to reside on his selection at least two and a half years, to enclose it, to cultivate 1 acre out of every 10, and generally to effect substantial improvements to the value of 20s. per acre. The rent payable during this period was 2s. per acre per annum, which was credited to the selector as part payment of the principal. At the expiration of the three years' licence, the selector, if he obtained a certificate from the Board of Land and Works that he had complied with these conditions, could either purchase his holding at once, by paying up the balance of 14s. per acre, or might convert his licence into a lease extending over seven years, at an annual rental of 2s. per acre, which was also credited to the selector as part payment of the fee-simple. On the expiry of such lease, and due payment of the rent, the land became the freehold of the selector. The Statute also contains provision for the sale of Crown lands by auction at an upset price of £1 per acre, or such higher sum as the Governor may direct, the whole extent to be sold in any one year not to exceed 200,000 acres.

Present land system.

731. The Land Act of 1869, just described, as amended by the Land Act 1878 (42 Vict. No. 634), which came into operation at the beginning of 1879, is the one at present in force. The principal alterations made by the amending Act, as regards selection for agricultural purposes, was to increase the period during which the land is held under licence from three years to six years, and the time of compulsory residence from two and a half years to five years, and to reduce the annual rental per acre for a licence or lease from 2s. to 1s., thereby allowing the payments to extend over a period of twenty years instead of ten years as formerly. It also contains provision for selection by persons who need not reside on their selections. In such cases, however, the rent is 2s. per acre, and the total price to be paid for the land £2 per acre. Improvements to the value of £2 per acre, moreover, have to be made during the six years' licence, of which at least half must be made before the expiration of the third year. Such licences are not to be issued in any one year for an aggregate area of more than 200,000 acres. Both these Acts will, unless further continued,* expire by effluxion of time on the 31st December, 1883.

Land systems in Australasian colonies.

732. The laws and regulations under which land for agricultural purposes passes from the Crown into the hands of private individuals differ in the various Australasian colonies.† In almost all, however,

* Since this was written they have been continued until the end of 1884 by Act 47 Vict. No. 774.

† A complete account of the land system of each colony was published in the *Victorian Year-Book*, 1879-80, page 394 *et seq.* A few changes have taken place since.

provision is made for any person, not a minor under 18 or a married woman,* desirous of settling on the land to select a certain limited area, and to pay the purchase-money by instalments, the compliance with certain conditions of residence and improvement being also required before the selector becomes entitled to a Crown grant. The principal features of this portion of each system, corrected to date, is detailed under nine heads in the following table :—

CONDITIONS OF LAND SELECTION IN AUSTRALASIAN COLONIES, 1883.

Conditions of Selection.	Victoria.	New South Wales.†	Queensland.‡		South Australia.§	Western Australia.||	Tasmania.¶	New Zealand.**
			Home-steads.	Other Selections.				
1. Maximum area allowed Acres	320	640	120 to 1,280	640 to 5,120	640 to 1,000	No limit	320	320
2. Price per acre ...	£1	£1	2s. 6d.	£2 to 7s. 6d.	£1	10s.	£1	£1
3. Time over which purchase may extend ... Years	20	28	5	10	20	10	14	10
4. Minimum time in which fee-simple may be acquired ... Years	6	5	5	3	6	Anytime	Anytime	3
5. Annual payment per acre...	1s.	1s.	6d.	4s. to 9d.	...	1s.	2s.	2s.
6. Value of necessary improvements per acre ...	20s.	10s.	7s. 6d. to 10s.	7s. 6d. to 10s.	10s.	...	...	20s.
7. Time allowed for making improvements ... Years	6	5	5	10	4	10	...	6
8. Acres in every 100 to be cultivated ...	10	...	...	...	20	25	...	20
9. Period of residence necessary †† ... Years	5	5	5	10	20	2½	14	6

* In Tasmania, married women may select land.

† In New South Wales, the selector is permitted to occupy, in addition, three times the area selected as a "grazing right," at an annual rental of £2 per 640 acres. The price per acre does not include interest, for which 5 per cent. per annum is added. For the first term of three years, 5s. per acre is payable in advance.

‡ In Queensland, within the limits named, the maximum area allowed to be selected may be varied in any district by the Government.

§ In South Australia, the maximum allowed to be selected is, of reclaimed land 640 acres, and of country or improved land 1,000 acres. The price per acre does not include purchase-money, for which about 3½ per cent. per annum is added.

|| In Western Australia, the necessary improvements are not assessed according to value. The condition is that the selected land shall be fenced and one-fourth cultivated. The time allowed for making improvements may be extended, if the selector continues to pay the annual licence fee.

¶ In Tasmania, 33½ per cent. is added to the price, as interest, for the period of fourteen years.

** In New Zealand, the price per acre varies with the quality of the land. There is besides a system of "perpetual leasing" in New Zealand, under which as much as 640 acres may be leased at an annual rental equal to 5 per cent. of the value of the land. The first lease is for 30 years, with the option of renewal for succeeding periods of 21 years, the rent being assessed afresh at each renewal. Between the eighth and eleventh years the lessee may acquire the freehold if the land is not within a proclaimed gold-field. The conditions as regards residence and improvement are the same as under the deferred payment system.

†† In all the colonies, as soon as the purchase-money is paid in full, the residence clause is no longer enforced. In Queensland (except in the case of homestead selections), South Australia, Western Australia, and New Zealand in the case of bush land, personal residence is not necessary.

Crown lands alienated to end of 1882. 733. The total extent of Crown land sold in Victoria up to the end of 1882 was 13,047,526 acres, and the extent granted without purchase was 8,973 acres. The whole area alienated in fee-simple was thus 13,056,499 acres, of which 6,595,522 acres, or nearly half, was acquired by selection under the system of deferred payments.

Crown lands selected. 734. The selected lands of which the purchase had not been completed up to the end of the year amounted to 10,576,371 acres. Of this extent it is estimated that 3,207,028 acres had been forfeited or abandoned, and had reverted to the Crown. The remainder, representing approximately the whole area in process of alienation under deferred payments, amounted to 7,369,343 acres.

Crown lands unalienated. 735. According to the latest computation, the total area of the colony is 56,245,760 acres; and if from this be deducted the sum of the lands granted, sold, and selected, amounting, less the extent forfeited, to 20,425,843 acres, it will follow that the residue, representing the Crown lands neither alienated nor in process of alienation, amounted at the end of 1882 to 35,819,917 acres.

Public estate, 1882. 736. The whole of this residue, however, is not available for selection, for it embraces lands occupied by roads, the unsold portions of the sites of towns, the State forests, auriferous, pastoral, and timber reserves, and land which is at present useless, owing to its mountainous character or to its being covered with mallee scrub. Deducting these lands from the extent unalienated and unselected, already stated to have been 35,819,917 acres, it will be found that the area open for selection is narrowed to 8,086,566 acres. This will be at once seen by the following table, which shows the position of the public estate at the end of 1882 :—

PUBLIC ESTATE OF VICTORIA ON 31ST DECEMBER, 1882.

Condition of Land.	Number of Acres.
Land alienated in fee-simple	13,056,499
Land in process of alienation under deferred payments	7,369,343
Roads in connexion with the above	1,181,643
Unsold land included in cities, towns, &c.	303,000
Unselected auriferous land * (about)	972,397
Timber reserves	222,230
Other reserves	725,350
State forests	926,105
Mountain forests	11,867,127
Mallee country	11,535,500
Area available for selection at end of 1882	8,086,566
Total area of Victoria	56,245,760

* This land may be selected for residence or cultivation under section 49 of the Land Act 1869, in lots not exceeding 20 acres. The total extent already selected under this section is included in the first two items, and amounts to 194,838 acres.

737. Omitting the 23,402,627 acres of mallee country and mountain forests, the remainder of the colony, amounting to 32,843,133 acres, or about 59 per cent. of the total area, may be said to be suitable for occupation. Of this extent, at the end of 1882, 20,425,842 acres, or 62 per cent., were already alienated or in process of alienation ; 4,330,725 acres, or 13 per cent., were occupied by reserves ; and 8,086,566 acres, or 25 per cent., were available for selection.

Crown lands available for selection.

738. The maximum area which the law allows one person to select is 320 acres. It will be at once seen that, supposing every selector should take up his full amount, there would be room for 25,270 selectors in the portion of the colony still remaining available for selection. Should the maximum be increased to 640 acres, there would of course be space for only half that number of selectors, or 12,635.

Number of selectors there is space for.

739. The difference between the extent available for selection at the end of 1881 and at the end of 1882 was 709,814 acres. The extent so available was equal at the former period to 15.6 per cent., and at the latter period to 14.4 per cent., of the whole area of the colony.

Extent available for selection, 1881 and 1882.

740. The land alienated from the Crown in fee-simple during 1882 amounted to 442,099 acres, of which 441,433 acres were sold, and 666 acres were granted without purchase. The total extent was less by 19,774 acres than that in 1881, but was in excess of the extent alienated in any other year since 1876.

Crown lands alienated, 1882.

741. Of the area sold, 31,387 acres, or about a fourteenth, were disposed of by auction. Nearly the whole of the remainder was in the first instance selected under the system of deferred payments. The extent sold by auction in 1882 was greater than in 1881 by over 6,600 acres ; it was also greater than the extent in 1880, but was less than that in any other year since 1869 except 1873.

Crown lands sold by auction.

742. The amount realized for Crown lands sold in 1882 was £598,079, or at the rate of £1 7s. 1d. per acre. Of this sum, only £247,626 was received during the year, the remainder having been paid in former years as rents and licence fees. The proportion sold by auction realized £180,116, or an average of £5 14s. 9d. per acre ; and the proportion sold otherwise than at auction realized £417,963, or an average of £1 0s. 5d. per acre.

Amount realized on Crown land sales, 1882.

743. From the period of the first settlement of the colony to the end of 1882 the amount realized by the sale of Crown lands was £20,780,857, or at the rate of £1 11s. 1d. per acre.

Amount realized, 1836 to 1882.

744. The total area selected, with right of purchase, in 1882, amounted to 837,205 acres, or 266,777 acres more than in 1881. Of this extent, 830,166 acres were taken up under the residence clauses

Selectors and area selected, 1870 to 1882.

of the Land Acts of 1869 and 1878, and 7,039 acres under the non-residence clause of the latter. The average area to each resident selector was 189 acres, and to each non-resident selector 138 acres. The area selected exceeded that in 1881 or 1880, but was less than in any other previous year since 1872, as will be observed by the following figures, which show the number of approved applications (approximating closely to the number of selectors) and the number of acres selected in each of the 13 years ended with 1882 :—

SELECTORS AND LAND SELECTED,* 1870 TO 1882.

Year.	Number of Approved Applications (Selectors).	Number of Acres Selected.
1870	3,017	320,719
1871	4,575	477,685
1872	7,771	780,819
1873	6,689	1,041,779
1874	9,578	1,809,668
1875	6,320	1,171,849
1876	5,785	1,029,141
1877	6,240	1,113,266
1878	7,524	1,389,955
1879	5,801	1,018,454
1880	4,103	736,210
1881	3,152	570,428
1882	4,434	837,205

Selected land forfeited, 1882.

745. Of land which had been selected with right of purchase in former years, as many as 216,708 acres were abandoned or forfeited to the Crown for non-fulfilment of conditions during the year 1882, resulting in a gain to the Treasury of £9,723.

Squatting runs: number and area.

746. The squatting runs in 1882 numbered 503, or 50 less than in 1881. The area of Crown lands embraced in runs amounted in 1882 to 10,120,730 acres, or 2,843,349 acres less than that in 1881.

Decrease in number of squatting runs.

747. The decrease in the number of squatting runs from year to year is accounted for by the fact that the best portions of the runs are often taken up by selectors, and the assessment of the remainder being considered excessive, the pastoral lessees abandon their leases, which are forfeited, and the lands are offered for re-occupation for grazing purposes, subject to annual licences, under the 47th section of the Land Act 1869. The highest tender for the grazing licence, which is frequently that of the former occupant, is generally accepted.

* Not including selectors of auriferous land under section 49.—See footnote to table following paragraph 736 *ante*.

748. The average size of squatting runs was 23,443 acres in 1881, and 20,121 acres in 1882. This is exclusive of any purchased land attached thereto. Squatting runs: average size.

749. The rent of runs is assessed in accordance with the number of stock the land is estimated to be able to depasture, viz., 5s. yearly for each head of cattle or horses, or 1s. yearly for each sheep. In 1881 the amount of rent payable was £70,732, or 1·309d. (under 1½d.) per acre, and in 1882 the amount was £50,254, or 1·192d. (about 1½d.) per acre. The sums actually received were £71,036 in 1881 and £57,839 in 1882, but arrears from previous years are included in these amounts. Rent of runs.

750. The receipts from grazing licences amounted to £13,663 in 1881, and £15,624 in 1882. The total amount received from pastoral occupation was thus £84,699 in the former and £73,463 in the latter year. Receipts from grazing licences.

751. The revenue from the sale and occupation of Crown lands may be divided into—(1) receipts from the alienation of land in fee-simple, including the price realized from land sales and from rents which count towards the purchase-money; (2) receipts on account of temporary occupation, which include payments for squatting and grazing licences, rents for business, factory, and hotel sites, &c., and rents of land which do not count towards the purchase-money; (3) penalties, interest, and fees for grants, leases, licences, &c. In 1882, as compared with 1881, there was a decrease under all these heads; the total amounting to £52,700, as will be seen by the following figures:— Land revenue.

LAND REVENUE, 1881 AND 1882.

Heads of Land Revenue.	Amounts Received.		Decrease.
	1881.	1882.	
	£	£	£
Alienation in fee-simple and progressive ...	713,478	677,045	36,433
Temporary occupation ...	97,770	87,610	10,160
Penalties, fees, interest, &c. ...	43,750	37,651	6,099
Total ...	854,998	802,306	52,692

752. The agricultural statistics of Victoria are collected by the municipal bodies, which, under the Local Government Act (38 Vict. No. 506), are required each year to furnish to the Government Statist, Agricultural statistics.

on or before the 31st March, at their own cost, such agricultural and other statistics relating to their districts on such forms and in such manner as the Governor in Council may direct. All persons are required to give correct information to the best of their knowledge and belief; and, should they fail to do so, they render themselves liable to a penalty not exceeding £10. Collectors divulging or making extracts from the information they receive, except under the special direction or authority of the Government Statist, also render themselves liable to a penalty of £10.

Agricultural statistics, 1882-3.

753. The agricultural statistics to which reference will now be made are those for the year ended 31st March, 1883.* Tables embodying the general results of these statistics were sent for publication in the *Government Gazette* on the 8th May last, and these, with additional tables, form portion of the *Statistical Register of Victoria*.

Number of cultivators.

754. The total number of persons returned as cultivating land was 33,952, of whom 32,592 were in shires, 1,079 in cities, towns, or boroughs, and 281 in places outside of local jurisdiction.

Land under tillage.

755. The extent of land returned as under cultivation amounted to 2,040,916 acres, as against 1,821,719 acres in 1881-2. The increase shown by the figures was, therefore, 219,197 acres.

756. In 1882-3, more land was in cultivation than at any previous period. The extent cultivated in that year was most nearly approached in 1880-81, when, according to the returns, 1,997,943 acres were under cultivation, or only 42,973 acres less than in the year under review.

Area cultivated per head of population.

757. The average area in cultivation to each person in the colony was $2\frac{1}{4}$ acres in the year under review as against $1\frac{3}{4}$ acre five years previously, and $1\frac{1}{2}$ acre 10 years previously. The exact amounts at the three periods were as follow :—

AVERAGE AREA CULTIVATED TO EACH PERSON IN THE COLONY.

1872-3	...	...	...	...	1.33 acres
1877-8	...	...	...	...	1.74 „
1882-3	...	...	...	...	2.25 „

Area cultivated per head in Australasian colonies.

758. The following table shows the area per head cultivated in each Australasian colony during the eight seasons ended with that of 1881-2, also the mean of those seasons, the colonies being placed in order according to the average extent of land per head that each cultivates :—

* A summary of the agricultural statistics of each year since the first settlement of the colony will be found at the commencement of this work (second folding sheet). The mode of collecting agricultural statistics is described in the *Victorian Year-Book* 1874, paragraphs 381 to 384.

CULTIVATION PER HEAD IN AUSTRALASIAN COLONIES, 1875 TO 1882.*

Colony.	Acres under Tillage per Head of Population.								
	1874-5.	1875-6.	1876-7.	1877-8.	1878-9.	1879-80.	1880-81.	1881-2.	Mean.
1. S. Australia ...	6.50	6.86	6.71	7.72	8.09	8.75	9.62	8.91	7.89
2. Tasmania ...	3.13	3.21	3.15	3.26	3.23	3.26	3.25	3.15	3.20
3. New Zealand	1.61	1.62	1.97	2.30	2.62	2.67	2.12	2.63	2.19
4. W. Australia	1.73	1.78	1.68	1.82	1.81	2.28	2.20	1.78	1.88
5. Victoria ...	1.29	1.42	1.54	1.74	1.95	2.01	2.32	2.06	1.79
6. N. S. Wales ...	.80	.74	.82	.83	.88	.90	.96	.83	.84
7. Queensland ...	.39	.43	.46	.52	.56	.49	.53	.56	.49

759. It will be observed that South Australia cultivates much more, and New South Wales and Queensland cultivate much less, per head than any of the other colonies; also that in only two of the colonies, viz., New Zealand and Queensland, were the figures for the last year named in the table higher than those for any previous one.

Results in different colonies compared.

760. The principal crops grown in Victoria are wheat, oats, barley, potatoes, hay, and green forage. In 1882-3, as compared with 1881-2, a larger area was placed under the first two and the last two of these crops, but a smaller area under the others. The extent under oats and hay was larger than in any previous year, the area under the latter being greater by nearly a third than that in 1881-2. The extent under wheat was only exceeded in 1880-81, and then by no more than 8,000 acres; the extent under barley was exceeded in 1880-81 and 1881-2, but in no other year; and the extent under green forage was exceeded only in the five years, 1875-6 to 1879-80. During the past seven years wheat was much more extensively cultivated than formerly. Prior to 1877, the extent under that crop never reached 400,000 acres. The following table shows the extent of land under each of these crops in the last two seasons :—

Land under principal crops.

LAND UNDER PRINCIPAL CROPS, 1882 AND 1883.

Year ended 31st March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Green Forage.
	acres.	acres.	acres.	acres.	acres.	acres.
1882 ...	926,729	146,995	48,652	39,129	212,150	241,947
1883 ...	969,362	169,892	43,721	34,267	309,382	290,438
Increase ...	42,633	22,897	...	...	97,232	48,491
Decrease...	...	...	4,931	4,862	...	...

* For the population and number of acres under tillage in each Australasian colony during the ten years ended with 1882, see Summary of Australasian Statistics (third folding sheet) ante; also Appendix A post.

Produce of principal crops.

761. The gross yield of wheat exceeded that in 1881-2 by 37,077 bushels, but was exceeded by 975,915 bushels in 1880-81, and by 647,404 bushels in 1879-80. The yield of oats exceeded that in 1881-2 by 833,916 bushels, and was the largest crop of that cereal ever raised in Victoria. The yield of barley was less than that in 1881-2 by 169,089 bushels, or nearly a fifth, and was also less than in 1880-81 and 1879-80. The yield of potatoes was less by 4,685 tons than that in 1881-2, and was also less than in 1879-80, 1876-7, and 1872-3. The hay crop was much the largest ever raised, and exceeded that in 1881-2 by 88,592 tons, or nearly a fourth. The following is a statement of the gross produce of each of the principal crops in 1881-2 and 1882-3 :—

GROSS PRODUCE OF PRINCIPAL CROPS, 1882 AND 1883.

Year ended 31st March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	bushels.	bushels.	bushels.	tons.	tons.
1882 ...	8,714,377	3,612,111	927,566	134,290	238,793
1883 ...	8,751,454	4,446,027	758,477	129,605	327,385
Increase ...	37,077	833,916	...	...	88,592
Decrease ...	...	...	169,089	4,685	...

Wheat-producing counties.

762. The following table shows, for each of the last six years, the produce of wheat in twelve counties which, for the most part, lie between the 36th and 37th parallels of latitude, and which are above all others the wheat-producing counties of Victoria :—

WHEAT RAISED IN TWELVE COUNTIES, 1878 TO 1883.

Counties.	Number of Bushels Produced.					
	1877-8.	1878-9.	1879-80.	1880-81.	1881-2.	1882-3.
Bendigo ...	795,398	727,195	871,278	1,007,979	517,342	622,451
Bogong ...	333,414	136,574	305,951	268,210	294,470	434,907
Borong ...	720,007	1,291,947	1,509,759	1,542,000	1,503,604	1,291,678
Dalhousie...	192,080	106,305	204,299	134,554	206,000	197,968
Delatite ...	278,947	115,639	265,478	176,934	236,936	277,824
Gladstone...	472,224	578,157	700,925	723,419	385,181	556,931
Gunbower ..	250,298	218,348	321,230	697,569	230,952	215,129
Kara Kara	598,661	651,142	681,868	950,096	678,846	576,667
Lowan ...	59,591	220,334	284,407	406,090	540,539	613,278
Moirra ...	889,774	317,465	1,671,507	1,655,322	1,865,846	1,805,153
Rodney ...	1,016,849	451,435	1,088,854	1,068,673	1,007,787	852,358
Talbot ...	449,405	414,473	397,621	302,987	377,893	368,480
Total	6,056,648	5,229,014	8,303,177	8,933,833	7,845,396	7,812,824

Yield of wheat in twelve counties.

763. In 1882-3, eight-ninths of the wheat raised in Victoria was grown in these twelve counties, and a somewhat similar proportion obtained in each of the previous five years. In Bendigo, Bogong,

Delatite, Gladstone, and Lowan, the gross yield was greater in 1882-3 than in the previous year ; but in the other seven counties it was below the yield of that year, the falling-off being especially marked in Borung, Kara Kara, and Rodney.

764. The average produce of wheat per acre in the various counties and in the whole colony in 1882-3 is compared in the following table with that in each of the five previous years. The counties are arranged according to the average yield in the past season, and the twelve counties just referred to are marked with asterisks :—

Yield of wheat in each county.

AVERAGE PRODUCE OF WHEAT IN EACH COUNTY, 1878 TO 1883.

County.	Bushels of Wheat per Acre.*					
	1877-8.	1878-9.	1879-80.	1880-81.	1881-2.	1882-3.
Villiers ...	22·27	12·65	26·20	11·73	26·15	27·30
Buln Buln ...	17·10	10·43	20·87	9·23	22·34	25·33
Heytesbury ...	17·95	13·60	24·14	13·16	21·97	24·80
Grant ...	17·55	13·64	24·57	12·78	22·56	24·55
Mornington ...	20·53	5·87	27·79	8·16	21·30	23·61
Polwarth ...	16·56	9·30	25·07	3·27	18·02	23·30
*Dalhousie ...	15·09	8·42	20·89	9·75	21·58	23·22
Tanjil ...	18·24	12·01	22·11	7·71	20·50	22·41
Benambra ...	20·56	11·44	21·27	12·73	20·92	22·11
Tambo ...	13·91	19·12	30·39	12·52	24·51	21·39
Hampden ...	13·26	11·42	18·54	9·31	21·02	21·37
Bourke ...	16·06	11·21	23·74	12·05	20·65	20·86
Dargo ...	20·17	13·49	22·27	10·27	18·59	20·35
Wonnangatta ...	10·15	5·99	16·85	4·69	18·80	19·99
Evelyn ...	16·31	4·86	21·86	8·26	20·16	19·96
Grenville ...	12·42	13·74	18·52	8·40	16·71	19·61
Anglesey ...	13·75	7·21	19·97	9·49	17·99	19·42
Dundas ...	17·85	14·23	19·61	10·11	20·01	19·20
*Talbot ...	13·02	11·99	15·95	10·07	16·53	18·35
Normanby ...	16·77	12·18	19·37	8·14	16·81	18·09
Ripon ...	13·38	14·36	17·35	12·14	15·67	17·53
Follett ...	22·13	11·80	18·44	8·43	12·61	16·86
*Bogong ...	14·59	6·00	13·63	9·92	13·49	16·47
*Delatite ...	14·16	5·38	14·53	8·29	13·90	16·10
Croajingolong ...	6·69	12·48	10·57	10·41	21·51	15·15
*Moira ...	14·64	3·89	16·98	12·71	12·91	12·17
*Rodney ...	12·82	5·54	15·09	12·34	12·68	10·51
*Lowan ...	9·63	13·46	13·75	10·01	10·65	9·00
*Gladstone ...	10·78	10·08	12·55	9·68	5·56	8·29
*Bendigo ...	11·48	8·79	11·58	10·87	6·48	7·81
*Kara Kara ...	10·14	10·73	9·97	9·45	7·39	6·24
*Borong ...	10·05	10·95	10·98	7·92	7·00	5·66
*Gunbower ...	9·18	6·47	7·67	9·29	4·16	3·24
Tatchera ...	5·45	10·55	10·76	5·85	2·37	3·08
Total ...	12·41	8·76	13·29	9·95	9·40	9·03

765. It will be observed that, in all the counties except Tambo, Evelyn, Dundas, Croajingolong, Moira, Rodney, Lowan, Kara Kara,

Acreable yield of wheat, 1882 and 1883.

* In 1878-9, the crops were much affected by rust and drought, and in the last three years by the latter.

Borong, and Gunbower, the acreable produce of wheat was higher in the past than in the previous season. It, however, happens that the last six of the counties named—or those in which the average yields of wheat were the smallest—are amongst those in which the gross yields were the largest, there having been in 1882-3 no less than 5,354,263 bushels, or five-eighths of the whole quantity produced in Victoria, grown therein; and, therefore, the average of the whole colony is brought down below that obtaining in 1881-2.

Average yields in twelve counties.

766. It will also be noticed that if Tatchera and Croajingolong, in which the extent of land suitable for wheat cultivation is but small, be omitted, ten of the “wheat-producing counties” were in 1882-3 at the bottom of the list in point of average yield, and were the counties in which—whilst, in consequence of the large area placed under wheat, the gross yield was greatest—the yield per acre was least. Talbot and Dalhousie, which stood much higher than the other “wheat-producing counties” in point of average yield, are situated to the south of the others, and thus partially escaped the drought which seriously affected the crops all over the northern portion of the colony. This is the third consecutive season in which the rainfall has been deficient in that part of Victoria.

Small gross yield of wheat in some counties.

767. It should be mentioned that in several of the counties in which the average yield of wheat is high a very small quantity is grown, which is probably raised on a patch of choice land, and does not afford an indication of the general productiveness of the county. Thus, in 1882-3, less than 2,000 bushels of wheat were grown in Wonnangatta and Evelyn, less than 3,000 bushels in Polwarth, and only a little over 3,000 bushels in Tambo and Mornington.

Yield of other principal crops in each county.

768. The average produce per acre of oats, barley, potatoes, and hay in each county during the last two seasons is given in the following table:—

AVERAGE PRODUCE OF OATS, BARLEY, POTATOES, AND HAY IN EACH COUNTY, 1881-2 AND 1882-3.

Counties.	Average Produce to the Acre of—							
	Oats. (bushels.)		Barley. (bushels.)		Potatoes. (tons.)		Hay. (tons.)	
	1881-2.	1882-3.	1881-2.	1882-3.	1881-2.	1882-3.	1881-2.	1882-3.
Anglesey ...	31·64	29·89	25·60	20·33	2·30	2·91	1·56	1·64
Benambra ...	29·00	34·69	19·12	25·21	3·16	4·20	1·42	1·75
Bendigo ...	8·69	14·47	6·85	10·97	·93	2·92	·55	·83
Bogong ...	22·85	28·15	14·55	23·79	1·95	2·88	1·09	1·47

AVERAGE PRODUCE OF OATS, BARLEY, POTATOES, AND HAY IN EACH COUNTY, 1881-2 AND 1882-3—continued.

Counties.	Average Produce to the Acre of—							
	Oats. (bushels.)		Barley. (bushels.)		Potatoes. (tons.)		Hay. (tons.)	
	1881-2.	1882-3.	1881-2.	1882-3.	1881-2.	1882-3.	1881-2.	1882-3.
Borong ...	15·46	19·32	6·69	7·76	1·09	2·06	·52	·52
Bourke ...	36·15	36·22	28·89	25·74	3·00	3·57	1·76	1·66
Buln Buln ...	29·60	30·20	23·12	29·02	4·33	4·49	2·31	2·09
Croajingolong	25·16	28·14	14·69	18·33	4·23	3·84	1·55	1·90
Dalhousie ...	32·14	34·42	30·78	35·49	1·72	2·69	1·96	1·88
Dargo ...	30·58	34·44	23·86	33·33	6·14	6·58	2·35	2·31
Delatite ...	22·77	26·49	18·20	22·80	1·44	2·46	1·26	1·37
Dundas ...	30·28	23·77	30·52	24·24	2·30	2·32	2·00	1·64
Evelyn ...	28·66	30·35	29·18	26·63	3·36	3·79	1·92	1·90
Follett ...	24·46	22·67	15·67	23·44	3·02	2·02	1·60	1·39
Gladstone ...	10·15	15·44	5·34	10·48	...	·81	·43	·66
Grant ...	35·47	35·67	33·23	30·69	3·19	4·38	1·53	1·57
Grenville ...	25·28	25·37	20·52	22·80	2·32	3·15	1·67	1·65
Gunbower ...	4·43	9·97	5·80	6·55	·17	...	·44	·35
Hampden ...	35·79	32·88	29·21	30·47	3·47	3·92	1·81	1·76
Heytesbury ...	27·73	27·17	36·24	28·12	3·38	3·81	2·17	1·86
Kara Kara ...	16·62	17·96	9·65	12·06	1·36	1·87	·53	·52
Lowan ...	16·50	17·42	14·02	10·84	1·46	1·22	·79	·69
Moira ...	18·01	18·81	15·62	12·40	1·29	1·50	·93	·92
Mornington ...	28·98	27·89	21·59	28·32	4·36	3·91	1·88	1·69
Normanby ...	23·65	18·95	18·94	22·45	3·08	2·89	1·69	1·53
Polwarth ...	33·09	30·32	21·62	26·73	3·32	4·09	2·23	1·94
Ripon ...	26·62	26·84	29·06	31·52	2·08	2·52	1·86	1·71
Rodney ...	16·08	15·26	17·24	11·69	·83	1·25	·80	·63
Talbot ...	32·24	32·62	28·67	28·94	1·84	2·77	1·50	1·52
Tambo ...	30·92	27·29	23·75	50·00	4·46	5·62	2·35	1·90
Tanjil ...	29·63	32·17	30·63	32·21	3·96	4·77	2·26	1·95
Tatchera ...	7·86	1·66	2·31	5·87	...	...	·26	·29
Villiers ...	31·84	28·09	45·20	39·16	5·27	4·41	2·36	2·28
Wonnangatta	33·13	31·41	20·00	25·00	2·34	4·10	1·60	1·63
Total ...	24·57	26·17	19·07	17·35	3·43	3·78	1·13	1·06

769. It will be noticed that in the year ended 31st March, 1883, the highest acreable yield of oats was in Bourke, the next in Grant, and the next in Benambra, Dargo, and Dalhousie in the order named ; that after Tambo, where only 5 acres were placed under that crop, the average yield of barley was highest in Villiers, then in Dalhousie, and then in Dargo ; that potatoes yielded the largest crop per acre in Dargo, in which county it was more than 6 tons ; that 5 tons per acre was exceeded in Tambo (where, however, only 91 acres were grown) ; and that 4 tons per acre was exceeded in Tanjil, Buln Buln, Villiers,

Yield of oats, barley, potatoes, and hay, 1882-3.

Grant, Benambra, Wonnangatta, and Polwarth ; that the highest yields of hay were in Buln Buln, Villiers, and Dargo, those being the only counties in which this crop averaged over 2 tons to the acre.

Yield of principal crops in past two seasons.

770. Comparing the averages of 1882-3 with those of the previous season, a falling-off is observed in the yield per acre of all the crops in Villiers ; of oats, barley, and hay in Dundas and Rodney ; of oats, potatoes, and hay in Follett, Mornington, and Normanby ; of oats and barley in Anglesey ; of oats and hay in Hampden, Polwarth, and Tambo ; of oats in Tatchera ; of barley, potatoes, and hay in Lowan ; of barley and hay in Bourke and Evelyn ; of barley in Grant ; of potatoes in Croajingolong ; and of hay in Buln Buln, Dalhousie, Dargo, Grenville, Kara Kara, Ripon, and Tanjil. In all other cases, the average yields were equal to or greater than those in 1881-2.

Yield of principal crops, 1872 to 1883.

771. In the past season, over the colony as a whole, the acreable yield of hay was lower than in any of the eleven previous ones ; that of wheat was lower than in any except 1878-9 ; and that of barley than in any except 18 0-81 ; but the acreable yield of oats was higher than in any of the eleven previous seasons ; and that of potatoes higher than in any except 1879-80. This will be seen by the following table, which shows the yield per acre of those five crops during each of the last twelve years, also the average during the whole period :—

AVERAGE PRODUCE OF PRINCIPAL CROPS, 1872 TO 1883.

Year ended 31st March.	Average Produce per Acre of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	bushels.	bushels.	bushels.	tons.	tons.
1872	13·45	18·76	20·00	3·22	1·40
1873	16·51	19·55	20·86	3·45	1·32
1874	13·58	15·69	19·84	2·86	1·27
1875	14·57	18·46	21·01	3·53	1·32
1876	15·49	21·92	22·20	3·37	1·33
1877	13·15	19·91	21·18	3·31	1·22
1878	12·41	19·39	19·81	3·11	1·17
1879	8·76	17·60	18·24	2·71	1·21
1880	13·29	24·00	24·67	4·04	1·45
1881	9·95	17·62	15·57	2·81	1·20
1882	9·40	24·57	19·07	3·43	1·13
1883	9·03	26·17	17·35	3·78	1·06
Mean of twelve years...	12·47	20·30	19·98	3·30	1·26

772. In the following table the average yield of wheat, oats, barley, potatoes, and hay in Victoria is placed side by side with the average of the same crops in the other Australasian colonies* during each of the eleven years ended with 1882 :—

Average produce in Australasian colonies.

AVERAGE PRODUCE PER ACRE OF THE PRINCIPAL CROPS IN AUSTRALASIAN COLONIES, 1872 TO 1882.

Year ended 31st March.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
WHEAT.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1872 ...	13·45	14·48	...	5·73	...	13·39	22·52
1873 ...	16·51	16·32	...	11·50	6·02	18·62	24·19
1874 ...	13·58	13·43	...	7·87	13·44	16·17	25·61
1875 ...	14·57	12·87	...	11·75	12·00	18·51	28·15
1876 ...	15·49	14·66	...	11·95	11·00	16·38	31·54
1877 ...	13·15	16·43	...	5·40	12·00	19·30	28·63
1878 ...	12·41	13·84	10·63	7·76	11·00	18·12	26·03
1879 ...	8·76	14·74	13·56	7·15	9·97	16·10	22·94
1880 ...	13·29	15·48	8·11	9·78	14·94	23·22	28·16
1881 ...	9·95	14·69	20·40	4·96	14·94	14·99	25·07
1882 ...	9·40	15·35	8·41	4·57	7·00	18·88	22·69
Mean ...	12·78	14·75	12·22	8·04	11·23	17·61	25·96
OATS.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1872 ...	18·76	20·36	...	10·85	...	20·03	26·78
1873 ...	19·55	19·94	...	16·39	13·24	25·85	27·00
1874 ...	15·69	18·71	...	10·61	19·22	20·98	29·81
1875 ...	18·46	16·31	...	14·61	16·00	26·82	35·22
1876 ...	21·92	18·72	...	16·69	15·00	25·40	37·79
1877 ...	19·91	21·16	...	10·65	15·00	24·21	31·24
1878 ...	19·39	19·31	10·11	11·96	14·00	22·32	31·68
1879 ...	17·60	20·24	9·65	12·01	18·02	24·82	30·11
1880 ...	24·00	21·64	24·74	15·02	19·00	28·61	36·53
1881 ...	17·62	19·87	17·94	11·50	19·00	22·13	32·05
1882 ...	24·57	21·81	12·74	10·66	10·00	28·44	28·45
Mean ...	19·77	19·82	15·04	12·81	15·85	24·51	31·51
BARLEY.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1872 ...	20·00	15·97	...	9·53	...	23·04	21·50
1873 ...	20·86	18·96	...	14·31	14·00	22·44	21·25
1874 ...	19·84	18·61	...	10·69	17·22	19·33	27·41
1875 ...	21·01	17·33	...	15·18	16·00	24·46	29·39
1876 ...	22·20	20·46	...	14·12	14·00	27·84	35·91
1877 ...	21·18	23·69	...	10·64	15·00	23·58	28·95
1878 ...	19·81	19·68	16·86	11·97	13·00	20·28	25·40
1879 ...	18·24	21·47	15·87	11·82	12·23	24·22	24·77
1880 ...	24·67	21·46	24·68	13·38	18·00	27·91	30·47
1881 ...	15·57	20·35	20·97	11·62	18·00	20·39	26·05
1882 ...	19·07	21·04	12·53	11·47	10·00	22·29	22·28
Mean ...	20·22	19·91	18·18	12·25	14·74	23·25	26·67

* The produce of crops in Queensland was not given prior to 1878.

AVERAGE PRODUCE PER ACRE OF THE PRINCIPAL CROPS IN
AUSTRALASIAN COLONIES, 1872 TO 1882—*continued.*

Year ended 31st March.	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	New Zealand.
POTATOES.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
1872 ...	3·22	3·03	...	3·48	...	2·77	3·53
1873 ...	3·45	2·98	...	3·28	2·34	3·92	4·92
1874 ...	2·86	2·98	...	3·41	2·67	3·16	4·46
1875 ...	3·53	2·83	...	3·72	3·00	3·75	5·24
1876 ...	3·37	2·98	...	4·52	3·00	3·54	4·89
1877 ...	3·31	3·03	...	2·84	3·00	3·43	5·36
1878 ...	3·11	2·52	1·91	2·51	2·00	3·25	5·38
1879 ...	2·71	3·20	2·33	2·67	2·49	3·37	4·98
1880 ...	4·04	3·23	3·03	3·80	3·50	3·18	5·62
1881 ...	2·81	2·73	2·65	2·89	3·50	3·12	4·94
1882 ...	3·43	2·78	2·36	2·96	2·00	3·47	5·41
Mean ...	3·26	2·94	2·46	3·28	2·75	3·36	4·98
HAY.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
1872 ...	1·40	1·50	...	1·00	...	·98	1·16
1873 ...	1·32	1·61	...	1·21	1·51	1·39	1·25
1874 ...	1·27	1·54	...	1·02	2·00	1·08	1·43
1875 ...	1·32	1·37	...	1·26	1·50	1·35	·84
1876 ...	1·33	1·15	...	1·21	1·00	1·42	1·46
1877 ...	1·22	1·43	...	1·95	1·00	1·21	1·31
1878 ...	1·17	1·22	1·30	1·13	1·00	1·13	1·30
1879 ...	1·21	1·66	1·33	·97	1·00	1·19	1·22
1880 ...	1·45	1·45	1·96	1·12	1·25	1·52	1·51
1881 ...	1·20	1·33	1·95	·96	1·25	1·13	1·27
1882 ...	1·13	1·35	1·16	·72	·75	1·29	1·30
Mean ...	1·27	1·42	1·54	1·14	1·23	1·24	1·28

NOTE.—All the calculations in this table were made in the office of the Government Statist, Melbourne. For the land under and total produce of each crop in the respective colonies during the ten years ended with 1882-3, see Summary of Australasian Statistics (third folding sheet) *ante*.

Colonies
with highest
and lowest
average
yields.

773. It will be observed that, according to the mean of the whole period, the average produce of wheat, oats, barley, and potatoes is much the highest in New Zealand, and that of hay is highest in Queensland. The lowest yield of wheat, oats, barley, and hay is in South Australia; and the yield of potatoes is lowest in Queensland. Victoria stands third in regard to the average per acre of barley, but fourth in regard to each of the other crops named.

Average pro-
duce 1881-2
and previous
years com-
pared.

774. It will further be noticed that in the latest year respecting which the table affords information the average produce of oats and potatoes in Victoria, of wheat, oats, and barley in New South Wales, of all the crops, except barley, in Tasmania, and of potatoes and hay in New Zealand, was above the mean of the eleven years to which reference is made; but that in Queensland, South Australia, and Western Australia the average produce of all the crops was below the mean of that period.

775. The next table shows the acreage under wheat, oats, barley, and potatoes in the United Kingdom, the Cape of Good Hope, in the principal countries on the continent of Europe, and in the United States of America. All the information has been taken from official documents :—

Land under crop in British and Foreign countries.

LAND UNDER CERTAIN CROPS IN THE UNITED KINGDOM, THE CAPE COLONY, AND FOREIGN COUNTRIES (000'S OMITTED).

Country.	Year.	Number of Acres under—				
		Wheat.	Oats.	Barley.	Rye.	Potatoes.
The United Kingdom...	1882	3,164,	4,245,	2,452,	64,	1,388,
Cape of Good Hope ...	1875	188,	114,	29,	...	9,
Austria ...	1881	2,455,	4,399,	2,582,	4,628,	2,449,
Belgium ...	1866	700,	567,	108,	714,	423,
Denmark ...	1876	140,	864,	699,	575,	96,
France ...	1881	17,189,*	8,584,	2,529,	4,390,	3,343,
Germany ...	1881	4,489,	9,249,	4,034,	14,606,	6,836,
Holland ...	1880	229,	291,	117,	487,	347,
Hungary ...	1881	6,226,	2,338,	2,228,	...	909,
Italy ...	1875-80	11,700,	939,	1,180,	...	169,
Norway ...	1875	11,	224,	138,	37,	86,
Russia in Europe ...	1872	28,743,	32,819,	15,512,	66,399,	3,169,
Sweden ...	1880	...	2,433,†	...	1,087,‡	380,
United States ...	1881	37,709,	16,832,	1,968,	1,789,	...

776. The agricultural statistics collected by the Imperial Board of Trade do not give the amount of produce raised in the United Kingdom. The official returns of the Cape Colony and many Foreign countries, however, contain statements of produce, and these, so far as they are available, are given in the following table. The produce of potatoes is not returned in tons, as in the Australasian colonies, but in bushels :—

Gross yield of crops in Foreign countries.

GROSS PRODUCE OF CERTAIN CROPS IN THE CAPE COLONY AND FOREIGN COUNTRIES (000'S OMITTED).

Country.	Year.	Number of Bushels § raised of—				
		Wheat.	Oats.	Barley.	Rye.	Potatoes.
Cape of Good Hope ...	1875	1,688,	918,	448,	...	371,
Austria ...	1881	39,894,	92,423,	45,334,	77,538,	273,976,
Belgium ...	1866	14,203,	23,364,	3,666,	17,562,	67,737,
Denmark ...	1876	3,894,	24,267,	17,998,	13,791,	10,357,
France ...	1881	266,228,*	212,432,	48,357,	65,262,	366,596,
Germany ...	1881	75,639,	138,109,	91,517,	200,138,	1,003,253,
Holland ...	1880	5,721,	13,111,	4,819,	9,079,	38,290,
Hungary ...	1881	85,591,	45,922,	38,459,	...	82,941,
Italy ...	1875-80	139,971,	18,455,	17,709,	...	27,722,
Norway ...	1875	276,	8,896,	4,285,	1,016,	19,591,
Russia in Europe ...	1872	157,938,	543,623,	124,754,	546,832,	370,876,
Sweden ...	1880	3,042,	46,824,	14,274,	18,282,	55,456,
United States ...	1881	368,661,	403,756,	39,903,	20,072,	...

* Including spelt (*Triticum spelta*). † Including barley and mixed corn. ‡ Including wheat. § The produce was originally given in Imperial bushels, except in the case of the United States, in which it was quoted in Winchester bushels. These have been converted into Imperial bushels upon the assumption that a Winchester bushel is equivalent to 969,447 of an Imperial bushel. For the standard weight of cereals per Imperial bushel see paragraph 810 post. An Imperial bushel of potatoes weigh about 56 lbs.

Average
yield of
wheat in
United
Kingdom

777. Although, as has been already said, no official return is made of the produce of crops in the United Kingdom, estimates more or less reliable have frequently been made by private persons, especially of the wheat yield. The London *Times* of the 1st November, 1879, gives a statement, evidently prepared with great care, of the assumed yield per acre of this crop in the fourteen years ended with 1879, with the following result:—

AVERAGE PRODUCE PER ACRE OF WHEAT IN THE UNITED
KINGDOM, 1866 TO 1879.

Bushels per acre.				Bushels per acre.			
1866	...	...	27	1873	...	...	25
1867	...	...	25	1874	...	...	31
1868	...	...	34	1875	...	...	23
1869	...	...	27	1876	...	...	27
1870	...	...	32	1877	...	...	22
1871	...	...	27	1878	...	...	30
1872	...	...	23	1879	...	...	18

Wheat yield
in United
Kingdom
and colonies
compared.

778. The average produce in the 14 years was $26\frac{1}{2}$ bushels per acre, which is much above the yield in any of the Australasian colonies except New Zealand. The yield in 1879 (18 bushels to the acre) is stated to have been the lowest for 63 years, or since 1816, but even this is much above the average in any of these colonies except New Zealand and Tasmania.

Yield of
wheat, oats,
and barley
in United
Kingdom,
1882.

779. An estimate for the year 1882 of the produce of wheat, oats, and barley in the United Kingdom was quoted by Major P. G. Craigie, F.S.S., in a paper read before the Statistical Society of London,* on the 16th January, 1883, with the following result:—

ESTIMATED PRODUCE OF WHEAT, OATS, AND BARLEY IN THE UNITED
KINGDOM, 1882.

				Total Number of Bushels.	Bushels per acre.		
Wheat	...	...	...	83,920,000	...	26·5	
Oats	...	...	...	176,240,000	...	41·5	
Barley	...	...	...	81,272,000	...	33·2	

Yield of crops
in United
Kingdom
and
colonies.

780. It will be observed that the average produce of wheat in the United Kingdom in 1882 was exactly equal to that of the 14 years already mentioned, which it was stated was much above the average of any of the Australasian colonies except New Zealand. A reference to a previous table † will show that the average of oats and barley was much higher than the average in any one of these colonies.

Average
yield of
crops in
Foreign
countries.

781. The average produce per acre in most of the countries named in a previous table has been calculated in the office of the Government Statist, Melbourne, and is given in the following table:—

* See Journal of the Statistical Society, Vol. XLVI., page 17, Stanford, 55 Charing Cross, London, S.W.

† See table following paragraph 772 *ante*.

AVERAGE PRODUCE PER ACRE OF CERTAIN CROPS IN THE CAPE COLONY AND FOREIGN COUNTRIES.

Country.	Year.	Bushels* per Acre of—				
		Wheat.	Oats.	Barley.	Rye.	Potatoes.
Cape of Good Hope ...	1875	9·0	8·1	15·4	...	41·2
Austria ...	1881	16·3	21·0	17·6	16·8	111·9
Belgium ...	1866	20·3	41·2	33·9	24·6	160·1
Denmark ...	1876	27·8	28·1	25·7	24·0	108·0
France ...	1881	15·5†	24·7	19·1	14·9	109·7
Germany ...	1881	16·9	14·9	22·7	13·7	146·8
Holland ...	1880	25·0	45·1	41·2	18·6	110·3
Hungary ...	1881	13·7	19·6	17·2	...	91·2
Italy ...	1875-80	12·0	19·6	15·0	...	164·0
Norway ...	1875	25·1	39·7	31·0	27·5	227·8
Russia in Europe ...	1872	5·5	16·5	8·0	8·2	117·0
United States ...	1881	9·8	24·0	20·3	11·2	...

782. It will be observed that the acreable yield of wheat in the year named was nearly 28 bushels in Denmark, 25 bushels in Norway and Holland, over 20 bushels in Belgium, 17 bushels in Germany, 16 bushels in Austria, 15½ bushels in France, and 14 bushels in Hungary, all of which were above the average of Victoria; but the wheat yields of Italy, the United States, Germany, the Cape of Good Hope, and European Russia, were below the average of this colony. †

Yield of wheat in Foreign countries and Victoria.

783. According to the figures, the average yield of oats is higher in Victoria* than in the Cape of Good Hope, Germany, or European Russia, and about equal to that in Italy or Hungary, but lower than in any other of the countries named; the yield of barley is about the same as in the United States, higher than in the Cape of Good Hope, Austria, France, Hungary, Italy, or European Russia, but below that in the other countries. Assuming a bushel of potatoes to weigh 56 lbs., the yield in Victoria would appear to be above that in any of the countries named except Belgium, Germany, Italy, and Norway.

Yield of oats, barley, and potatoes in Foreign countries and Victoria.

784. 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, as well as for the instruction of students in agriculture, a block of 4,806 acres (subsequently increased by 40 acres) was reserved in 1874 at Cashel, situated in Moira, a county in the North-eastern district of Victoria, on which to found a Government Experimental Farm; but it was not until April, 1877, that the fencing-in of the land was commenced, after which, in May, 1878, a tender for grubbing, burning-off,

Government Experimental Farm.

* See footnote (§) to table following paragraph 776 ante. † Including spelt (*Triticum spelta*).
 ‡ See table following paragraph 771 ante.

and ploughing was accepted. The existence of the farm, however, really dates from November, 1878, when a manager was appointed, and live stock was placed on the land, and in the following April the first crop of wheat was sown on about 40 acres, which was harvested in due course in the December and January following—producing an average of 40 bushels per acre. Besides this, 20 acres were laid out with experimental crops, and a further area was placed under green stuff. By April, 1881, 430 acres had been grubbed and cleared, of which 250 acres had been broken up under the plough, and about 30 acres had been planted with vines, olives, oranges, citrons, limes, figs, and other fruit trees; whilst the experimental grounds already alluded to had been divided into plots of one-tenth of an acre each, on which a series of experiments in rotation cropping, various systems of manuring, &c., had been commenced.

Present
state of Ex-
perimental
Farm.

785. Since then the farm has had some difficulties to contend with, but these have now been surmounted, and there is every reason to believe that in a short time it will become self-supporting.* During the financial year 1882-3 the receipts from the sale of produce were £1,446 13s. 9d., and the total expenditure was £1,296 11s. 0d., thus leaving a credit balance of £150 2s. 9d. The income would, no doubt, have been larger had it not been for a severe winter, which had the effect of reducing the condition of the live stock. The live stock now on the farm consists of 24 horses, 44 short-horned cattle, 18 Hereford cattle, 152 store and milch cows, 2,603 sheep and lambs, and 10 pigs, the whole being valued at £2,751 18s. Additional permanent improvements have been made during the year; additions have also been made to the stock of farming implements, furniture, &c.; 240 acres are now under cultivation, exclusive of the olive plantation, vineyard, &c., and 452 acres have been grubbed and cleared, and 280 acres simply cleared. The principal crops in 1882-3 were wheat, barley, oats, and hay.

New
industries
started.

786. During the past year the manufacture of wine has been started, with the result that the district is found suitable for vine growing and wine making. An oil press has also been erected, and the manufacture of olive oil commenced with favorable results. The farm is a benefit to farmers in supplying them with good seed wheat at reasonable rates; and also bull calves, with which to improve the breed of their cattle.

Employment
of Indus-
trial School
boys.

787. Originally, students were received at the farm, but these left after a trial of two years, when it was decided not to take any more, but, instead, to educate to farming pursuits boys to be selected from the inmates of the Industrial Schools, who, it was judged, would, in

* This and the next two paragraphs have been corrected to date by Mr. D. Martin, Secretary for Agriculture.

consequence of this training, be enabled to obtain situations in the country the more readily. The suggestion having been adopted, 16 boys were chosen, and are now regularly employed on the farm. The farm manager has reported very favorably on their conduct, and there is no doubt that the change will be exceedingly beneficial to the boys, both as regards their health and fitting them to become useful members of society.

788. Only in the last six years and three previous ones, viz., 1870, 1873, and 1874, has the colony raised enough breadstuffs for the consumption of its own inhabitants. In each of these nine years there was a surplus of Victorian-grown wheat remaining for export, which amounted in 1882 to about three and a third million, in 1881 to nearly four million, in 1880 to over three and a half million, and in each of the two previous years to about a million, bushels. This will be seen by the following table, which shows, for each of the years from 1840 to 1882, the mean population of Victoria, the quantity of breadstuffs available for consumption, distinguishing the Victorian-grown from the imported; also the probable manner of consumption, distinguishing the estimated quantity of wheat used for seed, or for the feeding of live stock, poultry, &c., from the wheat, flour, bread, and biscuit used for food, the total quantity of the latter being shown as well as the quantity per head:—

Breadstuffs available for consumption.

BREADSTUFFS AVAILABLE FOR CONSUMPTION, 1840-1882.

Year.	Mean Population.	Wheat, Flour, Bread, and Biscuit.*					
		Available for Consumption.			Probable Manner of Consumption.		
		Grown in Victoria.	Imported after deducting Exports.	Total.	For Seed, &c.	For Food.	
						Total.	Per Head.
		bushels.	bushels.	bushels.	bushels.	bushels.	
1840	8,056	12,600	57,771	70,371	3,880	66,491	8.25
1841	15,353	50,420	116,350	166,770	3,404	163,366	10.64
1842	22,107	47,840	119,004	166,844	4,864	161,980	7.33
1843	23,951	55,360	58,616	113,976	9,348	104,628	4.37
1844	25,418	104,040	98,581	202,621	13,839	188,782	7.43
1845	29,007	138,436	74,699	213,135	22,933	190,202	6.56
1846	34,807	234,734	43,928	278,662	31,604	247,058	7.10
1847	40,635	345,946	36,871	382,817	35,359	347,458	8.55
1848	47,163	349,730	64,726	414,456	38,775	375,681	7.97
1849	58,805	410,220	76,092	486,312	48,494	437,818	7.45
1850	71,191	525,190	55,564	580,754	57,020	523,734	7.36
1851	86,825	556,167	216,811	772,978	59,247	713,731	8.22
1852	132,905	733,321	1,208,006	1,941,327	33,646	1,907,681	14.35
1853	195,378	498,704	1,499,994	1,998,698	15,107	1,983,591	10.15
1854	267,371	154,202	1,385,465	1,539,667	25,654	1,514,013	5.66
1855	338,315	250,091	1,985,496	2,235,587	85,372	2,150,215	6.36
1856	380,942	1,148,011	2,236,406	3,384,417	160,310	3,224,107	8.46
1857	430,347	1,858,756	1,958,905	3,817,661	174,460	3,643,201	8.47
1858	483,827	1,808,439	1,504,760	3,313,199	156,468	3,156,731	6.52

* The quantities of flour, bread, and biscuit imported and exported are reduced to their equivalent in bushels, on the assumption that 1 bushel of wheat produces 45 lbs. of either of those articles.

BREADSTUFFS AVAILABLE FOR CONSUMPTION, 1840-1882—*continued.*

Year.	Mean Population.	Wheat, Flour, Bread, and Biscuit.*					
		Available for Consumption.			Probable Manner of Consumption.		
		Grown in Victoria.	Imported after deducting Exports.	Total.	For Seed, &c.	For Food.	
						Total.	Per Head.
bushels.	bushels.	bushels.	bushels.	bushels.	bushels.		
1859	517,390	1,563,113	1,957,610	3,520,723	214,185	3,306,538	6·39
1860	534,055	2,296,157	1,565,423	3,861,580	322,503	3,539,077	6·62
1861	539,824	3,459,914	1,522,517	4,982,431	393,844	4,588,587	8·50
1862	548,080	3,607,727	183,106	3,790,833	324,018	3,466,815	6·33
1863	562,960	3,008,487	191,107	3,199,594	298,784	2,900,810	5·15
1864	586,450	1,338,762	1,868,990	3,207,752	250,080	2,957,672	5·04
1865	611,218	1,899,378	1,800,932	3,700,310	357,256	3,343,054	5·47
1866	629,038	3,514,227	1,754,699	5,268,926	417,176	4,851,750	7·71
1867	644,276	4,641,205	15,190	4,656,395	433,978	4,222,417	6·55
1868	663,092	3,411,663	162,038	3,573,701	519,608	3,054,093	4·61
1869	687,202	4,229,228	719,589	4,948,817	577,028	4,371,789	6·36
1870	713,195	5,697,056	- 95,654	5,601,402	568,334	5,033,068	7·06
1871	737,005	2,870,409	1,179,583	4,049,992	669,218	3,380,774	4·59
1872	753,198	4,500,795	389,963	4,890,758	653,128	4,237,630	5·63
1873	765,511	5,391,104	-138,088	5,253,016	699,952	4,553,064	5·95
1874	777,656	4,752,289	- 40,714	4,711,575	665,872	4,045,703	5·20
1875	787,337	4,850,165	200,369	5,050,534	642,802	4,407,732	5·60
1876	796,558	4,978,914	258,931	5,237,845	802,834	4,435,011	5·57
1877	808,605	5,279,730	- 384,118	4,895,612	1,129,128	3,766,484	4·66
1878	821,466	7,018,257	-1,005,968	6,012,289	1,383,244	4,629,045	5·64
1879	834,030	6,060,737	- 957,384	5,103,353	1,414,376	3,688,977	4·42
1880	850,343	9,398,858	-3,578,733	5,820,125	1,954,570	3,865,555	4·55
1881	868,942	9,727,369	-3,892,974	5,834,395	1,853,458	3,980,937	4·58
1882	890,470	8,714,377	-3,321,532	5,392,845	1,938,724	3,454,121	3·88

NOTE.—The minus sign (—) indicates that the exports exceeded the imports by the quantity represented by the figures to which it is prefixed.

Allowance
for seed,
waste, &c.

789. The figures in the last column but two (For Seed, &c.) are intended to represent the whole quantity of wheat used otherwise than for the food of human beings. This is estimated arbitrarily at 2 bushels per acre of land returned as being under wheat in the year following that to which the figures in any line relate. It is known that the proportion actually sown is generally much less than this; but as a certain quantity of wheat is used for feeding swine, poultry, &c., and some is wasted or becomes spoilt, the allowance made has been thought not too high. The figures for 1882, however, would seem to point to an opposite conclusion. Perhaps, since Victoria has become a wheat exporting country, the wheat wasted and used for feeding the lower animals is less than formerly, and certainly it cannot be expected to bear a fixed ratio to the land placed under cultivation, as the quantity used for seed undoubtedly does. If $1\frac{1}{2}$ bushel per acre be considered a sufficient allowance for seed, the quantity left for consumption, waste, &c., would be 3,938,802 bushels, equal to 4·42 bushels per head;

* See footnote to preceding page.

or, if only 1 bushel per acre be allowed for seed, the residue would amount to 4,423,483 bushels, or nearly 5 bushels per head.

790. The estimated average quantity of breadstuffs available for food to each individual of the population is shown in the last column of the table. This will be found to vary in different years, ranging from over 14 bushels in 1852, and between 10 and 11 bushels in 1841 and 1853, to between 4 and 5 bushels in 1843, 1868, 1871, 1877, and the three years ended with 1881, and to less than 4 bushels in 1882, the figures for that year showing a smaller average than those for any previous one.

Consumption of breadstuffs per head.

791. The quantity of breadstuffs available for annual food-consumption per head has averaged 5.78 bushels over the whole period of forty-three years, but during the last five years it has averaged only 4.62 bushels. In the present state of our population, it may be fair to assume that from $4\frac{1}{2}$ bushels to $4\frac{3}{4}$ bushels per head, irrespective of the quantity required for seed, is amply sufficient to supply the wants of any given year.

Average consumption of breadstuffs.

792. In the United Kingdom, animal food, in consequence of its high price, is used much more sparingly than it is in this country, especially by the working classes, and therefore, as a natural consequence, the consumption of breadstuffs in proportion to the numbers of the population is somewhat higher than it is here. The following table shows the estimated mean population of the United Kingdom during each of the fourteen harvest years (or periods extending from the 1st September to the 31st August) ended with 1879-80; also the total number of bushels and number of bushels per head of grown and imported wheat available for consumption, after deducting seed, in each of the same years:—

Breadstuffs available for consumption in United Kingdom.

BREADSTUFFS AVAILABLE FOR CONSUMPTION IN THE UNITED KINGDOM, 1867 TO 1880.

Year ended 31st August.	Mean Population.	Bushels of Wheat* available for Food.	
		Total Number.	Number per Head.
1867	30,248,936	152,320,000	5.03
1868	30,523,478	155,200,000	5.08
1869	30,814,914	189,360,000	6.14
1870	31,108,133	176,560,000	5.68
1871	31,410,776	176,400,000	5.61
1872	31,728,316	170,320,000	5.37
1873	32,028,317	174,640,000	5.45
1874	32,325,778	174,240,000	5.39
1875	32,641,568	202,720,000	6.21
1876	32,978,682	184,512,000	5.59
1877	33,329,099	174,568,000	5.24
1878	33,681,904	175,520,000	5.21
1879	34,036,546	209,936,000	6.17
1880	34,388,503	192,000,000 †	5.58

* The total number of bushels of wheat available for consumption has been taken from an able article entitled, "The Great Harvest Failure," in the *Statist*, London Journal, of the 8th November, 1879. The calculations have been made in the office of the Government Statist, Melbourne.

† Estimated.

Average consumption of wheat in United Kingdom.

793. As a result of calculations derived from the figures in the table, it appears that in the fourteen years named the average quantity of wheat available for consumption in the United Kingdom was 5.55 bushels per head, or upwards of half a bushel per head more than is apparently found sufficient for the requirements of the Victorian population.

Consumption of breadstuffs per head in United States.

794. From somewhat similar calculations taken from the official returns of the United States, the estimated consumption of wheat per head of the population of that country ranged, during the fourteen years ended with 1880, from 4.08 Winchester bushels* in 1867 to 6.09 in 1878, the mean during the period being 5.30 Winchester bushels, or about 5.13 Imperial bushels. This result, it will be observed, is somewhat higher than that shown by the Victorian returns for recent years. It should be pointed out, however, that, in the United States returns, no deduction has been made for the wheat required for seed, so that the quantity available for food consumption is considerably less than that shown by the figures.

Imports and exports of breadstuffs, 1837 to 1882.

795. The imports and exports of breadstuffs during the forty-six years, 1837 to 1882, are set down in the following table. It will be observed that, after deducting the value of the quantities sent away, there remains a balance amounting to nearly $8\frac{1}{2}$ millions sterling paid by the colony for breadstuffs imported :—

IMPORTS AND EXPORTS OF BREADSTUFFS,† 1837 TO 1882.

Wheat, Flour, Bread, and Biscuit.		Quantity.	Value.
		bushels.	£
Imported, 1837 to 1882	... ..	32,551,223	13,817,518
Exported, „ „	... ..	19,313,163	5,392,668
Imports in excess of exports...		13,238,060	8,424,850

Net imports of agricultural products.

796. The following are the values of the net imports—*i.e.*, the values of imports after the values of the exports have been deducted—of certain articles of farm and garden produce during each of the six years ended with 1882. All the articles named are capable of being produced, and all, or nearly all, are to a certain extent now produced in the colony :—

* The Winchester bushel is smaller than the Imperial bushel by one thirty-second ($\frac{1}{32}$) part.

† The quantity and value of breadstuffs imported and exported during each year will be found in the Statistical Summary of Victoria (first folding sheet) *ante*.

NET IMPORTS* OF CERTAIN ARTICLES OF AGRICULTURAL PRODUCE, 1877 TO 1882.

Articles.	Balance of Imports over Exports in—					
	1877.	1878.	1879.	1880.	1881.	1882.
	£	£	£	£	£	£
Oats	95,071	80,140	92,176	12,938	74,924	29,621
Barley	25,481	48,328	87,982	21,000	...	3,033
Pearl barley	1,368	1,584	2,907	248	...	...
Malt	76,867	37,162	54,716	18,661	...	...
Maize	123,357	164,578	154,717	105,849	105,739	32,379
Maizena	7,365	2,359	3,668	4,171	7,654	5,098
Beans, pease, and split pease	2,456	2,057	2,191	...	...	...
Fruit—green, bottled, dried, currants and raisins	153,414	88,171	107,319	111,603	154,637	166,059
Jams, jellies, and preserves	350	...	...	...	...	2,787
Nuts, almonds, walnuts	6,064	4,565	5,497	3,208	7,349	6,722
Hops	43,782	41,461	20,596	24,637	28,442	31,639
Chicory	3,300	1,906	257	...	...	171
Pickles	4,284	1,843	6,457	295	5,508	7,371
Olive and salad oil ...	18,846	16,352	16,351	15,562	12,014	17,569
Tobacco, cigars, and snuff	148,688	45,372	24,921	...	31,270	96,206
Vegetables (preserved)	...	1,409	498	717	...	...
Canary seed	1,857	1,228	1,008	1,260	1,248	1,063
Grass and clover seed	19,618	12,616	13,704	5,226	2,990	9,560
Total ...	732,168	551,131	594,965	325,375	431,775	409,278

797. It will be observed that beans and pease are absent from the list for the last three years, and barley, malt, and preserved vegetables for the last two years; also, that jams, jellies, and preserves, which had been absent from the list since 1877, re-appeared in 1882, with net imports amounting to £2,787. Decreased imports of agricultural products.

798. In addition to the articles named in the above table, eggs, of which it might reasonably be supposed that Victoria would produce sufficient for her own consumption, were imported in 1882 to the value of £8,464, and exported to the value of only £505, the difference in favour of the former being £7,959. The value of the imports of eggs in 1881 exceeded that of the exports by £6,926, in 1880 by £6,693, in 1879 by £9,479, in 1878 by £11,597, and in 1877 by £13,550. Net import of eggs.

799. Of every thousand acres cultivated during the past season, 475 acres were placed under wheat; 83 under oats; 21 under barley; 17 under potatoes; 152 under hay; 142 under green forage; and 110 Proportion of land under each crop.

* The total imports and total exports of these articles during 1881 will be found in the table of Imports and Exports in Part Interchange *post*, chiefly under Order 22.

under other kinds of crops. Relatively to the whole area under tillage, the tendency of late years has been to crop a larger extent of land with wheat, and a smaller extent with the remaining crops. The following table shows the proportion that the land under different crops has borne to the total area under tillage during each of the last nine years :—

PROPORTION OF LAND UNDER EACH CROP TO TOTAL UNDER CULTIVATION, 1875 TO 1883.

Land under—	Proportion to Total Land under Tillage.									
	1874-5.	1875-6.	1876-7.	1877-8.	1878-9.	1879-80.	1880-81.	1881-2.	1882-3.	
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	
Wheat ...	32·90	28·52	32·61	39·74	42·98	41·89	48·91	50·87	47·50	
Oats ...	11·36	11·01	9·36	7·41	8·35	9·93	6·71	8·07	8·32	
Barley ...	2·92	2·80	2·03	1·35	1·42	2·56	3·44	2·67	2·14	
Potatoes ...	3·48	3·27	3·29	2·61	2·27	2·46	2·30	2·15	1·68	
Hay ...	11·76	13·78	11·97	12·46	10·74	11·93	12·50	11·65	15·16	
Green forage ...	25·14	27·37	29·45	27·48	24·94	18·11	13·24	13·28	14·23	
Other tillage ...	12·44	13·25	11·29	8·95	9·30	13·12	12·90	11·31	10·97	
Total ...	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	

Minor crops.

800. In addition to the principal crops of which mention has been made, various descriptions of minor crops are also raised. It is not, however, presumed that the whole of such crops, or the full measure to which they are grown, is recorded by the collectors. It is certain that they are often raised in gardens, in which case the different kinds would not be distinguished in the returns. It is also probable that they may be sometimes grown upon allotments of a smaller extent than one acre, which are not taken account of. The following list must, therefore, be looked upon as indicating the nature of certain minor crops grown in Victoria, rather than the extent to which those crops have been cultivated during the last six years :—

MINOR CROPS,* 1878 TO 1883.

Nature of Crop.	1877-8.	1878-9.	1879-80.	1880-81.	1881-2.	1882-3.
Arrowroot ...	acres ...	...	4	3	9	7
	tons (root)	...	3	17	37	32
	cwt., manfd.	...	7	10	8	30
Artichokes ...	acres ...	...	...	3	...	2
	tons ...	...	...	45	...	16
Beet, carrots, parsnips, and cabbage	acres ...	470	402	374	348	433
	tons ...	2,272	1,272	2,504	2,403	3,281
Broom millet...	acres ...	7	6	...	2	9
	fibre, cwt.	...	...	...	...	10
	seed, bush.	...	...	...	100	220

* Exclusive of those grown in gardens.

MINOR CROPS,* 1878 TO 1883—continued.

Nature of Crop.		1877-8.	1878-9.	1879-80.	1880-81.	1881-2.	1882-3.
Buckwheat ...	acres ...	2	...	1	...	...	3
	bushels ...	11	...	12	...	...	65
Canary seed ...	acres ...	82	4	1	57	127	41
	bushels ...	825	150	2	341	1,241	192
Chicory ...	acres ...	256	155	392	230	207	283
	tons ...	1,333	653	1,764	960	781	1,209
Coriander Seed	acres ...	...	...	...	...	2	3
	lbs. ...	...	...	...	...	1,008	810
Currants ...	acres ...	...	...	...	1	...	...
	bushels ...	...	...	...	8	...	...
Fenugreek † ...	acres ...	...	...	...	...	...	1
	lbs. ...	...	...	...	...	...	300
Flax ...	acres ...	33	4	5	13	21	7
	fibre, cwt.	40	...	12	31	21	31
	linseed, bsh.	125	...	30	67	91	43
Garden seeds...	acres ...	16	4	117	29	21	14
	cwt. ...	...	4	485	812	119	43
Gooseberries ...	acres ...	...	...	...	...	...	1
	cwt. ...	...	...	...	...	...	16
Grass and clover seeds ...	acres ...	1,846	2,824	2,237	2,817	2,061	2,290
	bushels ...	28,840	34,432	32,031	26,320	32,085	28,740
Green pease ...	acres ...	...	37	...	...	21	10
	tons ...	...	50	...	...	26	25
Hops ...	acres ...	274	203	267	428	564	1,034
	lbs. ...	218,848	130,816	284,480	307,328	453,040	1,035,216
Kohl-rabi ...	acres ...	...	...	...	...	...	1
	cwt. ...	...	...	...	...	...	260
Lucerne for seed ...	acres ...	...	3	7	...	...	...
	bushels ...	...	16	50	...	...	...
Maize ...	acres ...	1,215	1,939	2,447	1,769	1,783	2,702
	bushels ...	22,050	40,754	61,887	49,299	81,007	131,620
Mangel-wurzel	acres ...	1,320	888	1,027	1,284	1,044	1,087
	tons ...	15,465	8,275	14,897	12,640	14,989	16,656
Medicinal herbs	acres ...	...	...	...	2	...	...
	tons ...	...	...	...	...	...	...
Mulberry trees	acres ...	21	18	4	14	4	3
	number ...	14,310	12,460	...	...	...	379
Mustard ...	acres ...	58	39	92	233	97	81
	cwt. ...	167	121	447	771	444	379
Olives ...	acres ...	10	20	10	17	† 10	2
	fruit, cwt.	...	9	...	17	...	35
Onions ...	oil, gallons	...	...	...	15	...	...
	acres ...	816	1,069	1,040	1,056	1,134	1,341
	tons ...	3,055	3,600	7,347	4,979	10,190	8,280
Opium poppies	acres ...	3	3	5	15	4	9
	lbs of opium	...	...	80	171	80	225
	heads ...	...	60,000	...	...	...	...
Oranges ...	acres ...	...	6	2	20	5	...
	cases ...	...	...	30	6	...	...
Osiers ...	acres ...	...	...	...	31	4	4
	tons ...	...	...	...	1	9	2
Pease and beans	acres ...	17,286	15,153	21,462	23,378	25,937	26,832
	bushels ...	241,007	248,436	574,954	403,321	621,668	689,507
Prickly comfrey ...	acres ...	...	...	...	1	8	...
	tons ...	...	...	...	100	160	...

* Exclusive of those grown in gardens.

† *Fœnum græcum*, the *Trigonella* of Linnæus.

‡ Reported to have failed.

MINOR CROPS,* 1878 TO 1883—continued.

Nature of Crop.			1877-8.	1878-9.	1879-80.	1880-1.	1881-2.	1882-3.
Pumpkins, melons, cu- cubers, &c.	acres	...	46	205	99	64	81	35
	tons	...	159	1,190	484	416	842	370
Rape for seed	acres	...	...	2	41	14	...	30
	bushels	...	...	25	...	128	...	468
Raspberries ...	acres	...	17	45	94	132	155	203
	cwt.	...	224	476	1,299	1,591	3,067	4,822
Rhubarb ...	acres	...	3	3	...	18	1	9
	tons	...	10	10	...	81	1	40
Rye ...	acres	...	1,075	1,779	1,236	1,569	972	1,137
	bushels	...	9,852	20,816	18,407	13,978	12,653	23,244
Sheep's parsley	acres	...	...	3	...	...	...	...
	lbs.	...	...	1,000	...	...	...	...
Strawberries	acres	...	19	24	19	107	26	16
	cwt.	...	208	323	209	1,421	165	154
Sunflowers for seed ...	acres	...	...	...	2	7	6	6
	bushels	...	...	...	40	142	77	62
Teazles ...	acres	...	...	...	1	2	...	...
	number	...	...	...	8,000	27,000	...	...
Tobacco ...	acres	...	2,327	1,936	531	1,990	1,461	1,313
	cwt.	...	15,827	15,662	† 1,297	17,333	12,876	5,673
Tomatoes ...	acres	...	5	3	...	5	10	15
	cwt.	...	721	220	...	454	1,549	2,265
Turnips ...	acres	...	315	310	192	460	151	125
	tons	...	2,346	1,349	2,054	1,932	1,713	901
Vetches and tares for seed	acres	...	...	...	3	23	5	5
	bushels	...	...	...	62	201	71	83
Vines ‡	acres	...	4,419	4,434	4,284	4,980	4,923	5,732
	wine, galls.	...	457,535	410,333	574,143	484,028	539,191	516,763
Wattle trees ...	brandy, „	...	840	1,561	3,284	3,038	1,453	3,377
	acres	...	13	...	...	30	...	...

Vines.

801. In 1882-3 the area under vines was greater than in any previous year. The quantity of wine returned, however, was less than that returned in 1881-2 by 22,428 gallons, and was also less than that returned in 1879-80, and in the seven years 1869-70 to 1875-6. The season under review is only the third during the last seven years that the number of gallons of wine produced exceeded 500,000, whereas in two previous seasons before the advent of the phylloxera, about the year 1875, it exceeded 700,000 gallons. It is right, however, to point out that this part of the statistics is not quite so reliable as the other portions, since, as grapes come to maturity later than the other crops of which returns are made, only the acreage under vines can be returned for the year to which the remainder of the statistics relate, and the grape crop is necessarily that of the previous season. This partial dealing with the returns of two years may sometimes cause confusion in the minds of

* Exclusive of those grown in gardens.

† The tobacco crop of 1879-80 failed in most of the districts.

‡ The quantity of wine and brandy is for the season prior to that for which the area under vines is returned.

the vine-growers, who may also not always remember the exact particulars of their previous year's crop.

802. An account of the visitation of the phylloxera, and of the measures taken for its suppression, has been kindly contributed by Mr. D. Martin, the Secretary for Agriculture :—

Phylloxera
vastatrix.

“The vine disease caused by the insect known as *Phylloxera Vastatrix* made its appearance known in the Geelong district by a decadence of vigour in the vines, in small patches in different parts of the vineyard, *i.e.*, by a want of strength, and presenting a sickly appearance. The leaves afterwards became yellow round the edges, the plants sickened still further, and after a few years died completely. It was in or about the year 1875 that the disease commenced to demonstrate itself. As the vines died out, they were frequently replaced by others on the same spot by the vignerons, and these vines and cuttings likewise died. The origin of the disease is believed to have arisen by the importation of vines. When vines are diseased, the roots become covered with patches of a yellow orange colour, when viewed with the naked eye, and the rootlets have at their terminal points and at other parts nodules or swellings; in the fissures, also, of the bark on the roots may be seen there little bodies. When viewed with the microscope, these spots are seen to be little clusters of insects, having six legs and two antennæ.

“The disease has been confined to the Geelong district, extending from Gheringhap to Germantown, a distance of about fourteen miles. In order, if possible, to prevent the spread of the disease, an Act* was passed providing for the appointment of inspectors of vineyards, with power to enter any lands whereon vines were grown, for the purpose of ascertaining whether the vines were infected, in which case the fact was to be reported to the Chief Secretary, who might authorize steps to be taken to eradicate the disease, either by destroying the vines or otherwise, no compensation being granted to the proprietor for any loss he might sustain in consequence of such measures. In 1878, thirteen vineyards, containing an area of 75 acres, were found to be diseased; some were partially destroyed and others were wholly rooted out. Six vineyards, containing an area of 35 acres, were destroyed in 1879. In November, 1880, a Select Committee of the Legislative Assembly was appointed to inquire into the condition of the disease, and the best means of eradicating or otherwise mitigating it. The committee reported there was no evidence to show that the insect settled on any vegetation other than vines; that so far as experiments have been carried on no remedy or cure for the disease was known; the time most to be dreaded for the spread of the scourge was about the end of December; and that there was no other cure than entire eradication. It was recommended that a cordon, having a radius of 20 miles, should be drawn round Geelong, and that no part of the vines within that cordon, whether cuttings, leaves, fruit, or roots should be removed outside of it; that all vines within that cordon should be inspected, and all reported as diseased, or situated within a three-mile radius of any reported as diseased, should be destroyed by the complete rooting up of such vines, and burning the roots, the owners being awarded a moderate compensation, based, not upon the value of the vines, but of the grape crop which might have been expected during the next three years.

“Consequently upon this report, another Act† was passed, repealing all former ones relating to vines or vineyards, and providing for the proclamation of infected localities as “Vine Disease Districts,” to which inspectors should be appointed, on the receipt of whose reports the Minister might order any diseased vines to be uprooted, as well as all other vines within a radius of three miles thereof whether diseased or not, compensation being given to owners of diseased vines up to the value of one year's crop, and to owners of vines not diseased up to the value of three years' crops. Persons were, moreover, prohibited, under a penalty not exceeding £100 or imprisonment for any term not exceeding six months, from removing from a “Vine Disease District” any vine or part of a vine. The Governor in Council was also granted power to restrict the importation of vines, vine cuttings, or grapes, and to make regulations for the purpose of carrying the Act into effect. The question, moreover, formed one of the subjects of discussion at the Intercolonial Conference, held in Melbourne, in December, 1880, when it was agreed by the colonies of New South Wales, South Australia, and Victoria, to contribute jointly to the expense of eradicating the disease.

* “*Diseases in Vines Act 1877*,” 41 Vict. No. 595 (18th January, 1878).

† “*Phylloxera Vine Disease Act 1880*,” 44 Vict. No. 684 (28th December, 1880).

“With a view of further preventing the spread of the disease, the “*Phylloxera Vine Disease Act 1880*” was amended towards the close of 1881 by the “*Geelong District Vine Disease Act 1881*,” 45 Vict. No. 718 (24th December, 1881), which gave power to the Minister to order the destruction of all vines growing within the boundaries of the Geelong Vine Disease District, as described in the *Government Gazette* of 12th January, 1881. On this Statute coming into operation, immediate steps were taken to arrange as to the amount to be paid as compensation; and, acting on the powers given, all vines found within the district have been destroyed, except those in the parishes of Birregurra and Warrion, which are situated at from 24 to 45 miles from where any diseased vines were growing, and are, consequently, not likely to be reached by the insect.

“Special attention has been given to destroy all shoots from broken roots remaining in the ground of vines which have been destroyed under the several Acts, and from roots of vines destroyed by the occupiers of land to whom compensation was not paid.

“Compensation, in amounts varying from £1,042 10s. to 1s., has been awarded to the owners of about 2,000 separate properties; about half the number of awards is for cottage vines in the town of Geelong and suburbs. The total amount paid for eradication, compensation, and departmental expenses, up to the end of June, 1883, is £33,767.”

Gardens and orchards.

803. No return is made of the nature of the crops grown or the quantity of produce raised in gardens and orchards. The following table shows the extent of land returned under this description of culture in the last two years:—

LAND UNDER GARDENS AND ORCHARDS, 1882 AND 1883.

Year ended 31st March.				Gardens.	Orchards.	Total.
				acres.	acres.	acres.
1882	...	...	...	11,363	9,267	20,630
1883	...	...	...	9,677	10,048	19,725
	Increase	...	...	...	781	...
	Decrease	...	...	1,686	...	905

Land in fallow.

804. Land in fallow is included in the area under tillage. The number of acres in this condition in 1883 was 159,302, or 14,976 more than in the previous year.

Leases and rental of farms.

805. The average duration of leases of farms from private persons was returned in 1882-3 as averaging from 2 to 6½ years; the extreme figures being 1 year and 14 years. The average rental of agricultural land per acre was stated to be from 6s. 6d. to 19s.; the extreme figures being 2s. 6d. and 80s. The average rental of pastoral land was said to be from 2s. 10d. to 7s.; the extreme figures being 1s. and 20s.

Prices of agricultural produce.

806. Each collector is required to furnish a statement of the price of the principal articles of agricultural produce in his district at the time he makes his rounds. The prices, being those prevailing in the place where the crops are grown, are generally much lower than those obtaining in Melbourne, which are quoted in Part VIII., Interchange, of this work. The following is an average deduced from the returns of all the districts

during each of the last fourteen years. It will be noted that a considerable increase occurred in 1883 in the prices of all the articles except wheat and oats :—

PRICES OF AGRICULTURAL PRODUCE, 1870 TO 1883.

During February and March.		Wheat.		Oats.		Barley.		Potatoes.		Hay.	
		per bushel.		per bushel.		per bushel.		per ton.		per ton.	
		s.	d.	s.	d.	s.	d.	s.	d.	s.	
1870	...	4	3	3	7	4	0	75	0	77	
1871	...	5	4	3	9	4	11	70	0	76	
1872	...	4	8	2	11½	3	6¼	65	6	64	
1873	...	4	9	3	5	4	1	67	4	81	
1874	...	5	9	5	6	5	3	118	3	88	
1875	...	4	5	4	3	4	6	89	0	89	
1876	...	4	7	3	3	3	10	87	0	82	
1877	...	5	10	3	7	3	10	114	0	93	
1878	...	5	1	4	6	4	4	115	0	87	
1879	...	4	2	3	6	4	1	92	4	75	
1880	...	4	0½	2	3½	4	8	69	11	63	
1881	...	4	1¾	2	3	4	11¼	46	3	60	
1882	...	5	0	3	3	3	6	70	0	76	
1883	...	4	9	3	1	4	1	75	4	81	

807. It will be observed that the price of wheat and hay was highest in 1877; and that of oats, barley, and potatoes in 1874; also that the price of barley was lowest in 1882, that of wheat in 1880, and that of oats, potatoes, and hay in 1881. Years of highest and lowest prices.

808. The following statement of the average *Gazette* price of wheat per Imperial quarter* during the seven years ended with 1881 has been taken from an official source,† and that of the average price in 1882 has been taken from the *London Statist*:— Price of wheat in London.

AVERAGE "GAZETTE" PRICE PER QUARTER OF WHEAT IN LONDON.

Month.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January	44 1	44 9	51 7	51 11	39 3	45 11	42 5	46 3
February	41 8	43 1	51 7	51 4	38 0	43 5	41 9	45 7
March	41 6	43 0	51 1	49 7	39 7	45 7	42 7	44 5
April	43 0	44 11	53 4	51 3	41 0	48 1	44 6	46 11
May	42 3	45 1	65 10	51 11	41 0	45 2	44 5	47 0
June	42 3	47 5	64 6	48 0	41 9	45 1	44 6	47 5
July	46 5	48 3	62 9	44 11	44 6	43 9	46 5	49 2
August	52 10	46 0	64 11	44 9	49 1	43 11	48 6	50 5
September	48 4	46 8	59 1	43 8	47 6	41 2	52 3	42 1
October	46 4	46 6	53 7	39 7	48 10	41 9	47 1	40 3
November	47 2	47 11	52 3	40 4	48 9	43 9	45 11	40 11
December	46 3	49 9	51 6	40 3	46 7	44 1	44 7	41 6
The Year...	45 2	46 2	56 9	46 5	43 11	44 4	45 4	45 2

* The imperial quarter is equal to 8 bushels.

† Giffen's Statistical Abstract for the United Kingdom, 1867 to 1881.

Value of
agricultural
produce.

809. The value of agricultural produce in the year ended 31st March, 1883, may be estimated at nearly $6\frac{1}{2}$ millions sterling. The following table shows the means whereby such an estimate is arrived at:—

VALUE OF AGRICULTURAL PRODUCE, 1882-3.

Name of Crop.	Gross Produce and Price.			Estimated Value.		
		£	s. d.	£	s. d.	
Wheat	8,751,454 bushels	@	0 4 9	2,078,470	6 6	
Oats	4,446,027 "	@	0 3 1	685,429	3 3	
Barley	758,477 "	@	0 4 1	154,855	14 5	
Other cereals	844,371 "	@	0 4 0	168,874	4 0	
Potatoes	129,605 tons	@	3 15 4	488,178	16 8	
Other root crops	29,118 "	@	5 0 0	145,590	0 0	
Hay	327,385 "	@	4 1 0	1,325,909	5 0	
Green forage	290,438 acres	@	3 0 0	871,314	0 0	
Tobacco	1,313 "	@	2 16 0	3,676	8 0	
Grapes, not made into wine	15,543 cwt.	@	1 0 0	15,543	0 0	
Wine	516,763 gallons	@	0 4 0	103,352	12 0	
Brandy	3,377 "	@	0 10 0	1,688	10 0	
Other crops	518 acres	@	5 0 0	2,590	0 0	
Garden and orchard produce	19,725 "	@	20 0 0	394,500	0 0	
	Total			6,439,971	19 10	

Specific
weight of
crops.

810. The standard weight of crops in Victoria is reckoned to be 60 lbs. to the bushel for wheat, 40 lbs. for oats, 50 lbs. for barley, and 56 lbs. for maize. The actual weight, however, differs in different districts. Thus wheat, during 1882-3, ranged from 57 lbs. to 65 lbs.; oats, from 35 lbs. to 50 lbs.; barley, from 40 lbs. to 59 lbs.; and maize, 50 lbs. to 60 lbs. In the same year, taking the districts as a whole, the average weight per bushel of wheat was 61 lbs.; of oats, 41 lbs.; of barley, 51 lbs.; and of maize, 55 lbs.

Rates of
agricul-
tural labour.

811. The following figures will show that the average rates of labour on farms were generally higher in 1882-3 than in 1881-2. Rations are allowed in all cases in addition to the wages quoted:—

RATES OF AGRICULTURAL LABOUR,* 1882 AND 1883.

Description of Labour.	1881-2.		1882-3.	
	s.	d.	s.	d.
Ploughmen, per week	19	7	20	2
Farm laborers, "	17	0	18	3
Married couples, "	24	10	25	6
Females, "	10	0	10	6
Mowers, "	30	5	37	4
" per acre	5	10	5	8
Reapers, per week	29	10	34	0
" per acre	10	8	12	8
Threshers, per bushel	0	6	0	7

* See also table of Wages in Part Interchange post.

812. The number and power of steam engines used on farms, and the value of farming plant and improvements, were returned as follows for the year under review and the previous one :—

Plant and improvements on farms.

STEAM ENGINES, IMPLEMENTS, AND IMPROVEMENTS ON FARMS, 1882 AND 1883.

	1881-2.	1882-3.
Steam engines, number	367	417
„ horse-power	3,008	3,217
Value of farming implements and machines...	£2,197,768	£2,304,735
„ improvements on farms ...	£14,167,644	£13,849,370

813. The following figures, which have been obtained by means of averages struck from the returns of the collectors in all the districts, show the rates paid for machine labour in the last two years :—

Machine labour.

MACHINE LABOUR, 1882 AND 1883.

Average Rates Paid for—	1881-2.	1882-3.
	£ s. d.	£ s. d.
Machine reaping, per acre *	0 4 11	0 5 6
„ mowing, „	0 4 6	0 4 11
„ threshing, per 100 bushels †	1 2 5	1 2 10

814. Information as to the numbers of live stock kept was obtained at the census of 1881, and since that time the figures have been brought on by estimates furnished by the municipal authorities. The following are the census numbers, and the numbers at the end of 1882, as derived from the municipal estimates alluded to :—

Live stock, 1881 and 1882.

LIVE STOCK, 1881 AND 1882.

Period.	Horses.	Cattle.			Sheep.	Pigs.
		Milch Cows.	Exclusive of Milch Cows.	Total.		
3rd April, 1881 (enumerated)	275,516	329,198	957,069	1,286,267	10,360,285	241,936
31st December, 1882 (estimated)	280,874	330,192	956,896	1,287,088	10,174,246	237,917
Increase ...	5,358	994	...	821	...	...
Decrease ...	...	...	173	...	186,039	4,019

815. The estimates for 1882, as compared with the numbers returned at the census, show an increase of horses and milch cows, and a falling-off of other cattle, sheep, and pigs. Too much reliance, however, must not be placed on any statement of the numbers of live stock, except such as is derived from the returns of a general census.

Increase or contrary, 1882.

816. Speaking roughly, there were in Victoria, when the census was taken, 3 horses, 15 head of cattle, 118 sheep, and 3 pigs, or, taking the different kinds together, 139 head of stock of these descriptions, large and small, to the square mile.

Stock per square mile.

* Without binding; the average price, with binding, was 10s. 1d. in 1882-3.

† Including winnowing; without winnowing, the average price in 1882-3 was 17s. 9d

Goats, asses,
and mules.

817. Besides the live stock returned at the census, as shown in the table, 68,426 goats, 135 asses, and 78 mules were then enumerated. No attempt has been made to bring these numbers on to any later period.

Poultry.

818. Information respecting the numbers of poultry kept is not obtained except at the taking of a census. The following is a statement of numbers of the different kinds, according to the returns of the censuses of 1871 and 1881:—

POULTRY, 1871 AND 1881.

Year of Census.	Number of Owners of Poultry.	Geese.	Ducks.	Fowls.	Turkeys.	Pea Fowls.	Guinea Fowls.	Pheasants.	Ostriches.
1871 ..	81,347	83,025	137,355	1,636,782	69,756	970	3,542	199	16
1881 ..	97,152	92,654	181,698	2,328,521	153,078	1,701	2,307	40	..
Increase	15,805	9,629	44,343	691,739	83,322	731	..	..	..
Decrease	..	..	..	..	..	..	1,235	159	16

Increase or
decrease of
poultry.

819. It is seen that in ten years an increase of nearly 16,000 took place in the number of keepers of poultry, also a fair increase in all the different kinds of poultry except guinea fowls. Pheasants and ostriches, although not strictly speaking poultry, were returned in 1871, but no ostriches at the latter period; moreover, pheasants fell off in number from 199 in 1871 to 40 in 1881.

Live stock
in British
and Foreign
countries.

820. The following table contains a statement of the number of horses, cattle, sheep, and pigs in the United Kingdom and some of the principal Foreign countries. The information has been derived entirely from official documents:—

LIVE STOCK* IN THE UNITED KINGDOM AND FOREIGN COUNTRIES
(000'S OMITTED).

Country.	Year.	Number of—			
		Horses.	Cattle.	Sheep.	Pigs.
United Kingdom ...	1880	1,929,	9,871,	30,240,	2,863,
Austria ...	1880	1,463,	8,584,	3,841,	2,722,
Belgium ...	1866	283,	1,242,	586,	632,
Denmark ...	1876	352,	1,348,	1,719,	504,
France ...	1879	2,818,	11,576,	22,891,	5,563,
Holland ...	1880	278,	1,470,	848,	335,
Italy ...	1881	...	4,783,	8,596,	1,164,
Hungary ...	1880	1,820,	4,598,	9,252,	...
Norway ...	1875	152,	1,017,	1,686,	101,
Russia ...	1870	16,160,	22,770,	48,132,	9,800,
Sweden ...	1880	465,	2,228,	1,457,	419,
United States ...	1880	11,430,	33,306,	43,577,	36,248,

Live stock
slaughtered.

821. The numbers of live stock slaughtered in Victoria are furnished by the local bodies, but it is probable the returns do not in every case include the animals slaughtered by private persons, and on farms and stations, and, therefore, that more were really slaughtered than the

For live stock in each Australasian colony. see third folding sheet *ante*, also Appendix A *post*.

figures show. The following were the numbers returned for 1881 and 1882, those for the latter year being in every case larger than those for the former:—

LIVE STOCK SLAUGHTERED, 1881 AND 1882.

Year.	Cattle and Calves.	Sheep and Lambs.	Pigs.
1881	236,965	1,884,374	106,796
1882	296,562	2,082,845	120,124
Increase ...	59,597	198,471	13,328

822. The purposes to which the carcasses of the slaughtered animals were appropriated in 1882 were returned as follow:—

Purposes for which stock was slaughtered.

PURPOSES FOR WHICH LIVE STOCK WAS SLAUGHTERED, 1882.

Description of Live Stock.	Numbers Slaughtered for—			
	The Butcher and Private use.	Preserving or Salting.	Boiling down for Tallow.	Total.
Cattle and Calves ...	295,622	620	320	296,562
Sheep and Lambs ...	1,900,461	142,095	40,289	2,082,845
Pigs	67,233	52,863	28	120,124
Total	2,263,316	195,578	40,637	2,499,531

823. The following is an estimate of the gross value of pastoral produce raised on holdings of all descriptions in 1882-3:—

Value of pastoral produce.

VALUE OF PASTORAL PRODUCE, 1882-3.

Nature of Produce.	Value.
Milk, butter, and cheese, from 330,192 milch cows kept, @ £8 10s. ...	£ 2,806,632
Estimated value of stock produced in 1882:—	
Cattle, 330,192, viz., 220,128, @ £8, and 110,064 (calves), @ 30s.	1,926,120
Sheep, 2,543,560, @ 7s. 6d.	953,835
Pigs, 71,375, @ £2 10s.	178,438
Horses, 14,044, @ £8	112,352
Excess of exports over imports of wool, Customs value	3,167,836
Estimated value of wool used in the colony for manufacturing purposes, 2,034,654 lbs., @ 1s. 6d.	152,599
Total	9,297,812

NOTE.—The principle on which the numbers of “stock produced” have been estimated is as follows:—It has been assumed that the increase of cattle amounted to one to every milch cow, and that one-third of the calves born were slaughtered for veal, the remainder taking the place of the older cattle slaughtered. The increase of sheep has been reckoned at 25 per cent. on the total number of both sexes over six months old in the colony, that being the proportionate increase ascertained by Mr. A. J. Skene, Surveyor-General of Victoria, to have taken place during a series of years on nearly 3½ millions of sheep on 34 stations situated in various parts of the colony. The increase of pigs and horses has been arbitrarily estimated at 30 and 5 per cent. respectively upon the total numbers of such stock. The value per head set down for the different kinds of stock is intended to represent the average value per head of all the stock of each kind in the colony, young and old; for although the stock born in the year would be only six months old, on the average, when the year terminated, and would, consequently, not be of so high a value as the figures indicate, yet all the growing or fattening stock may be considered to have become more valuable during the year, and the increase of bulk, and consequently of value, of such stock may fairly be set down as part of the year's produce as much as the stock actually born therein, the numbers of the latter being taken as a basis whereto such values may be applied. The quantity of wool manufactured in Victoria has been ascertained from the various woollen mills. No estimate has been made of the value of meat, tallow, lard, hides, skins, horns, hoofs, bones, &c., as this is supposed to be included in the value of stock produced.

Flour mills. 824. In 1883, as compared with 1882, an increase of 5 occurred in the number of flour mills returned; the wheat operated upon also increased by 377,000 bushels, and the other grain operated upon by nearly 400,000 bushels. A falling-off of 22 took place in the number of hands employed, but an increase of over £4,000 in the estimated value of machinery, lands, and buildings :—

FLOUR MILLS, 1882 AND 1883.

Year ended 31st March.	Number of Mills.	Mills employing—		Amount of Horse-power of steam engines.	Number of Pairs of Stones.	Number of Hands employed.
		Steam-power.	Water-power.			
1882 ...	138	130	8	2,605	449	814
1883 ...	143	140	3	2,695	457	836
Increase	5	10	...	...	...	...
Decrease	...	...	5	90	8	22

Year ended 31st March.	Grain operated upon.		Approximate Total Value of—		
	Wheat.	Other.	Machinery and Plant.	Lands.*	Buildings.
	bushels.	bushels.	£	£	£
1882 ...	6,021,043	229,872	231,930	56,396	173,905
1883 ...	6,397,738	628,116	223,125	61,757	181,445
Increase ...	376,695	398,244	...	5,361	7,540
Decrease ...	...	...	8,805	...	...

**Value of
materials
used and
produced.**

825. In 1881 the statistics were collected by the census sub-enumerators, and consequently it was possible to obtain more complete information than is supplied in ordinary years by the collectors employed by the local bodies, especially in regard to the values of materials operated upon and articles produced, which, in the case of the flour mills, were as follow :—

FLOUR MILLS, 1880-81.

Value of materials operated upon	...	£1,412,099
Value of articles produced	...	1,651,351
Increased value	...	<u>£239,252, or 17 per cent.</u>

Breweries.

826. The breweries returned in the year under review were fewer by 10 than those in the former one. More materials, however, were used and more beer was produced in 1883 than in 1882, and the value of plant, lands, and buildings also increased. In the past year, as compared with the previous one, 2 more breweries employed steam-power, and 12 fewer were worked by manual labour only, which resulted in the hands employed being fewer by 12. The closed breweries were all small, and

* The figures in this column apply to purchased lands only. Three of the mills were upon Crown lands. In these cases no valuation of the land has been given.

were situated at Collingwood, Daylesford, Geelong, Hamilton, Melbourne (2), Richmond, Sale, Sandhurst, Williamstown, and Wood's Point. On the other hand, a new brewery was opened at Echuca.

BREWERIES, 1882 AND 1883.

Year ended 31st March.	Number of Breweries.	Breweries employing—			Amount of Horse-power of Steam Engines.	Number of Hands employed.	Materials used.		
		Steam- power.	Water- power.	Manual Labour only.			Sugar.	Malt.	Hops.
1882... ..	88	53	2	33	476	941	lbs. 11,330,928	bushels. 511,340	lbs. 685,390
1883... ..	78	55	2	21	505	927	12,048,400	594,534	695,938
Increase ...	...	2	...	...	29	...	717,472	83,192	10,548
Decrease ...	10	...	...	12	...	14	...	...	...

Year ended 31st March.	Beer made.	Approximate Total Value of—		
		Machinery and Plant.	Lands.*	Buildings.
	gallons.	£	£	£
1882	12,250,807	129,073	74,405	223,240
1883	13,594,214	142,725	80,815	241,120
Increase ...	1,343,407	13,652	6,410	17,880

827. The value of the sugar, malt, and hops used, and of the beer made, were returned for the census year, but not since. The following are the figures given :—

Value of materials used and produced.

BREWERIES, 1880-81.

Value of materials used	...	...	...	£ 442,885
„ of beer made	...	...	...	780,501
Increased value	...	...	...	<u>337,616, or 76 per cent.</u>

828. The large amount of building carried on in 1881-2, especially in Melbourne and suburbs, and the great demand for bricks resulting therefrom, led to the opening of a number of new brick-making works in that year. Three of these were closed in 1882-3, but the remainder appear to have done a larger business, as increases occurred in the power of steam engines used, in the number of hands employed, in the out-put of bricks, and in the value of pottery manufactured. Moreover, the valuation placed upon plant, lands, and buildings was higher by £45,090

Brickyards and potteries.

* The figures in this column apply to purchased lands only. One of the breweries in 1882 was on Crown lands, and two were on Crown lands in 1883.

than in the previous year. The following are the comparative figures of the two years :—

BRICKYARDS AND POTTERIES, 1882 AND 1883.

Year ended 31st March.	Number of Brick- yards and Potteries.	Number of Machines in use.		Brickyards employing—			Amount of Horse- power of Steam Engines.	Number of Hands employed.
		For tempering or crushing Clay.	For making Bricks or Pottery.	Steam- power.	Horse- power.	Manual Labour.		
1882 ...	198	162	79	17	83	98	318	1,346
1883 ...	195	160	83	24	76	95	407	1,442
Increase	...	...	4	7	...	...	89	96
Decrease	3	2	...	...	7	3	...	...

Year ended 31st March.	Number of Bricks made.	Approximate Total Value of—				
		Bricks made.	Pottery made.	Machinery and Plant.	Lands.*	Buildings.
		£	£	£	£	£
1882 ...	94,398,225	185,000	62,689	63,662	59,786	51,731
1883 ...	95,476,350	187,112	77,094	81,602	79,415	59,252
Increase	1,078,125	2,112	14,405	17,940	19,629	7,521

Tanneries,
fellmong-
eries, &c.

829. Six new establishments for tanning and wool-washing were opened in 1882-3, and the returns show an increase of £5,571 in the value of plant, lands, and buildings connected with that industry. The business done, however, was less than in the previous year; the hides and skins tanned being fewer in number by 51,610, the skins stripped by 52,419, and the wool obtained and washed by 847,551 lbs. The following are the particulars of the two years :—

TANNERIES, FELLMONGERIES, AND WOOL-WASHING ESTABLISHMENTS,
1882 AND 1883.

Year ended 31st March.	Number of Establishments.	Establishments employing—					Amount of Horse-power of Steam Engines.	Number of Hands employed.	Number of Tan Pits.
		Steam- power.	Wind- power.	Water- power.	Horse- power.	Manual Labour only.			
1882 ...	160	47	2	1	31	79	530	1,969	3,515
1883 ...	166	58	1	1	15	91	653	1,786	3,920
Increase	6	11	...	...	...	12	123	...	405
Decrease	...	...	1	...	16	...	...	183	...

* The figures in this column apply to purchased lands only. Thirty-one of the brickyards in 1882 and thirty in 1883 were on Crown lands. In these cases no estimate of the value of the land is given.

TANNERIES, FELLMONGERIES, AND WOOL-WASHING ESTABLISHMENTS,
1882 AND 1883—continued.

Year ended 31st March.	Number of Hides and Skins Tanned.	Number of Skins Stripped of Wool.	Wool obtained from Skins.	Other Wool Washed.	Approximate Total Value of—		
					Machinery and Plant.	Lands.*	Buildings.
1882 ...	1,725,718	2,593,664	lbs. 4,237,870	lbs. 8,618,119	£ 111,740	£ 56,664	£ 149,083
1883 ...	1,674,108	2,068,745	4,975,225	7,033,213	114,198	64,249	144,611
Increase Decrease	... 51,610	... 524,919	737,355 ...	... 1,584,906	2,458 ...	7,585 ...	... 4,472

830. An estimate of the value of the materials used and articles produced in tanneries, fellmongeries, and wool-washing establishments was obtained at the census of 1881, but no later information exists respecting these values. The following are the figures :—

Value of materials used and produced.

TANNERIES, FELLMONGERIES, AND WOOL-WASHING ESTABLISHMENTS,
1880-81.

Value of materials used	£1,008,531
„ articles produced	1,406,274
Increased value	£397,743, or 39 per cent.

831. The number of woollen mills has not been changed in the last two years. A trifling decrease, however, occurred in the amount of horse-power employed; also a falling-off of 73,000 yards in the out-put of tweed, cloth, flannel, &c., but an increase in the other items, except shawls, of which only three were made 1882 and none in 1883. Forty-five more hands were employed in 1883 than in 1882, and an additional value of £4,049 was placed on the machinery, lands, and buildings :—

Woollen mills.

WOOLLEN MILLS, 1882 AND 1883.

Year ended 31st March.	Total Number of Woollen Mills.	Horse- power of Steam Engines.	Quantity of Wool used.	Goods Manufactured : Quantity of—		
				Tweed, Cloth, Flannel, &c.	Blankets.	Shawls.
1882 ...	9	505	lbs. 1,866,828	yards. 1,128,636	pairs. 1,788	number. 3
1883 ...	9	495	2,034,654	1,055,015	5,974	...
Increase ...	...	...	167,826	...	4,186	...
Decrease ...	...	10	...	73,621	...	3

* The figures in this column apply to purchased lands only. Eleven of the establishments in 1882 and nine in 1883 were on Crown lands. In these cases no valuation of the land has been given.

WOOLLEN MILLS, 1882 AND 1883—continued.

Year ended 31st March.	Hands employed.		Approximate Total Value of—		
	Males.	Females.	Machinery and Plant.	Lands.	Buildings.
			£	£	£
1882 ...	442	326	158,563	6,682	63,631
1883 ...	477	336	159,449	7,082	66,394
Increase ...	35	10	886	400	2,763

Value of
articles
used and
produced.

832. The value of the raw material used in woollen mills, and of the articles produced, was returned for the census year, but not since, the difference in favour of the manufactured articles being £79,298. The following are the figures :—

WOOLLEN MILLS, 1880-81.

Value of materials used	...	...	£89,412
„ articles produced	...	...	168,710
Increased value	...	...	£79,298, or 89 per cent.

Soap and
candle
works.

833. The soap and candle works returned in 1883 were fewer by 3 than those in 1882, but the closed factories were all small, and employed manual labour only. The weight of candles made was less by over 6,000 cwt. than that in 1882, but the soap manufactured exceeded the quantity in that year by 8,000 cwt., and a higher valuation by £30,000 was placed upon the machinery, lands, and buildings :—

SOAP AND CANDLE WORKS, 1882 AND 1883.

Year ended 31st March.	Number of Establishments.	Establish- ments employing—		Amount of Horse-power of Steam Engines.	Number of Hands employed.	Soap made.	Candles made.	Approximate Total Value of—		
		Steam- power.	Manual Labour only.					Machinery and Plant.	Lands.*	Buildings.
						cwt.	cwt.	£	£	£
1882 ...	34	23	11	332	471	127,675	68,483	109,312	11,865	39,553
1883 ...	31	23	8	327	472	135,576	62,158	121,490	19,954	49,015
Increase ...	...	...	...	...	1	7,901	...	12,178	8,089	9,462
Decrease ...	3	...	3	5	...	...	6,325	...	...	...

* The figures in this column apply to purchased land only. Four of the establishments were on Crown lands. In these cases no valuation of the land has been given.

834. The value of the raw material used, and of the articles produced, in soap and candle factories was returned for the twelve months preceding the census, with the following result. No later information exists on these points :—

SOAP AND CANDLE WORKS, 1880-81.

Value of raw materials used	...	...	£288,340
„ articles produced	...	...	450,924
Increased value			£162,584, or 56 per cent.

835. In 1883 the same number of tobacco manufactories were returned as in the previous year; there was, however, an increase of 40 in the hands employed, and a considerable increase in the number of cigars made, but a falling-off in the quantity of tobacco and snuff manufactured. The value of plant, lands, and buildings increased by £8,088 :—

TOBACCO MANUFACTORIES, 1882 AND 1883.

Year ended 31st March.	Number of Establishments.	Establishments employing—			Amount of Horse power of Steam Engines.	Number of Hands employed.		Quantity of—		Number of Cigars and Cigar- ettes Manu- factured.	Approximate Total Value of—		
		Steam- power.	Water- power.	Manual Labour.		Males.	Females.	Tobacco Manufactured.	Snuff Manufactured.		Machinery and Plant.	Lands.	Buildings.
1882 ..	14	5	..	9	50	590	225	1,539,900	10,300	6,172,980	44,895	28,775	23,165
1883 ..	14	5	1	8	61	592	263	1,345,151	2,605	6,263,200	42,295	36,313	26,315
Increase ..	..	..	1	..	11	2	38	..	..	90,220	..	7,538	3,150
Decrease ..	..	..	..	1	..	..	..	194,749	7,695	..	2,600	..	..

836. According to the census returns, the value of the articles produced in tobacco manufactories in 1880-81 showed an excess over that of the raw materials used of £72,870, which is equivalent to an increase of value by the process of manufacture amounting to 58 per cent. The following are the figures :—

TOBACCO MANUFACTORIES, 1880-81.

Value of materials used	...	...	£126,450
„ articles produced	...	...	199,320
Increased value			£72,870, or 58 per cent.

837. Seven distilleries were returned both in 1882 and 1883. A slight decrease occurred in the valuation placed on machinery and plant, but an increase under all the other heads. The following are the figures for the two years :—

DISTILLERIES, 1882 AND 1883.

Years ended 30th March.	Number of Distilleries.*	Amount of Horse-power of Steam Engines.	Number of Hands employed.	Spirits made.	Approximate Value of—		
					Machinery, Plant, &c.	Land.	Buildings and Improve- ments.
1882 ...	7	115	70	gallons. 226,457	£ 25,500	£ 12,900	£ 22,200
1883 ...	7	150	74	227,788	24,850	17,900	22,500
Increase ...	...	35	4	1,331	...	5,000	300
Decrease ...	...	...	...	...	650	...	...

Other manu-
factories,
works, &c.

838. The manufactories and works, exclusive of those of which mention has already been made—viz., flour mills, breweries, distilleries, brickyards, tanneries, fellmongeries, wool-washing establishments, woollen mills, soap works, candle manufactories, and tobacco manufactories—were more numerous by 129 than those returned in 1882. It will be observed that all the increases took place in items respecting which the following table affords information, except the amount of horse-power employed, in which there was a trifling decrease; the hands employed were more numerous by 2,478; and the value of machinery, plant, lands, and buildings being greater by over £340,000 than in that year. The returns are subjoined:—

MANUFACTORIES, WORKS, ETC., 1882 AND 1883.

(Exclusive of Flour Mills, Breweries, Distilleries, Brickyards, Potteries, Tanneries, Fellmongeries, Wool-washing Establishments, Woollen Mills, and Soap, Candle, and Tobacco Manufactories.)

Year ended 31st March.	Number of Manufactories, Works, &c.	Manufactories, &c., employing—					Amount of Horse-power employed.
		Steam.	Water.	Gas.	Horse- power.	Manual Labour only	
1882 ...	1,840	749	14	76	29	972	10,067
1883 ...	1,969	829	14	98	24	1,004	11,319
Increase ...	129	80	...	22	...	32	1,252
Decrease ...	...	...	...	...	5	...	...

Year ended 31st March.	Number of Hands employed.		Approximate Total Value of—		
	Males.	Females.	Machinery and Plant.	Lands.	Buildings.
1882 ...	28,856	7,159	£ 2,624,348	£ 1,301,045	£ 2,184,397
1883 ...	30,781	7,712	2,846,154	1,405,195	2,200,266
Increase ...	1,925	553	221,806	104,150	15,869

* All these establishments employ machinery worked by steam-power.

839. By summarizing the returns of manufactories and works of all descriptions, including not only such as are embraced in the foregoing table, but also those excluded therefrom—viz., flour mills, breweries, distilleries, brickyards, potteries, tanneries, fellmongeries, wool-washing establishments, woollen mills, soap works, candle manufactories, and tobacco manufactories—it is found that during 1882–3 the establishments increased by 124, the number of establishments using steam or gas by 102, the amount of horse-power by 1,579, the hands employed by 2,489, and the value of machinery, lands, and buildings by £475,000. The returns of the two years are contained in the following table :—

MANUFACTORIES, WORKS, ETC., 1882 AND 1883.

(Including Flour Mills, Breweries, Distilleries, Brickyards, Potteries, Tanneries, Fellmongeries, Wool-washing Establishments, Woollen Mills, Soap, Candle, and Tobacco Manufactories, as well as all other Manufactories, Works, &c.)

Year ended 31st March.	Total Number of Establishments.	Number of Establishments using Steam or Gas.	Horse-power of Engines.	Number of Hands employed.	Approximate Value of Lands,* Buildings, Machinery, and Plant.
1882 ...	2,488	1,146	15,033	43,209	£ 8,044,296
1883 ...	2,612	1,248	16,612	45,698	8,519,486
Increase ...	124	102	1,579	2,489	475,190

840. The manufacturing establishments of all kinds respecting which returns are obtained are named in the following table, and their numbers are given for 1880–81 and 1882–3. For the former, which was the census year, are also given the approximate values of the materials used and articles produced, and for the latter the number of hands employed and the approximate value of lands, buildings, machinery, and plant. The establishments are for the most part of an extensive character, the only exception being in cases where the existence of industries of an unusual or interesting nature might seem to call for notice. No attempt is made to enumerate mere shops, although some manufacturing industry may be carried on thereat. Were this done, the “manufactories” in the colony might be multiplied to an almost indefinite extent. It is customary to note all establishments where machinery worked by steam, gas, water, wind, or horse power is used. It is believed that a different system prevails in some of the neighbouring colonies, and that particulars of many establishments which in Victoria would not be considered worthy of notice find place in their returns :—

* In the case of establishments standing upon Crown lands no estimate of the value of the land is given. The number of such establishments was 207 in 1882, and 238 in 1883.

MANUFACTORIES, WORKS, ETC., 1881 AND 1883.

Description of Manufactory, Works, &c.	1880-81.			1882-3.		
	Number of Establishments.	Approximate Value of—		Number of Establishments.	Hands Employed.	Approximate Value of Machinery, Plant, Lands, and Buildings.
		Materials used.	Articles produced.			
		£	£			£
BOOKS AND STATIONERY.						
Account-book manufactories, manufacturing stationers	7	62,386	100,057	5	645	126,652
Printing establishments ...	85	172,155	522,097	100	2,770	474,394
MUSICAL INSTRUMENTS.						
Organ-building establishments ...	2	3,500	8,050	2	26	3,650
Pianoforte manufactories ...	5	1,700	4,150	5	24	4,400
PRINTS, PICTURES, ETC.						
Picture-frame makers, carvers, and gilders	13	5,627	11,550	10	51	13,050
CARVING FIGURES, ETC.						
Indiarubber stamp manufactories ...	2	350	1,700	2	16	4,450
Modelling (architectural and figure), &c., works	11	3,584	8,900	8	40	6,310
Statuary works ...	...	...	...	1	...	...
Wood carving, turnery—works ...	10	4,965	10,800	14	225	30,680
DESIGNS, MEDALS, AND DIES.						
Diesinkers, engravers, medalists, trade-mark makers	6	3,350	9,200	4	68	12,300
PHILOSOPHICAL INSTRUMENTS, ETC.						
Electric-lighting apparatus manufactory	...	...	...	1	...	...
Philosophical instrument manufactories	1	...	...	4	12	6,210
SURGICAL INSTRUMENTS.						
Surgical instrument, truss—manufactories	6	2,400	5,600	4	21	5,950
ARMS, AMMUNITION, ETC.						
Blasting powder, dynamite, &c.—manufactories	3	9,964	16,737	5	69	28,140
Fuse manufactory ...	1	...	...	1	...	...
Gunmakers ...	...	...	...	4	11	3,250
Shot manufactories ...	...	...	...	2	9	5,100
MACHINE TOOLS AND IMPLEMENTS.						
Agricultural implement manufactories	54	91,659	202,535	58	1,147	121,115
Bellows manufactory ...	1	...	...	1	...	...
Cutlery, tool—manufactories ...	3	800	2,400	6	26	9,810
Engine, machine—manufactories ...	74	115,069	282,025	61	2,472	401,650
Washing-machine manufactory ...	1	...	...	1	...	...
CARRIAGES AND HARNESS.						
Carriage lamp manufactories ...	3	900	2,950	2	21	2,550
Coach, waggon, &c.—manufactories	132	99,415	212,615	156	1,819	219,063
Perambulator manufactories ...	3	1,750	5,000	2	17	2,200
Saddle, harness—manufactories ...	47	35,792	81,130	45	491	66,073
Saddle-tree, &c., manufactories ...	4	2,400	6,860	3	34	2,450
Whip manufactories ...	3	940	2,950	4	15	3,960

MANUFACTORIES, WORKS, ETC.—*continued.*

Description of Manufactory, Works, &c.	1880-81.		1882-3.			
	Number of Establishments.	Approximate Value of—		Number of Establishments.	Hands Employed.	Approximate Value of Machinery, Plant, Lands, and Buildings.
		Materials used.	Articles produced.			
		£	£			£
SHIPS AND BOATS.						
Ship, boat—builders	10	3,570	14,614	11	130	12,980
Ships' wheels, blocks, &c.—manufactories	3	505	1,100	3	10	2,213
Floating-dock	1	...	...	1	...	...
Graving-docks	3	...	...	3	138	429,368
Patent slips	2	...	...	2	31	4,200
HOUSES, BUILDINGS, ETC.						
Lime works	21	6,560	17,216	23	187	9,645
Patent ceiling ventilator manufactories	2	250	1,600	2	13	4,850
Roof-covering composition manufactories	2	944	2,180	...	...	...
FURNITURE.						
Bedding and upholstery manufactories	11	9,000	18,980	12	65	17,155
Bedstead manufactory ... ..	...	...	...	1	...	...
Cabinet works, including billiard-table makers	63	131,000	258,188	59	1,209	160,687
Earth-closet manufactories	1	...	...	2	15	3,550
Iron-safe manufactories	2	670	970	2	12	1,690
Looking-glass manufactories	2	400	1,300	4	18	8,950
CHEMICALS.						
Chemical works	6	25,160	43,600	5	52	15,200
Dye works	6	1,130	7,150	12	65	19,815
Essential oil manufactories	4	1,825	3,900	5	33	5,410
Ink, blacking, blue, washing-powder, &c.—manufactories	12	37,280	58,560	5	104	5,555
Paint, varnish—manufactories	1	...	...	3	12	4,100
Salt works	8	4,882	10,810	7	66	19,163
Tar-distilling, asphalte—works*	8	10,640	27,783	...	...	...
TEXTILE FABRICS.						
Woollen mills	10	89,412	168,710	9	813	232,925
DRESS.						
Boot manufactories	105	355,418	686,922	90	3,672	167,424
Clothing factories	63	370,181	761,401	83	6,155	292,496
Fur manufactories	3	4,300	6,900	2	28	2,326
Hat, cap—manufactories	22	34,753	66,264	24	714	73,875
Hosiery manufactory ... ..	...	...	...	1	...	...
Oilskin, waterproof-clothing—manufactories	5	900	5,700	5	62	3,450
Umbrella and parasol manufactories	9	13,180	24,825	8	96	13,705
Wig manufactory	1	...	...	...	...	...
FIBROUS MATERIALS.						
Rope, twine, mat, bag, sack—manufactories	18	66,975	102,280	14	503	77,482

* In returns for 1882-3, included with stonebreaking works, *post.*

MANUFACTORIES, WORKS, ETC.—continued.

Description of Manufactory, Works, &c.	1880-81.		1882-3.			
	Number of Establishments.	Approximate Value of—		Number of Establishments.	Hands Employed.	Approximate Value of Machinery, Plant, Lands, and Buildings.
		Materials used.	Articles produced.			
ANIMAL FOOD.						
Cheese factories	28	£ 17,733	£ 31,586	22	84	35,021
Meat-curing establishments	16	192,150	258,790	23	599	86,492
Milk condensing works ... ..	...	...	...	2	24	11,250
VEGETABLE FOOD.						
Arrowroot, maizena, oatmeal, starch —manufactories	5	5,620	8,000	3	31	16,175
Biscuit manufactories	13	106,110	181,840	12	416	21,315
Confectionery works	8	61,600	88,800	12	255	49,140
Flour mills	144	1,397,099	1,637,351	143	836	466,327
Jam manufactories	9	67,480	99,230	15	463	42,439
Macaroni works	2	125	230	2	4	525
DRINKS AND STIMULANTS.						
Aërated waters, gingerbeer, liqueur, &c.—works	114	91,849	196,810	121	737	155,843
Breweries	81	442,885	780,501	78	927	464,660
Coffee, chicory, cocoa, mustard, spice —works	12	235,355	322,786	11	279	133,840
Distilleries	6	26,368	44,500	7	74	65,250
Malthouses	14	67,635	98,000	18	106	64,523
Sauce, pickle—manufactories	11	8,450	18,340	10	78	17,360
Sugar, treacle—refineries	1	...	...	2	180	134,200
Tobacco, cigars, snuff—manufactories	16	126,450	199,320	14	855	104,923
Vinegar works	5	8,500	14,600	2	12	2,520
ANIMAL MATTERS.						
Anti-friction grease manufactory ... ..	...	...	...	1	...	...
Boiling-down, tallow-rendering— establishments	15	28,303	77,000	22	145	27,214
Bone mills and bone manure manu- factories	15	50,225	70,845	19	142	40,399
Brush manufactories	8	15,700	27,800	10	183	16,150
Comb manufactory	1	...	...	1	...	...
Catgut manufactories	2	800	2,000	2	14	1,250
Curled hair manufactories	3	1,700	2,565	2	9	880
Flock manufactories	4	4,350	7,900	5	31	8,475
Glue, oil—manufactories	7	8,200	12,700	7	46	12,740
Morocco, fancy leather—manufactories	3	2,480	4,400	3	23	6,395
Portmanteau, trunk—manufactories	7	5,680	9,520	6	59	7,775
Soap, candle—works	38	288,340	450,924	31	472	190,459
Tanneries, fellmongeries, and wool- washing establishments	151	1,008,531	1,406,274	166	1,786	323,058
VEGETABLE MATTERS.						
Bark mills	8	17,000	25,650	9	66	6,135
Basket-making works	9	1,670	4,560	10	52	8,317
Blind (window) manufactories	12	5,500	11,750	9	93	8,760
Broom manufactory	2	6,200	13,000	...	...	...
Chaff-cutting, corn-crushing—works*	165	357,232	516,623	186	844	198,951
Churn manufactories ... ..	...	...	...	2	21	3,725

* All these establishments used machinery worked by steam, wind, or horse power. They must not be confounded with chaff-cutting and corn-crushing machines in use on farms, which numbered 15,251 in 1882-3.

MANUFACTORIES, WORKS, ETC.—*continued.*

Description of Manufactory, Works, &c.	1880-81.			1882-3.		
	Number of Establishments.	Approximate Value of—		Number of Establishments.	Hands Employed.	Approximate Value of Machinery, Plant, Lands, and Buildings.
		Materials used.	Articles produced.			
VEGETABLE MATTERS—<i>continued.</i>						
Cooperage works	24	£ 17,829	£ 35,243	27	185	£ 21,628
Cork manufactories	2	2,100	3,100	3	13	3,525
Fancy-box, hat-box—manufactories	5	3,080	6,745	4	87	4,485
Paper manufactories	3	24,300	47,370	2	182	87,850
Paper-bag manufactories	4	30,320	47,700	4	192	26,700
Paper-pattern cutting works ... ..	...	...	...	1	...	...
Saw mills, moulding, joinery, &c.—works	174	552,463	973,127	210	3,758	382,224
Tent, tarpaulin—manufactories ...	12	28,860	47,250	16	112	20,087
COAL.						
Gasworks	19	97,392	226,116	19	536	1,147,058
Patent fuel factory	1	...	...	...	...	...
STONE, CLAY, EARTHENWARE, AND GLASS.						
Artificial stone manufactories ... ..	...	...	...	2	37	10,700
Brickyards and potteries	165	...	137,834	195	1,442	220,269
Filter manufactory	1	...	...	1	...	...
Glass manufactories, works	9	12,705	41,150	5	153	20,740
Marble and monumental works	31	30,709	62,964	16	163	19,480
Stone-breaking, tar-pavement—works*	1	...	...	12	369	16,705
Stone sawing, polishing—works ...	12	19,874	41,650	18	314	52,145
WATER.†						
Ice manufactories	2	2,000	7,000	3	54	29,000
GOLD, SILVER, AND PRECIOUS STONES.						
Electro-plating and gilding works ...	5	1,100	4,300	5	25	7,200
Goldsmiths and jewellers (manufacturing)	23	60,920	105,350	25	357	73,120
METALS OTHER THAN GOLD AND SILVER.						
Antimony-smelting works	3	27,000	41,000	1	...	...
Bell foundry	1	...	...	1	...	...
Copper-smelting works	1	...	...	3	40	16,150
Iron and tin works	61	143,000	247,299	65	1,009	130,120
Iron, brass, and copper foundries ...	73	214,326	441,894	61	2,135	280,603
Lead works	5	17,850	23,800	3	35	16,000
Nut and bolt works ... ..	...	..	...	1	...	...
Pyrites works	1	...	...	1	...	...
Tin-smelting works	3	5,396	7,610	2	8	990
Type foundry	1	...	...	1	...	...
Wire-working establishments	10	3,650	9,800	8	62	12,650
Total where only one return was received for each of certain descriptions ‡	...	257,910	400,080	...	252	45,950
Total	2,468	7,997,745	13,370,836	2,612	45,698	8,519,486

* In 1880-81, tar-pavement works were not included, but were grouped under chemicals.—See page 377 *ante*.

† Works for the storage and supply of water are not included in the manufacturing tables. A table of water-works follows paragraph 843 *post*.

‡ The particulars of these have been combined, in accordance with a promise made that the contents of individual schedules would not be published.

Value of materials used and produced.

841. The difference between the value of materials used and articles produced in 1880-81, as shown by the table, indicates an increase in the value of the former by the process of manufacture of over $5\frac{1}{3}$ millions sterling, or 67 per cent. The following are the exact figures:—

VALUE OF RAW AND MANUFACTURED MATERIALS, 1880-81.

		£
Value of materials operated upon	...	7,997,745
„ articles produced	... ..	13,370,836
Increased value		5,373,091, or 67 per cent.

Summary of manufactures at three periods.

842. By comparing the particulars respecting these manufactories, as returned in 1883 and in the first year of each of the two previous quinquennia, increases at each successive period will be found in all the columns, but more especially between the first and second periods. The number of establishments increased by 34 per cent. between 1873 and 1878, and by 10 per cent. between 1878 and 1883; the hands employed increased by 51 per cent. and 43 per cent. in those intervals respectively; and the value of machinery, plant, lands, and buildings increased by 61 per cent. in the first, and by 28 per cent. in the second, interval. The following is the comparison referred to:—

SUMMARY OF MANUFACTORIES, WORKS, ETC., 1873, 1878, AND 1883.

Year ended 31st March.	Total Number of Establishments.	Number of Establishments using Steam or Gas.	Horse-power of Engines.	Number of Hands employed.	Approximate Value of Lands, Buildings, Machinery, and Plant.
1873 ...	1,770	750	10,100	21,493	£ 3,944,900
1878 ...	2,370	929	12,698	32,688	6,665,540
1883 ...	2,612	1,248	16,612	45,698	8,519,486

Waterworks.

843. Extensive works for the storage and supply of water for domestic, mining, and irrigation purposes have been constructed by the Government in various parts of the colony. The most important of these is the Yan Yean reservoir, together with the subsidiary reservoirs at Morang, Preston, and Essendon, by means of which Melbourne is provided with a supply of fresh water at a high pressure. The Yan Yean is an artificial lake situated 19 miles from the city, and 595 feet above its level, which covers an area of 1,300 acres, or rather more than two square miles. To meet the increased demand for water consequent upon the growth of the city and suburbs, a channel is being made for the purpose of turning into the reservoir one or more streams, by which means all fear of the supply becoming exhausted in seasons of drought will be at an end. The following table contains a list of these works, also a statement of the estimated capacity of each

work, and its actual or estimated cost. Some of these works have been completed, and others are in course of construction. It will be observed that the storage capacity of the whole is over thirteen thousand million gallons, and the cost three and four-fifth millions sterling :—

WATERWORKS IN VICTORIA.

Name of Town or District to be supplied.	Reservoir.		Actual or Estimated Cost.
	Where situated.	Storage Capacity.	
		gallons.	£
Melbourne and suburbs	Yan Yean	6,400,000,000	1,739,000
	Morang (pipe head)	2,800,000	
	Preston (storage)	15,000,000	
	Essendon (storage)	1,000,000	
Coliban Scheme, including Reservoirs at—	Malmsbury	2,841,000,000	917,174
	Expedition Pass	128,000,000	
	Old Post Office Hill	2,000,000	
	Barker's Creek, Harcourt	611,500,000	
	Red Hill	1,250,000	
	Spring Gully	149,000,000	
	Crusoe Gully	320,000,000	
	Big Hill	68,000,000	
	Taradale (tank)	65,000	
	Crocodile Gully	5,407,462	
	Spring Gully	7,000,000	
	Solomon Gully	1,250,000	
	Big Hill, Pipe Head Reservoir	300,000	
Geelong and suburbs, including Reservoirs at—	Sparrowhawk, Pipe Head Reservoir	1,500,000	327,178
	Stony Creek (Old)	166,000,000	
	Stony Creek (New)	143,000,000	
	Lovely Banks	6,000,000	
	Anakie (pipe head)	900,000	
Creswick	Newtown	500,000	14,692
	Bullarook	45,000,000	
	Ashwell's Gully	8,500,000	
Tarnagulla	Adekate Creek	18,000,000	245
	Tarnagulla	6,000,000	
Inglewood { (Old)	Inglewood	5,670,000	1,112
	{ (New)	Inglewood ... ..		13,792,000
Maryborough	Maryborough	21,000,000	1,839
Maldon	Maldon	17,500,000	4,037
Beechworth	Lake Kerferd	110,000,000	41,385
Chiltern	Barrambogie Springs	4,753,869	7,282
	Railway Tank	6,000	
Wangaratta	Tank at Railway Station	40,000	4,669
Rutherglen	Rutherglen	27,000,000	3,516
Ararat	Oliver's Gully	19,615,554	5,000
	Langi-Giran	15,200,000	
	Opossum Gully	24,621,547	
Beaufort	Beaufort	85,881,110	1,991
	Service Reservoir, Camp Hill	1,200,000	
Ballarat	Four and One Weir Basin in Bungaree	632,960,000	360,000

WATERWORKS IN VICTORIA—continued.

Name of Town or District to be supplied.	Reservoir.		Actual or Estimated Cost.
	Where situated.	Storage Capacity.	
		gallons.	£
Clunes ...	Newlyn ...	265,000,000	81,753
Blackwood ...	Lerderderg River ...	64,441,237	1,090
Buninyong ...	Buninyong ...	10,462,485	1,047
Ovens ...	Sandy Creek ...	70,000,000	2,835
Indigo ...	Suffolk Lead ...	1,701,562	437
Sandhurst ...	Grassy Flat (1) ...	58,860,375	} 5,821
	Grassy Flat (2) ...	26,769,369	
Kilmore ...	Kilmore ...	14,466,000	2,755
Myers Creek ...	Myers Creek ...	13,000,000	844
Echuca ...	Echuca (tank No. 1) ...	68,000	7,578
	Echuca (tank No. 2) ...	70,000	4,053
Dunolly Old Lead ...	Dunolly ...	17,200,000	1,912
Dunolly ...	Dunolly Township ...	7,500,000	3,000
St. Arnaud ...	St. Arnaud ...	42,000,000	13,471
Redbank ...	Redbank ...	27,100,000	2,785
Laplough ...	Laplough ...	9,261,946	1,232
Talbot ...	Amherst ...	13,813,284	11,193
	Evansford ...	182,978,781	15,000
Wedderburn ...	Wedderburn ...	3,100,000	2,353
Chewton ...	Commissioner's Gully ...	7,000,000	1,203
Daylesford ...	Wombat Creek ...	31,284,413	2,527
Moyston ...	Campbell's Reef ...	5,400,000	1,141
Orville ...	Opossum Gully ...	2,000,000	250
	Quartz Reefs ...	9,725,627	1,229
	Pleasant Creek ...	7,905,750	805
Stawell ...	Four Posts ...	3,100,000	802
	Fyan's Creek ...	...	} 115,434
	Service Reservoir ...	2,250,000	
Woodend ...	Newham ...	... *	5,023
Great Western ...	Great Western Dam ...	1,211,662	489
Elaine ...	Lal Lal ...	90,000,000	... †
Sebastopol ...	White Horse Ranges ...	4,830,904	2,862
	Linton ...	8,000,000	1,826
	Haddon ...	3,100,000	1,066
	Happy Valley ...	2,350,995	593
	Piggoreet ...	600,000	79
Shire of Grenville ...	Kangaroo (Berringa) ...	1,000,000	171
	Cape Clear ...	400,000	68
	Staffordshire Reef ...	375,000	163
	Illabarook ...	3,069,000	396
	Rokewood Junction ...	480,000	198
	Lucky Woman's ...	125,000	43
Shire of Leigh ...	Rokewood ...	5,000,000	385
	Break-of-Day ...	4,500,000	424
	Teesdale ...	4,000,000	216
Shire of Tullaroop ...	Chinaman's Flat ...	2,500,000	2,251
Rushworth ...	Rushworth ...	7,000,000	1,640
Homebush ...	Homebush ...	5,000,000	308
Hamilton ...	Hamilton ...	30,000,000	13,202
Melton ...	Melton ...	2,290,000	800
Barry's Reef ...	Barry's Reef ...	120,000	358
	Total ...	13,000,623,932	3,800,007

* No reservoir (pipe-head tank).

† Cost cannot at present be given.

844. The stone quarries returned in 1883 were fewer by 4 than in 1882, and a falling-off of £2,273 took place in the value of plant, lands, and buildings. Moreover, the quantity of stone raised fell off by 38,988 cubic yards, and its value by £843. The following are the figures for the two years :—

STONE QUARRIES, 1882 AND 1883.

Year ended 31st March.	Number of Quarries.	Cubic Yards of Stone raised.					Steam Engines in use.	
		Bluestone.	Slate and Flagging.	Sandstone and Freestone.	Granite.	Limestone.	Number.	Horse-power.
1882	121	361,380	1,500	5,708	3,211	370	4	69
1883	117	323,071	2,479	5,078	1,510	1,043	5	79
Increase	...	...	979	...	...	673	1	10
Decrease	4	38,309	...	630	1,701	...	...	...

Year ended 31st March.	Number of Hands employed.	Approximate Total Value of—			
		Stone raised.	Machinery and Plant.	Lands.*	Buildings.
		£	£	£	£
1882	570	66,416	13,187	13,815	2,653
1883	610	65,573	12,856	11,983	2,543
Increase	40	...	...	...	...
Decrease	...	843	331	1,832	110

845. According to the estimates of the mining registrars, supplemented by returns of gold purchased in Melbourne from private holders, the gold raised in Victoria in 1882 was 894,487 oz.; but this evidently does not represent the entire quantity, as, by means of returns made to the Mining Department by the managers of banks and others, it has been ascertained that gold was purchased amounting to 4,049 oz. more, or to 898,536 oz. in all, which may be held to be a tolerably close approximation to the whole quantity raised during the year.

846. This quantity exceeds that obtained in 1881 by nearly 40,000 oz., representing, at £4 per oz., a value of nearly £160,000. The following are the exact figures for the two years :—

* The figures in this column apply to purchased land only. Forty-one of the stone quarries in 1882 and twenty-eight in 1883 were on Crown lands, and in these cases no valuation of the land has been given.

QUANTITY AND VALUE OF GOLD RAISED IN 1881 AND 1882.

Year.	Gold raised in Victoria.	
	Estimated Quantity.	Value, at £4 per oz.
	oz.	£
1881	858,850	3,435,400
1882	898,536	3,594,144
Increase ...	39,686	158,744

Gold raised,
1871 to
1882.

847. From 1871 to 1879 the quantity of gold raised from year to year had been steadily diminishing, but since then an improvement has taken place, the yield in the last three years having been above that in any other year since 1876. The following figures give an estimate of the quantity of gold raised in 1871 and each subsequent year :—

ESTIMATED QUANTITY OF GOLD RAISED, 1871 TO 1882.

1871	oz.	1,355,477	1877	oz.	809,653
1872	1,282,521	1878	775,272		
1873	1,241,205	1879	758,947		
1874	1,155,972	1880	829,121		
1875	1,095,787	1881	858,850		
1876	963,760	1882	898,536		

Gold raised,
1851 to
1882.

848. Carrying on to the end of 1882 the calculations given in previous years, the following may be estimated as the total quantity and value of the gold raised in Victoria from the period of its first discovery in 1851. The figures give an average per annum during the whole period of about 1,632,000 oz., which is nearly twice the quantity raised in 1882 :—

ESTIMATED TOTAL QUANTITY AND VALUE OF GOLD RAISED IN VICTORIA, 1851 TO 1882.*

Gold raised in Victoria.	Estimated Quantity.	Value, at £4 per oz.
	oz.	£
Prior to 1882 ...	50,505,567	202,022,268
During 1882 ...	898,536	3,594,144
Total ...	51,404,103	205,616,412

* For a statement of the estimated quantity and value of gold raised in each year, see Statistical Summary of Victoria (first folding sheet) *ante*.

849. The quantity of gold raised in all the Australasian colonies, from the period that deposits of that metal were first discovered in 1851 to the end of 1881, is estimated to have amounted to nearly 73½ million oz., valued at 289 million pounds sterling. The following table, which has been compiled in the office of the Government Statist, Melbourne, contains particulars of the quantity and value of the gold produced in each colony during that period. Western Australia is absent from the list, since little, if any, gold has yet been discovered there :—

Gold raised in Australasian colonies.

PRODUCE OF GOLD IN AUSTRALASIAN COLONIES.*

Colony.	Gold produced.					
	Prior to 1881.		During 1881.		Total.	
	Estimated Quantity.	Value.	Estimated Quantity.	Value.	Estimated Quantity.	Value.
	oz.	£	oz.	£	oz.	£
Victoria ...	49,646,717	198,586,868	858,850	3,435,400	50,505,567	202,022,268
New South Wales	9,035,737	33,477,003	145,532	550,111	9,181,269	34,027,114
Queensland ...	3,386,388	12,486,499	259,782	925,012	3,646,170	13,411,511
South Australia	84,600	337,405	16,975	66,973	101,575	404,378
Total of Australia	62,153,442	244,887,775	1,281,139	4,977,496	63,434,581	249,865,271
Tasmania ...	181,739	711,504	54,348	211,253	236,087	922,757
New Zealand ...	9,552,194	37,380,633	270,561	1,080,790	9,822,755	38,461,423
Total of Australasia	71,887,375	282,979,912	1,606,048	6,269,539	73,493,423	289,249,451

850. The returns of the mining surveyors and registrars give any account of 864,610 oz. of the gold which was raised in 1882. Of this 512,532 oz., or 59 per cent., was obtained from quartz reefs, and 352,078 oz., or 41 per cent., from alluvial deposits. These figures, as compared with those for the previous year, show an increase of 38,250 oz. in the yield of alluvial workings, but a decrease of 7,018 oz. in that of quartz reefs. The tendency of the yield of alluvial gold to increase has been apparent for the last three years, which is no doubt due in a great measure to the use of the diamond drills imported and worked by the Government, whereby rich deposits, which had previously been hidden beneath deep flows of volcanic rock, have been brought to light.

Gold derived from alluvial and quartz workings.

* The figures for Victoria and New South Wales express the quantity and value of all the gold raised in those colonies since its discovery in 1851; those for Queensland represent the exports of Queensland gold seaward since 1859, when that colony was separated from New South Wales; those for South Australia express the quantity and value of gold from that colony received at the Melbourne and Sydney Mints; those for New Zealand express the total exports of gold from that colony; and those for Tasmania express the exports of Tasmanian gold since 1866, there being no record of the quantity of gold raised prior to that period.

This has especially been the case in the Smeaton and Kingston districts, referring to which the Hon. J. F. Levien, Minister of Mines, states—
 “There is reason to believe that the further opening up of the basaltic areas at those places will for a long time continue to operate favorably upon the annual returns of gold.”*

Value of gold
per miner.

851. The value of gold raised in proportion to the number of miners at work † fell to its lowest point in 1879, but since then it has been increasing, and in 1882 was higher than in any year since 1875. During the 12 years ended with 1882 the average per miner was highest in 1875, when it exceeded that in 1882 by £8 4s. 8½d., and was lowest in 1879, when it was less than that in 1882 by £19 18s. 5½d. The following figures, which have been taken from the reports of the Secretary for Mines, express this proportion for each of those years:—

VALUE OF GOLD PER MINER, † 1871 TO 1882.

	£	s.	d.		£	s.	d.
1871	93	6	1½	1877	82	6	1¾
1872	93	17	1½	1878	82	12	11½
1873	93	16	2½	1879	76	1	2¼
1874	99	8	3	1880	81	18	11¾
1875	104	4	4	1881	95	11	9½
1876	89	19	6¾	1882	95	19	7¾

Value of gold
per alluvial
and quartz
miner.

852. The same reports show that, in proportion to the number of miners, the yield of gold from quartz is much greater than that from alluvial workings. The following are the figures for the last six years:—

VALUE OF GOLD PER ALLUVIAL AND QUARTZ MINER, 1877 TO 1882.

	Alluvial Miners.			Quartz Miners.		
	£	s.	d.	£	s.	d.
1877	47	8	0¼	139	12	0¼
1878	47	3	6¾	138	7	7¼
1879	48	10	1½	118	8	7
1880	49	14	2	129	11	7¾
1881	62	0	9¾	141	19	2½
1882	68	14	1½	131	19	5½

Diamond
drills.

853. Up to the end of June, 1882, £39,106 had been expended by the Government on the purchase and working of diamond drills, viz., £76 in 1877-8; £8,724 in 1878-9; £3,448 in 1879-80; £6,858 in 1880-81; and £20,000 in 1881-2.

* See memorandum by the Hon. J. F. Levien, dated 21st March, 1883, page 5, of the *Mineral Statistics of Victoria* 1882, Parliamentary Paper 2 S.—No. 3, Session 1883.

† For the number of gold miners at work in 1882, see paragraph 92 *ante*.

‡ These amounts are sometimes incorrectly spoken of as the “average earnings” of the miners. I have pointed out on former occasions that, as a very large proportion of the miners are working on wages, the gold they raise no more represents their individual earnings than do the products of a manufactory represent the earnings of its operatives.

854. Of the steam engines employed in connexion with gold mining, about a fourth are used on alluvial and three-fourths on quartz workings. The following is the number of engines in use and their horse-power in each of the last nine years :—

Steam engines used in mining.

STEAM ENGINES USED IN GOLD MINING, 1874 TO 1882.

	Number.	Horse-power.		Number.	Horse-power.
1874	... 1,141	... 24,866	1879	... 1,024	... 22,509
1875	... 1,101	... 24,224	1880	... 1,030	... 22,499
1876	... 1,081	... 23,947	1881	... 1,034	... 23,379
1877	... 1,067	... 23,416	1882	... 1,074	... 24,692
1878	... 1,036	... 22,711			

855. The number of mining machines of all descriptions decreased from 4,415 in 1881 to 4,149 in 1882; but the value of such machines, as estimated by the Department of Mines, increased from £1,860,577 in 1881 to £1,953,466 in 1882.

Mining machinery

856. The number of quartz reefs proved to be auriferous was returned by the mining surveyors and registrars as 3,645 in 1881, and 3,683 in 1882. It has been pointed out, however, that these cannot in every case be distinct reefs, as parts of the same reef in different localities are held to be independent veins, and named accordingly; and, moreover, as the lines of reef are further explored, it is found that what were supposed to be separate reefs are in reality not distinct.

Auriferous reefs.

857. The approximate area of auriferous ground worked upon was stated to be 1,279 square miles in 1881, and 1,305 in 1882. The figures are derived from estimates, not from actual surveys, and they vary from year to year. As the shallow alluvia of the older gold-fields are abandoned by the miners, they are often occupied by agriculturists and gardeners, and ground which one year is included in the area embraced in gold-workings is properly excluded in another.

Extent of auriferous ground.

858. It is impossible to obtain an exact statement of the yield of auriferous quartz in any year, owing to the fact that many of the owners of machines for crushing quartz are unable to give, or are precluded from giving, information respecting their operations. The officers of the Mining Department, however, succeeded in obtaining particulars respecting the crushing of 1,041,212 tons in 1881, and 1,027,826 tons in 1882. The average yield per ton of these crushings was 8 dwt. 18·2 gr. in the former, and 9 dwt. 0·44 gr. in the latter, year. From similar estimates, extending over a series of years, and embodying information respecting the crushing of more than 19,000,000 tons of quartz, an average is obtained of 10 dwt. 15·35 gr. of gold to the ton of quartz crushed.

Average yield of quartz.

Deep quartz
mining.

859. At least 17 of the shafts sunk in Victoria in search of auriferous quartz have attained depths exceeding 1,000 feet. The deepest shaft in the colony is the Magdala at Stawell, which is 2,409 feet deep, and other shafts in the same locality are 1,940, 1,830, 1,815, 1,770, 1,565, and 1,220 feet from the surface; at Sandhurst there are shafts 1,800, 1,601, and 1,563 feet deep respectively; at Maldon, there is one 1,220 feet deep; and at Clunes, there is one shaft 1,193 and another 1,214 feet deep.

Yield from
deep mines.

860. The yield of gold from 14,202 tons of quartz, obtained at Ballarat at depths varying from 220 to 1,105 feet, averaged from 5 dwt. 18 gr. to 12 dwt. 6 gr. per ton; 35,166 tons at Sandhurst, at various depths between 500 and 1,140 feet, averaged from 7 dwt. 10 gr. to 1 oz. 16 dwt. 5 gr. per ton; 18,256 tons at Castlemaine, at depths varying from 250 to 600 feet, gave a yield of from 4 dwt. 3 gr. to 12 oz. 3 dwt. 1 gr. per ton; 36,016 tons at Maryborough, at depths varying from 200 to 754 feet, gave a yield of from 4 dwt. 3 gr. to 1 oz. 2 dwt. 15 gr. per ton; 734 tons at Stawell, at depths varying from 800 to 1,120 feet, yielded from 19 dwt. 14 gr. to 6 oz. 13 dwt. 19 gr. per ton; 22,727 tons at Stringer's Creek, in Gippsland, at depths varying from 300 to 723 feet, yielded from 17 dwt. 23 gr. to 1 oz. 17 dwt. 7 gr. per ton; and 3,576 tons at Beechworth, at depths varying from 200 to 500 feet, yielded from 4 dwt. 11 gr. to 1 oz. 18 dwt. 20 gr. per ton.*

Gold-mining
leases.

861. Since the first issue of gold-mining leases, the total number granted has been 13,027, giving the right to mine over an area amounting in the aggregate to 240,162 acres. Of these leases, 679, for 14,044 acres, were granted in 1882, and 1,836, for 33,909 acres, were in force at the end of that year.

Gold-mining
companies.

862. The number of gold-mining companies registered in 1882 was 254, the nominal capital of which was £3,016,142, and the number of shares 5,561,765. These figures are smaller than those for 1881 by 194 in the number of companies registered, by over 3½ million pounds in the nominal capital, and by about 3¼ million in the number of shares. In the six years prior to 1882 there were, altogether, 1,240 mining companies registered, with a nominal capital amounting in the aggregate to £14,240,216, distributed amongst 21,755,087 shares.

Leases for
other
minerals.

863. At the end of 1882, the following leases of Crown lands, conferring the privilege of working for minerals and metals other than gold, were in force. The leases were more numerous by 83, and the area comprised therein was larger by 11,335 acres than in 1881:—

* See Report of the Secretary for Mines on *Mineral Statistics*, 1882; Parliamentary Paper 2 S.—No. 3, Session 1883.

LEASES FOR MINERALS AND METALS OTHER THAN GOLD, 1882.

Metals and Minerals.	Leases in force at end of 1882.	
	Number.	Area.
Antimony	22	444
Coal	14	8,577
Copper and the ores of copper	9	722
Gypsum	1	18
Lignite	1	476
Silver	1	15
Slate	2	30
Slate and flagging	2	28
Ironstone	1	320
Tin and the ores of tin	76	8,373
Lead	1	154
Lead and silver	2	440
Red ochreous clay	1	2
Marble	2	21
Total	135	19,620

864. According to the estimate of the Mining Department, the following are the values of metals and minerals other than gold raised in Victoria from 1851 to the end of 1882. Of these productions, the value in 1882 amounted to £21,528 :— Minerals other than gold raised.

VALUE OF METALS AND MINERALS OTHER THAN GOLD, 1851 TO 1882.

<p style="text-align: center;">£</p> <p>Silver 53,954</p> <p>Tin 355,498</p> <p>Copper 100,915</p> <p>Antimony 167,247</p> <p>Lead 4,922</p> <p>Iron 8,636</p> <p>Coal 13,520</p> <p>Lignite 2,813</p> <p>Kaolin 7,444</p> <p>Flagging 57,106</p>	<p style="text-align: center;">£</p> <p>Slates 940</p> <p>Gypsum... .. 7</p> <p>Magnesite 12</p> <p>Ores, mineral earthy clays, &c., unenumerated 10,901</p> <p>Diamonds 108</p> <p>Sapphires, &c. 630</p> <p style="text-align: right; border-top: 1px solid black;">Total 784,653</p>
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865. The following, according to the estimate of the same department, is the number of men engaged in mining for various kinds of minerals or metals other than gold* at the end of 1882 :— Miners for minerals other than gold.

MINERS FOR MINERALS OTHER THAN GOLD.

<p style="text-align: center;">Number of Miners.</p> <p>Tin 77</p> <p>Antimony 64</p> <p>Ironstone 60</p> <p>Limestone 30</p> <p>Lead 6</p> <p>Coal 4</p>	<p style="text-align: center;">Number of Miners.</p> <p>Slate and flag 35</p> <p>Lignite 11</p> <p style="text-align: right; border-top: 1px solid black;">Total 287</p>
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* For number of gold miners, see paragraph 92 ante.

Value of
mining
lands.

866. The value of lands held under the by-laws of the various mining districts, and under lease from the Crown, is estimated by the Mining Department to have been £7,080,780 in 1881, and £7,394,167 in 1882.

Revenue
from gold-
fields.

867. The revenue derived from the gold-fields amounted to £20,261 in 1881 and £23,543 in 1882. The amount in the latter year was made up of the following items :—

REVENUE FROM GOLD-FIELDS, 1882.

	£
Miners' rights	5,711
Business licences	470
Rents for leases of auriferous mineral lands	15,689
Water-right and searching licences	673
Total	<u>22,543</u>

State aid to
mining.

868. A statement is subjoined of the amounts advanced from the revenue to companies and individuals in order to assist in the development of the mining industry in the years named; also, of the amount repaid in the last two financial years :—

	£
Amount advanced, 1875-6	1,500
" " 1877-8	250
" " 1878-9	18,800
" " 1879-80	500
Total	<u>21,050</u>
Amount repaid, 1880-81	£737
" " 1881-2	240
Balance outstanding	<u>20,073</u>

ages of
miners, &c.

869. The weekly rates of wages paid for different descriptions of mining labour in the year 1882 are thus quoted by the Mining Department :—

RATES OF MINING LABOUR,* 1882.

	Per Week, without Rations.		Per Week, without Rations.
General manager ...	£2 10s. to £12	Carpenter ...	£1 5s. to £4
Legal manager ...	10s. to £5	Foreman of shift ...	£2 2s. to £3
Mining manager ...	£2 5s. to £7	Miner ...	£2 to £3
Engineer ..	£2 10s. to £6	Surface man (labourer)	£1 5s. to £2 10s
Engine-driver ...	£2 to £3 10s.	Boy ...	15s. to £2
Pitman ..	£1 10s. to £4	Chinese ...	12s. to £1 16s.
Blacksmith ...	£1 15s. to £4		

Value of
mining
produce.

870. The estimated value of the produce raised from Victorian mines and quarries in 1882 is summarized as follows :—

VALUE OF MINING PRODUCE, 1882.

	£
Gold	3,594,144
Other metals and minerals	21,528
Stone from quarries	65,573
Total	<u>£3,681,245</u>

* See also table of Wages in Part Interchange post.

871. The estimated value of the agricultural, pastoral, and mining produce raised in Victoria during each of the last nine years is given in the following table. It should be borne in mind that the prices of agricultural and pastoral produce, on which the value mainly depends, fluctuates from year to year. In 1878 and 1879, these prices were below the average.* In most of the years the value of the pastoral produce was greater than that of the other two industries combined:—

Agricultural, pastoral, and mining produce.

VALUE OF AGRICULTURAL, PASTORAL, AND MINING PRODUCE, 1874 TO 1882.

Year.	Estimated Value of—			Total.
	Agricultural Produce.	Pastoral Produce.†	Mining Produce.	
	£	£	£	£
1874 ...	4,410,436	9,840,562	4,740,679	18,991,677
1875 ...	4,835,894	9,541,551	4,475,876	18,853,321
1876 ...	5,574,239	10,069,570	3,949,135	19,592,948
1877 ...	5,792,898	8,652,471	3,322,264	17,767,633
1878 ...	4,912,745	8,360,265	3,211,990	16,485,000
1879 ...	5,875,313	6,375,965	3,136,527	15,387,805
1880 ...	5,395,021	9,855,800	3,397,661	18,648,482
1881 ...	5,893,874	8,684,218	3,533,658	18,111,750
1882 ...	6,439,972	9,297,812	3,681,245	19,419,029

872. The census taken on the 3rd April, 1881, enabled an approximate return to be made of the value of articles manufactured in the twelve months prior to that date, and the net result has already been stated to be £5,373,091.‡ If, on the assumption that the value of manufacturing produce would be about the same in 1882 as in the census year, this amount be added to the figures in the lowest line of the last column in the above table, a total of the gross value of agricultural, pastoral, mining, and manufacturing produce will be obtained for the year 1882, amounting in the aggregate to £24,792,120.

Agricultural, pastoral, mining, and manufacturing produce.

873. The patents for inventions applied for in 1882 numbered 242, as against 197 in the previous year. Since 1854 the total number of patents applied for has been 3,401.

Patents.

874. The Victorian Copyright Act (33 Vict. No. 350) came into force in December 1869. Since then the following copyrights have been registered:—

Copyrights.

* For prices of agricultural produce in different years, see table following paragraph 806 ante.
 † The pastoral produce referred to is that derived from the live stock kept by both farmers and squatters.
 ‡ See paragraph 841 ante.

COPYRIGHTS, 1870 TO 1881.

Subject of Copyright.	Copyrights Registered.		
	Prior to 1882.	During 1882.	Total.
DESIGNS.			
Articles of manufacture, chiefly of—			
Metals	188	14	202
Wood, stone, cement, or plaster ...	44	...	44
Glass	7	1	8
Earthenware	3	...	3
Ivory, bone, papier-maché, &c. ...	25	3	28
Woven fabrics	10	2	12
Miscellaneous	15	...	15
LITERARY PRODUCTIONS.			
Literary works	967	140	1,107
Dramatic „	56	8	64
Musical „	76	4	80
WORKS OF ART.			
Paintings	4	...	4
Drawings	20	...	20
Engravings	706	47	753
Photographs	868	33	901
Sculpture	2	...	2
Total	2,991	252	3,243

Trade-marks.

875. Provision for the registration of trade-marks was established under the Trade-marks Registration Act 1876 (40 Vict. No. 539) which came into operation on the 22nd September of that year. The registration of a person as the proprietor of a trade-mark is *primâ facie* evidence of his right to its exclusive use, subject to the provisions of the Act as to its connexion with the good-will of a business. From the period of the commencement of the Act to the end of 1882, 599 trade-marks were submitted for registration, and 448 were registered. During the year 1882, the number submitted was 136, and the number registered 112.

PART VII.—LAW, CRIME, ETC.

Transfer of Land Statute.

876. The system whereby persons acquiring possession of land, either by transfer, inheritance, or other means, may receive a title thereto direct from the Crown, was first introduced into Victoria in the year 1862, and continues in force to the present period.

Lands under the Statute.

877. All lands alienated from the Crown since the introduction of the system have come at once under its provisions; and lands alienated