

Meteorology,  
1866 to 1876.

243. The following are the results for Melbourne in each of the eleven years ended with 1876 :—

METEOROLOGICAL OBSERVATIONS AT MELBOURNE.—RETURN FOR  
ELEVEN YEARS.

(Observatory 91·3 feet above the Sea-level.)

Year.	Temperature in the Shade.			Mean Atmospheric Pressure.	Days on which Rain fell.	Amount of Rainfall.	Mean Relative Humidity.	Amount of Cloud.
	Max.	Min.	Mean.					
	°	°	°	inches.	No.	inches.	0-1.	0-10.
1866	108	28	58	29·95	107	22·41	·70	5·5
1867	108	30	58	29·92	133	25·79	·72	5·7
1868	110	27	57	29·98	120	18·27	·70	5·7
1869	108	27	57	29·94	129	24·59	·71	6·0
1870	109	30	57	29·93	129	33·76	·74	5·8
1871	106	32	58	29·92	125	30·17	·74	5·9
1872	103	32½	58	29·92	136	32·52	·74	6·4
1873	102	30	58	29·94	134	25·61	·72	6·0
1874	103	29	57	29·93	134	28·10	·72	6·1
1875	110	31	57	29·89	158	32·87	·72	6·2
1876	111	29	57	29·93	134	24·04	·70	5·8

Meteorology  
elsewhere  
treated on.

244. An extended account of the meteorology and climate of Victoria will be found in the *Victorian Year-Book*, 1874, paragraphs 54 to 95.

PART V.—PRODUCTION.

Disposal of  
Crown  
lands.

245. An account of the various changes which have taken place in the mode of disposing of the Crown lands of this colony was given in the *Victorian Year-Book*, 1874.\* No alteration has been made in the system since the publication of that work.

Land Act  
1869.

246. The Land Act now in force is that of 1869 (33 Vict. No. 360). Under this Statute an extent of land not exceeding 320 acres is allowed to be selected by one person. The selection is held under license for three years, within which period the licensee must reside on his selection at least two years and a half, must enclose it, cultivate 1 acre out of every 10 acres, and generally effect improvements to the value of 20s. per acre. The rent payable during this period is 2s. per acre per annum, which is credited to the selector as part payment of the principal. At the expiration of the three years' license, the selector, if he obtain a certificate from the Board of Land and Works that he has

\* Paragraphs 366 to 370.

complied with these conditions, may either purchase his holding by paying the balance of 14s. per acre, or may convert his license into a lease extending over seven years, at an annual rental of 2s. per acre, which is also credited to the selector as part payment of the fee-simple. On the expiry of this lease the land becomes 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 amount to be so sold in any one year not to exceed 200,000 acres.

247. The land alienated from the Crown in fee-simple during 1876 amounted to 476,584 acres. Of this extent, 476,038 acres were sold, and 546 acres were granted without purchase. Crown lands alienated, 1876.

248. Of the area sold, 150,626 acres, or nearly a third, was disposed of by auction. Nearly the whole of the remainder was in the first instance selected under the system of deferred payments. Crown lands sold by auction.

249. The extent of Crown lands sold from the first settlement of the colony to the end of 1876 was 10,823,988 acres, and the extent granted without purchase was 3,791 acres. The total extent alienated was thus 10,827,779 acres. Crown lands alienated, 1836 to 1876.

250. The selected lands of which the fee-simple had not passed to the purchaser up to the end of the year amounted to 7,213,148 acres. Of this area it is certain that at least 750,000 acres had been forfeited for non-fulfilment of conditions. The remainder, representing the area in process of alienation under deferred payments, amounted to 6,463,148 acres, the whole of which, should the legal conditions be duly complied with, will pass away from the Crown in the course of a few years. Crown lands selected.

251. According to the latest estimate, the total area of the colony is 56,446,720 acres; and if from this be deducted the sum of the lands granted, sold, and selected, amounting to 17,290,927 acres, it will follow that the residue, representing the Crown lands neither alienated nor in process of alienation, amounted at the end of 1876 to 39,155,793 acres. Crown lands unalienated.

252. 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, lakes, or lagoons. Deducting these lands from the extent unalienated and unselected, already stated to have been 39,155,793 acres, it will be found that the area open for selection is narrowed to 12,994,820 acres. This will be at once seen by Public estate, 1876.

the following table, which shows the condition of the public estate at the end of 1876 :—

PUBLIC ESTATE OF VICTORIA ON 31ST DECEMBER 1876.

Condition of Land.	Number of Acres.
Land alienated in fee-simple ... ..	10,827,779
Land in process of alienation under deferred payments ... ..	6,463,148
Roads in connection with the above ... ..	902,051
Unsold land included in town reserves ... ..	242,922
Reserves in connection with pastoral occupation (about)... ..	350,000
Auriferous lands (about) ... ..	1,060,000
State forests, not included in unavailable mountain ranges ... ..	223,300
Timber reserves ... ..	382,700
Mallee scrub, unavailable mountain ranges, lakes, lagoons, &c. (about)	23,000,000
Area available for selection at end of 1876 ... ..	12,994,820
Total area of Victoria ... ..	56,446,720

Crown lands available for selection.

253. Omitting the 23,000,000 acres covered by mallee scrub, unavailable mountain ranges, lakes, lagoons, &c., the remainder of the colony, amounting to 33,446,720 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 1876, 17,290,927 acres, or 52 per cent., were already alienated or in process of alienation; 3,160,973 acres, or 9 per cent., were occupied by reserves; and 12,994,820 acres, or 39 per cent., were available for selection.

Extent available for selection, 1875 and 1876.

254. The difference between the extent available for selection at the end of 1875 and at the end of 1876 was 942,133 acres. The extent so available was equal at the former period to 25 per cent., and at the latter period to 23 per cent. of the whole area of the colony.

Amount realised on Crown land sales, 1876.

255. The amount realised for Crown lands sold in 1876 was £584,913, or at the rate of £1 4s. 7d. per acre. Of this sum, only £376,864 was received during the year, the remainder having been paid in former years as rents and license fees. The proportion sold by auction realised £255,990, or an average of £1 14s. per acre; and the proportion sold otherwise than at auction realised £328,922, or an average of £1 0s. 2½d. per acre.

Amount realised, 1836 to 1876.

256. From the period of the first settlement of the colony to the end of 1876 the amount realised by the sale of Crown lands was £18,001,112, or at the rate of £1 13s. ¾d. per acre.

Squatting runs: number and area.

257. The squatting runs in 1876 numbered 822, or 43 less than in 1875. The area of Crown lands embraced in runs amounted in 1876 to 21,906,540 acres, or 1,061,099 acres less than in 1875.

Squatting runs: average size.

258. The average size of squatting runs was 26,552 acres in 1875, and 26,650 acres in 1876. This is exclusive of any purchased land attached thereto.

259. The number of runs with purchased land attached was 448 in 1875, and 493 in 1876. The land so attached was 1,730,113 acres in the former, and 1,685,811 acres in the latter year. In explanation of the falling off in the area of purchased land held in connection with runs, it is to be observed that, as soon as the Crown lands attached to a run are altogether purchased, it drops out of the list of runs, and is considered as a farm. The term "run" is applied to such holdings only as are subject to pastoral licenses. Squatting runs with purchased land attached.

260. The extent of purchased land attached to runs was in the proportion of 2,000 acres to each run in 1875, and of 2,051 acres to each run in 1876; or in the proportion of 3,862 acres in 1875, and of 3,419 acres in 1876, to each run having purchased land held in connection therewith. Proportion of purchased land to each run.

261. The rent paid for runs is fixed in accordance with the grazing capabilities of the land. For the five years ended with 1875 it was charged at the rate of 4s. yearly for each head of cattle or horses, or 8d. for each sheep, the run was estimated to be able to depasture; but by the Land Act 1875 (39 Vict. No. 515) the rate was changed to 5s. for cattle or horses and 1s. for sheep, the change to take effect from the 31st December 1875. In 1875 the amount of rent received was £139,304, or 1.456d. (nearly 1½d.) per acre, and in 1876 the amount of rent received was £152,644, or 1.672d. (nearly 1¾d.) per acre. Rent of runs.

262. The whole revenue from the sale and occupation of Crown lands amounted to £1,147,857 in 1876. The receipts from auction sales were less by £35,240 than in 1875; yet the total receipts showed an improvement of £141,028. The land revenue may be thus divided:— Revenue from Crown lands.

LAND REVENUE, 1876.

Temporary occupation ... ..	£194,535
Alienation in fee-simple and progressive ... ..	834,663
Penalties, fees, and interest ... ..	118,659
Total ... ..	£1,147,857

263. The agricultural statistics of Victoria are collected by the municipal bodies, who are required each year to furnish the Government Statist, on or before the 31st March, 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 ten pounds. Collectors divulging or making extracts from the information they receive, except under the special direction or Agricultural statistics.

authority of the Government Statist, also render themselves liable to a penalty of ten pounds.

Agricultural  
statistics,  
1876-7.

264. The agricultural statistics\* to which reference will now be made are those for the year ended 31st March 1877. Tables embodying the general results of these statistics were sent for publication in the *Government Gazette* on the 10th May last, and these, with additional tables, have since been printed and laid before Parliament, in Part V. of the Statistical Register.

Holdings to  
be visited  
by collec-  
tors.

265. The holdings which the collectors are required to visit are all blocks of alienated land above one acre in extent, which are occupied for agricultural or pastoral purposes. Each distinct occupation is considered to be a holding, without reference to its proprietorship, and each of several holdings in different localities owned by one person is necessarily reckoned as a distinct holding.

Land in  
occupation.

266. The extent of land in occupation of which a return is made is always less than the whole area alienated. The collectors are not required to take account of holdings of a smaller extent than one acre, nor of gardens or grounds attached to residences which are kept merely for ornament and pleasure, nor of any lands which are unoccupied, or which are used for other purposes than agriculture or the keeping of stock. It is, moreover, possible that in a few instances the collectors may not be aware of the existence of, and consequently may not penetrate to, some isolated blocks of purchased land held in connection with squatting stations at a distance from agricultural districts.

Returns of  
large hold-  
ings ob-  
tained with  
difficulty.

267. Returns of the small or medium-sized holdings are obtained without much trouble, but difficulty is often experienced in getting particulars respecting the large estates, especially in regard to their size. Sometimes an overseer is in charge who does not know even the gross area, much less the extent of the portions which are let off as farms, and which, being returned in the name of the tenant, should be subtracted from the total. Not unfrequently the owner himself professes to be unable to furnish the collectors with correct information.

Land occu-  
pied, en-  
closed, and  
cultivated.

268. A statement of the number of holdings, and of the extent of land occupied, enclosed, and cultivated in the year under review, and the previous one, will be found in the following table. All the items show increase :—

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\* 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.

HOLDINGS, AND LAND\* OCCUPIED, ENCLOSED, AND CULTIVATED, 1876 AND 1877.

Year ended 31st March.	Number of Holdings larger than 1 acre.	Acres Occupied.	Acres Enclosed.	Acres under Tillage.
1876 ...	40,852	13,084,233	12,105,197	1,126,831
1877 ...	43,057	13,855,003	12,702,051	1,231,105
Increase ...	2,205	770,770	596,854	104,274

269. During the decenniad ended with the year under review the holdings, the land occupied, and that enclosed have nearly doubled, and the land under cultivation has more than doubled. The following are the figures :—

INCREASE IN 1877 AS COMPARED WITH 1867.

Holdings ...	20,359
Acres occupied ...	6,481,724
„ enclosed ...	6,192,861
„ cultivated ...	638,190

270. The estimated population of Victoria at the end of 1876 was 840,300, and the land under tillage, as returned three months later, being 1,231,105 acres, the average area cultivated to each person was 1.47 acre, as against 1.37 acre in the previous year.

271. In proportion to population, South Australia places much more land under cultivation, and New South Wales and Queensland much less, than any other colonies of the group. The following table shows the extent of land per head so placed in each Australasian colony during the three seasons ended with that of 1875-6, also the mean of the three seasons. The colonies are placed in order, the colony with the largest amount of cultivation per head being placed first, and that with the least last :—

CULTIVATION PER HEAD IN AUSTRALASIAN COLONIES, 1874 TO 1876.†

Colony.	Acres under Tillage per Head of Population.			
	1873-4.	1874-5.	1875-6.	Mean of Three Years.
South Australia ...	6.18	6.50	6.86	6.51
Tasmania ...	1.61	3.13	3.21	2.65
Western Australia ...	2.01	1.73	1.78	1.84
New Zealand ...	1.27	1.61	1.62	1.50
Victoria ...	1.22	1.25	1.37	1.28
New South Wales ...	.82	.80	.74	.79
Queensland ...	.43	.39	.43	.42

\* The holdings and land referred to are exclusive of Crown lands held under squatting licenses.

† For the population and number of acres under tillage in each Australasian colony during the four years ended with 1876-7, see Summary of Australasian Statistics (third folding sheet) ante.

Land under principal crops.

272. The following table shows the extent of land in Victoria placed under the principal crops in 1876 and 1877. An increase will be observed in the land under wheat, potatoes, and green forage, but a falling off in that under oats, barley, and hay :—

LAND UNDER PRINCIPAL CROPS, 1876 AND 1877.

Year ended 31st March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.	Green Forage.
	acres.	acres.	acres.	acres.	acres.	acres.
1876 ...	321,401	124,100	31,568	36,901	155,274	308,405
1877 ...	401,417	115,209	25,034	40,450	147,408	362,554
Increase ...	80,016	...	...	3,549	...	54,149
Decrease...	...	8,891	6,534	...	7,866	...

Increase or decrease of land under principal crops.

273. The area placed under wheat in 1877 was nearly twice that in 1867 ; the area under barley was more than twice that in 1867 ; the area under potatoes was 25 per cent., and the area under hay was 59 per cent. more than the areas under those crops in 1867 ; the area under green forage was upwards of four times as great as that in 1867, but the area under oats was 11 per cent. less than that in 1867. The following are the figures of increase or diminution :—

INCREASE IN 1877 AS COMPARED WITH 1867.

Acres under wheat ...	192,829	Acres under hay ...	54,936
„ barley ...	15,119	„ green forage	298,380
„ potatoes ...	8,047		

DECREASE IN 1877 AS COMPARED WITH 1867.

Acres under oats ...	...	...	...	...	...	14,075
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Produce of principal crops.

274. The gross produce of the same crops, except green forage, is shown as follows for 1876 and 1877. It will be observed that the yield of wheat and potatoes was greater in the latter year than in the former, but the reverse was the case as regards oats, barley, and hay :—

GROSS PRODUCE OF PRINCIPAL CROPS, 1876 AND 1877.

Year ended 31st March.	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	bushels.	bushels.	bushels.	tons.	tons.
1876 ...	4,978,914	2,719,795	700,665	124,377	206,613
1877 ...	5,279,730	2,294,225	530,323	134,082	180,560
Increase ...	300,816	...	...	9,705	...
Decrease ...	...	425,570	170,342	...	26,053

Increase or decrease of yield of principal crops.

275. The quantity of wheat, oats, barley, and hay raised in 1877, as compared with the quantity of the same crops raised in 1867, was not so great as they would have been had the yield per acre been as bountiful in the year under review as at the former period. Potatoes, on the other hand, showed a larger acreable yield in the year under review than at

the former period. The following are the differences between the yields at the two periods :—

INCREASE IN 1877 AS COMPARED WITH 1867.

Bushels of wheat ...	638,525		Tons of potatoes ...	45,202
„ barley ...	231,106		„ hay ...	19,317

DECREASE IN 1877 AS COMPARED WITH 1867.

Bushels of oats ...	...	...	...	1,586,181
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276. About five-sixths of the wheat raised in Victoria is grown in eleven counties, the greater part of which lies between the 36th and 37th parallels of latitude and the 143rd and 147th degrees of longitude. The following are the names of these counties, and the quantity of wheat raised in each during the season under review :—

WHEAT RAISED IN ELEVEN COUNTIES, 1877.

	Bushels.		Bushels.
Bendigo ...	763,984	Gunbower ...	169,105
Bogong ...	264,571	Kara Kara ...	436,834
Borong ...	336,156	Moira ...	568,004
Dalhousie ...	170,817	Rodney ...	697,027
Delatite ...	252,946	Talbot ...	462,695
Gladstone ...	342,485	Total ...	<u>4,464,624</u>

277. It is a remarkable fact that the acreable yield of wheat is not nearly so high in these counties as it is in others in which the gross yield is much smaller. Two of the counties named are at the very bottom of the list; seven others follow one another in succession, only a little higher up; twelve counties stand before one, and sixteen before the other of the two remaining ones. The following is a list of the counties in Victoria, arranged in order according to the quantity of wheat they produced per acre in the year under review, the figures denoting the average yield being placed against the name of each county. The eleven counties alluded to as producing the largest gross quantities of wheat are marked with asterisks :—

AVERAGE PRODUCE OF WHEAT IN EACH COUNTY, 1877.

	Bushels per Acre.		Bushels per Acre.
Tambo ...	25·43	Anglesey ...	15·50
Villiers ...	24·67	Grenville ...	14·89
Tanjil ...	24·10	Hampden ...	14·81
Dargo ...	23·85	Wonnangatta ...	14·43
Polwarth ...	23·72	Ripon ...	14·14
Buln Buln ...	21·04	*Bogong ...	13·83
Evelyn ...	21·03	*Moira ...	13·82
Benambra ...	20·89	*Talbot ...	13·82
Bourke ...	20·23	*Rodney ...	13·41
Heytesbury ...	19·65	*Bendigo ...	12·55
Grant ...	18·95	*Gladstone ...	12·13
Mornington ...	18·59	*Kara Kara ...	12·05
*Dalhousie ...	17·69	Tatchera ...	10·97
Follett ...	16·74	Lowan ...	10·60
Normanby ...	16·52	*Gunbower ...	8·97
Dundas ...	16·18	*Borong ...	8·58
*Delatite ...	16·03		



Yield of  
other prin-  
cipal crops  
in each  
county.

278. The average produce per acre of the other principal crops is given in the following table. It will be noticed that the highest acreable yield of oats was in Tambo, that of barley and potatoes in Villiers, and that of hay in Dargo; also, that the lowest acreable yield of oats, barley, and potatoes was in Tatchera, and that of hay in Gunbower:—

AVERAGE PRODUCE OF OATS, BARLEY, POTATOES, AND HAY IN EACH COUNTY, 1877.

[Counties.	Average Produce to the Acre of—			
	Oats.	Barley.	Potatoes.	Hay.
	bushels.	bushels.	tons.	tons.
Anglesey ... ..	21·98	19·00	2·00	1·25
Benambra ... ..	27·70	17·31	3·05	1·27
Bendigo ... ..	16·58	14·43	·97	1·15
Bogong ... ..	21·39	21·32	2·84	1·17
Borong ... ..	11·68	10·04	1·12	·67
Bourke ... ..	25·73	25·68	3·49	1·43
Buln Buln ... ..	22·35	23·41	2·84	1·62
Dalhousie ... ..	21·70	23·77	2·32	1·57
Dargo ... ..	22·31	29·97	4·38	2·23
Delatite ... ..	22·28	22·75	2·00	1·16
Dundas ... ..	18·46	23·78	1·41	1·37
Evelyn ... ..	21·85	12·20	2·76	1·61
Follett ... ..	18·97	21·67	2·41	1·29
Gladstone ... ..	14·77	15·13	1·45	·90
Grant ... ..	26·33	25·93	3·97	1·18
Grenville ... ..	15·80	18·44	2·74	1·16
Gunbower ... ..	14·43	9·32	·67	·50
Hampden ... ..	18·62	23·49	3·16	1·23
Heytesbury ... ..	21·55	19·66	2·57	1·58
Kara Kara ... ..	14·98	14·40	1·24	·91
Lowan ... ..	13·40	14·09	1·44	·66
Moira ... ..	17·82	17·52	1·10	·97
Mornington ... ..	21·91	15·42	2·46	1·46
Normanby ... ..	21·56	25·83	2·54	1·42
Polwarth ... ..	27·12	26·62	4·38	1·66
Ripon ... ..	15·73	26·64	1·74	1·40
Rodney ... ..	17·99	17·67	1·43	·92
Talbot ... ..	21·16	21·81	2·58	1·29
Tambo ... ..	27·86	30·69	3·14	1·86
Tanjil ... ..	26·06	38·03	3·32	1·62
Tatchera ... ..	9·28	5·02	·33	·86
Villiers ... ..	22·68	39·76	4·88	1·72
Wonnangatta ... ..	17·07	13·50	2·99	1·31
Total ... ..	19·91	21·18	3·31	1·22

Yield of  
principal  
crops, 1867  
to 1877.

279. Taking the colony as a whole, the average produce of wheat per acre in the year under review was 13·15 bushels, that of oats was 19·91 bushels, that of barley was 21·18 bushels, that of potatoes was 3·31 tons, that of hay was 1·22 tons. The average of wheat was

exceeded in every year of the previous decenniad except 1871, and that of hay in all the years except 1869 and 1871 ; the average of oats and barley was exceeded only in 1867, 1870, and 1876, and that of potatoes only in 1873, 1875, and 1876. The following table shows the acreable yield of these crops during each of the last eleven years, also the average during the whole period :—

AVERAGE PRODUCE OF PRINCIPAL CROPS, 1867 TO 1877.

Year ended 31st March.	Average Produce per Acre of—				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
	bushels.	bushels.	bushels.	tons.	tons.
1867 ... ..	22·25	30·01	30·18	2·74	1·74
1868 ... ..	15·72	18·61	20·32	3·29	1·30
1869 ... ..	16·28	19·65	15·23	2·21	1·09
1870 ... ..	19·75	25·98	24·55	3·09	1·60
1871 ... ..	10·10	14·98	12·26	3·27	1·13
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
Average of eleven years	15·22	20·35	20·55	3·13	1·33

280. In the following table the average yield of wheat, oats, potatoes, and hay in Victoria during the five years ended with 1876, is placed side by side with the average of the same crops in the other Australasian colonies during as many of those years as the information is available for. The only one of the colonies for which the particulars are altogether wanting is Queensland. That colony publishes no return of the produce of any crop except wheat, and that only for certain selected districts, the average of which does not afford reliable data for ascertaining the average produce of wheat over the colony taken as a whole :—

Average produce in Australasian colonies.

AVERAGE PRODUCE OF PRINCIPAL CROPS IN AUSTRALASIAN COLONIES, 1872 TO 1876.

Name of Colony.	1872.	1873.	1874.	1875.	1876.	Mean.
WHEAT : BUSHELS PER ACRE.						
Victoria ... ..	13·45	16·51	13·58	14·57	15·49	14·72
New South Wales	14·48	16·32	13·43	12·87	14·66	14·35
South Australia	5·73	11·50	7·87	11·75	11·95	9·76
Western Australia	...	6·02	13·44	12·00	11·00	10·62
Tasmania ... ..	13·39	18·62	16·17	18·51	16·38	16·61
New Zealand ...	22·52	24·19	25·61	28·15	31·54	26·40

**AVERAGE PRODUCE OF PRINCIPAL CROPS IN AUSTRALASIAN  
COLONIES, 1872 TO 1876—continued.**

Name of Colony.	1872.	1873.	1874.	1875.	1876.	Mean.
<b>OATS : BUSHELS PER ACRE.</b>						
Victoria ...	18·76	19·55	15·69	18·46	21·92	18·88
New South Wales	20·36	19·94	18·71	16·31	18·72	18·81
South Australia	10·85	16·39	10·61	14·61	16·69	13·83
Western Australia	...	13·24	19·22	16·00	15·00	15·87
Tasmania ...	20·03	25·85	20·98	26·82	25·40	23·82
New Zealand ...	26·78	27·00	29·81	35·22	39·34	31·63
<b>POTATOES : TONS PER ACRE.</b>						
Victoria ...	3·22	3·45	2·86	3·53	3·37	3·29
New South Wales	3·03	2·98	2·98	2·83	2·98	2·96
South Australia	3·48	3·28	3·41	3·72	4·52	3·68
Western Australia	...	2·34	2·67	3·00	3·00	2·75
Tasmania ...	2·77	3·92	3·16	3·75	3·54	3·43
New Zealand ...	3·53	4·92	4·46	5·24	4·89	4·61
<b>HAY : TONS PER ACRE.</b>						
Victoria ...	1·40	1·32	1·27	1·32	1·33	1·33
New South Wales	1·50	1·61	1·54	1·37	1·15	1·43
South Australia	1·00	1·21	1·02	1·26	1·21	1·14
Western Australia	...	1·51	2·00	1·50	1·00	1·50
Tasmania ...	·98	1·39	1·08	1·35	1·42	1·24
New Zealand ...	1·16	1·25	1·43	·84	1·46	1·23

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 four years ended with 1876-7, see Summary of Australasian Statistics (third folding sheet) *ante*.

Breadstuffs  
available  
for con-  
sumption.

281. This colony, in almost every year since its first settlement, has been obliged to supplement the wheat grown within its borders by importations from without, in order to meet requirements. In only three years has the quantity produced in Victoria, added to the stocks previously on hand, been sufficient for the consumption of the population. It is usual, on the publication of the agricultural statistics of each year, for those interested to endeavour to arrive at an estimate of the probable amount of breadstuffs it might be necessary to import by making calculations based upon a supposed number of bushels required for each individual in the colony. Authorities differ in respect to the average quantity which each person consumes, and therefore some degree of uncertainty always attends these estimates. In order to throw some light on so important a subject, the following table has been constructed. It shows for each of the thirty-seven years ended with 1876 the mean population, the quantity of breadstuffs available for consumption, distinguishing the Victorian grown from the imported, also the probable manner in which such breadstuffs have been consumed, distinguishing the

estimated quantity of wheat used for seed from that of breadstuffs of all descriptions used for food :—

BREADSTUFFS AVAILABLE FOR CONSUMPTION, 1840-1876.

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.†	For Food.	
					Total.	Per Head.	
		bushels.	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
1859	517,226	1,563,113	1,957,610	3,520,723	214,185	3,306,538	6.39
1860	539,337	2,296,157	1,565,423	3,861,580	322,503	3,539,077	6.56
1861	541,012	3,459,914	1,522,517	4,982,431	393,844	4,588,587	8.48
1862	548,450	3,607,727	183,106	3,790,833	324,018	3,466,815	6.32
1863	561,322	3,008,487	191,107	3,199,594	298,784	2,900,810	5.17
1864	589,160	1,338,762	1,868,990	3,207,752	250,080	2,957,672	5.02
1865	616,375	1,899,378	1,800,932	3,700,310	357,256	3,343,054	5.42
1866	634,077	3,514,227	1,754,699	5,268,926	417,176	4,851,750	7.65
1867	649,826	4,641,205	15,190	4,656,395	433,978	4,222,417	6.50
1868	671,222	3,411,663	162,038	3,573,701	519,608	3,054,093	4.55
1869	696,942	4,229,228	719,589	4,948,817	577,028	4,371,789	6.27
1870	709,839	5,697,056	-95,654	5,601,402	568,334	5,033,068	7.09
1871	738,725	2,870,409	1,179,583	4,049,992	669,218	3,380,774	4.58
1872	760,991	4,500,795	389,963	4,890,758	653,128	4,237,630	5.57
1873	780,362	5,391,104	-138,088	5,253,016	699,952	4,553,064	5.83
1874	798,688	4,752,289	-40,714	4,711,575	665,872	4,045,703	5.06
1875	815,034	4,850,165	200,369	5,050,534	642,802	4,407,732	5.41
1876	830,679	4,978,914	258,931	5,237,845	802,834	4,435,011	5.34

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

282. The last column of the table shows the average quantity of breadstuffs available for food to each individual of the population. This Consumption of breadstuffs per head.

\* 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.

† Calculated 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.

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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  $4\frac{1}{3}$  bushels in 1843, and about  $4\frac{1}{2}$  bushels in 1868 and 1871. Of late years the average supply has maintained a considerable degree of uniformity, thereby not only showing that, for those periods, the calculations of importers of breadstuffs have been made with much accuracy, but indirectly proving the correctness of the agricultural statistics on which those calculations were based.

Average consumption of breadstuffs.

283. The quantity of breadstuffs available for annual food-consumption per head has averaged  $6\frac{1}{4}$  bushels over the whole period of thirty-seven years. It has averaged  $5\frac{3}{5}$  bushels during the last ten years, and about  $5\frac{2}{5}$  ( $5\cdot44$ ) bushels during the last five years. In the present state of our population, it may be fair to assume that an allowance of  $5\frac{1}{2}$  bushels per head, irrespective of the quantity required for seed, is amply sufficient to supply the wants of any given year.

Imports and exports of breadstuffs, 1837 to 1876.

284. The imports and exports of breadstuffs during the forty years, 1837 to 1876, are set down in the following table. It will be observed that, after deducting the quantities sent away, there remains a balance amounting to nearly  $11\frac{3}{4}$  millions sterling paid by the colony for breadstuffs imported :—

IMPORTS AND EXPORTS OF BREADSTUFFS,\* 1837 TO 1876.

Wheat, Flour, Bread, and Biscuit.	Quantity.	Value.
	bushels.	£
Imported, 1837 to 1876 ... ..	31,879,263	13,663,223
Exported, „ „ ... ..	5,500,494	1,950,493
Imports in excess of exports ...	26,378,769	11,712,730

Net imports of agricultural products.

285. 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 1875 and 1876. All the articles named are capable of being produced, and all, or nearly all, are to a certain extent now produced in the colony. It will be observed that the net importations of these articles in 1876 exceeded those in the previous year by about £32,000, the increase being under the head of wheat, barley, maize, maizena, fruit, jams and jellies, nuts, hops, pickles, tobacco, and preserved vegetables :—

\* 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, 1875 AND 1876.

Articles.	Balance of Imports over Exports in—	
	1875.	1876.
	£	£
Wheat† ... ..	65,913	87,247
Oats ... ..	170,957	112,430
Oatmeal ... ..	511	261
Barley ... ..	24,569	35,318
Pearl barley ... ..	4,623	2,825
Malt ... ..	93,009	68,401
Maize ... ..	114,609	117,951
Maizena ... ..	1,624	4,988
Beans, peas, and split peas ... ..	5,528	2,266
Fruit—green, bottled, dried, currants and rasins	104,916	116,202
Jams and jellies ... ..	4,799	6,450
Nuts, almonds, walnuts ... ..	6,255	7,774
Hops ... ..	42,960	64,600
Chicory ... ..	2,413	1,798
Pickles ... ..	9,160	12,892
Tobacco, cigars, and snuff ... ..	36,485	78,192
Vegetables (preserved) ... ..	930	1,397
Total ... ..	689,261	720,992

286. 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 1875 to the value of £12,471, but none were exported. In 1876 the value of the imports of eggs exceeded that of the exports by £16,093.

287. Wheat and green forage bore a larger proportion to the total cultivation in the year under review than in the former one. Potatoes bore about the same proportion to the whole tillage in both years. Oats, potatoes, and hay bore a smaller proportion to the tillage in 1877 than the same crops did to that in 1876. The following are the figures for the two years :—

PROPORTION OF LAND UNDER EACH CROP, 1876 AND 1877.

Name of Crop.	1875-6.	1876-7.	Name of Crop.	1875-6.	1876-7.
	per cent.	per cent.		per cent.	per cent.
Wheat ... ..	28·52	32·61	Hay ... ..	13·78	11·97
Oats ... ..	11·01	9·36	Green forage ... ..	27·37	29·45
Barley ... ..	2·80	2·03	Other tillage ... ..	13·25	11·29
Potatoes ... ..	3·27	3·29	Total land under crop	100·00	100·00

\* The total imports and total exports of these articles will be found in the table of imports and exports published in Part VII., Interchange, *post*, chiefly under Order 22.

† The value of the exports of flour, bread, and biscuit exceeded the value of the imports of those articles by £30,852 in 1875, and £31,782 in 1876. If these amounts be deducted from those representing the value of the net imports of wheat in each year (£65,913 and £87,247), the remainders (£35,061 in 1875, and £55,465 in 1876) will represent the values of the net imports of breadstuffs in those years respectively.

Minor crops.

288. 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 the collectors are not called upon to visit. 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 three years:—

## MINOR CROPS,\* 1875, 1876, AND 1877.

Nature of Crop.				1874-5.	1875-6.	1876-7.
Beet, carrots, and cabbage ...	parsnips, ...	and ...	acres ...	721	807	571
			tons ...	3,887	4,268	3,430
Broom millet	...	...	acres ...	56	96	8
			fibre, cwt. ...	264	338	8
Buckwheat	...	...	seed, bush. ...	1,000	2,095	...
			acres ...	5	2	...
Canary ...	...	...	bushels ...	...	40	...
			acres ...	...	50	30
Chicory ...	...	...	bushels ...	...	300	183
			acres ...	109	174	225
" for seed	...	...	tons ...	531	652	980
			acres ...	...	3	...
Clover for seed	...	...	lbs. ...	...	168	...
			acres ...	...	45	...
Cucumbers...	...	...	bushels ...	...	614	...
			acres ...	...	...	1
Flax ...	...	...	tons ...	...	...	12
			acres ...	7	17	3
Garden seeds—Carrot	...	...	fibre, cwt. ...	48	93	2 $\frac{1}{4}$
			linseed, bush. ...	63	80	52
" " Mixed	...	...	acres ...	1	...	...
			lbs. ...	560	...	...
" " Radish	...	...	acres ...	...	...	50
			lbs. ...	...	...	1
Grass seeds—Cocksfoot	...	...	...	...	...	560
			acres ...	5	1	13
" " Cow ...	...	...	bushels ...	140	15	230
			acres ...	20	13	...
" " Mixed...	...	...	bushels ...	37	15	...
			acres ...	...	...	29
" " Prairie	...	...	bushels ...	...	...	399
			acres ...	21	45	75
" " Rye ...	...	...	bushels ...	619	948	12 $\frac{1}{2}$
			acres ...	3,036	2,130	1,851
" " Yorkshire fog	...	...	bushels ...	35,202	32,602	28,209
			acres ...	...	...	25
" " "	...	...	bushels ...	...	...	379

\* Exclusive of those grown in gardens.

† Of this area 72 acres are reported to have failed.

‡ Grown on 3 acres only.

MINOR CROPS,\* 1875, 1876, AND 1877—continued.

Nature of Crop.				1874-5.	1875-6.	1876-7.
Green peas	...	...	{ acres ...	...	...	11
			{ tons ...	...	...	18
Hops	...	...	{ acres ...	126	145	225
			{ lbs. ...	99,624	113,344	129,136
Kohl-rabi	...	...	{ acres ...	...	1	...
			{ cwt. ...	...	300	...
Lucerne for seed	...	...	{ acres ...	...	6	...
			{ bushels ...	...	42	...
Maize	...	...	{ acres ...	1,523	2,346	1,609
			{ bushels ...	24,263	37,177	25,909
Mangel-wurzel	...	...	{ acres ...	1,281	1,223	1,285
			{ tons ...	17,899	16,795	15,386
Medicinal herbs	...	...	{ acres ...	...	...	1
			{ tons ...	...	...	5
Melons	...	...	{ acres ...	10	16	...
			{ tons ...	17	18	...
Mulberry trees	...	...	{ acres ...	1	23	11†
			{ number ...	6,500	30,650	11,010
Mustard	...	...	{ acres ...	31	40	74
			{ cwt. ...	100	166	185
Olives	...	...	{ acres ...	...	10	...
Onions	...	...	{ acres ...	347	552	720
			{ tons ...	2,794	4,780	3,579
Opium poppies	...	...	{ acres ...	10	4	4
			{ lbs. ...	168	100	60
Osiers	...	...	{ acres ...	4	3	5
Peas and beans	...	...	{ acres ...	16,170	18,854	21,235
			{ bushels ...	317,382	450,948	373,857
Pumpkins	...	...	{ acres ...	36	39	19
			{ tons ...	233	49	77
Rape for seed	...	...	{ acres ...	7	34	10
			{ bushels ...	30	...	20
Raspberries	...	...	{ acres ...	...	3	10
			{ cwt. ...	...	60	51
Rye and bere	...	...	{ acres ...	1,096	1,292	1,153
			{ bushels ...	15,620	19,356	15,277
Sheep's parsley	...	...	{ acres ...	...	...	2
			{ lbs. ...	...	...	1,500
Strawberries	...	...	{ acres ...	21	24	21
			{ cwt. ...	210	215	273
Teazles	...	...	{ acres ...	1	11	3
			{ number ...	121,000	1,079,000	19,000
Tobacco	...	...	{ acres ...	733	782	1,479
			{ cwt. ...	6,839	501‡	14,413
Turnips	...	...	{ acres ...	241	284	224
			{ tons ...	1,901	2,668	1,769
Vegetable marrows	...	...	{ acres ...	...	...	2
			{ tons ...	...	...	55
Vetches and tares for seed	...	...	{ acres ...	3	26	8
			{ bushels ...	28	492	47
Vines	...	...	{ acres ...	4,937	5,081	4,765
			{ wine, galls....	577,493	755,000	481,588
			{ brandy, galls.	148	256	3,725

\* Exclusive of those grown in gardens.

† A large plantation of mulberry trees is reported to have been abandoned in 1876-7.

‡ The tobacco crop 1875-6 failed in most of the districts.



Vines.

289. A slight falling off appears in the acreage under vines, as shown in the last table, and the vine crop returned is also smaller than that in any other year since 1868-9.\* There is no doubt that the effects of the oidium, and other diseases the vine is subject to, materially reduce its productiveness, and that, in consequence of the importation and subsequent multiplication of frugivorous birds, especially sparrows, more grapes are now destroyed by birds than there were formerly. 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 the vine-growers, who may also not always remember the exact particulars of their previous year's crop.

Mulberries  
and olives.

290. Only 11 acres under mulberry trees appear in the returns of the year under review, although in those of the previous year 23 acres were noticed. The difference was caused by the abandonment of a large plantation, in consequence of the site having been found unsuitable. The number of trees on the 11 acres is stated to be 11,010. Ten acres under olives were returned in 1876, but this return was altogether absent on the present occasion. Mulberry and olive trees are frequently grown in gardens, and there is no doubt that these, in common with many other plants and minor crops, are much more extensively cultivated than would appear from the agricultural returns.

Gardens and  
orchards.

291. The following table shows the land under gardens and orchards in 1876 and 1877. No return is made of the nature of the crops grown or the quantity of produce raised. The increase in area during the year amounted to nearly 900 acres :—

LAND UNDER GARDENS AND ORCHARDS, 1876 AND 1877.

Year ended 31st March.				Gardens.	Orchards.	Total.
				acres.	acres.	acres.
1876	...	...	...	11,816	5,945	17,761
1877	...	...	...	12,241	6,400	18,641
	Increase	...	...	425	455	880

\* A statement of the acreage under and produce of vines during each year will be found in the Summary of Agricultural Statistics (second folding sheet) *ante*.

292. Land in fallow is included in the area under tillage. The quantity in this condition amounted in 1877 to 84,159 acres, or 12,974 acres less than in the previous year. Land in fallow.

293. The following table shows the number of holdings of various sizes, and the extent of occupied and cultivated land embraced therein according to the returns of the present year. It must be borne in mind that all the land alienated from the Crown is not included, but only that embraced in holdings above a certain minimum size, and showing sufficient evidence of occupation for agricultural or pastoral purposes to cause it to come under the notice of the collectors of agricultural statistics\* :— Classification of holdings as to size.

CLASSIFICATION OF HOLDINGS AS TO SIZE, 1876-7.

Size of Holdings.	Number of Holdings.	Extent of Sold or Selected Land in Occupation.	Extent of Land under Tillage.
		acres.	acres.
1 acre to 4 acres	1,673	4,874	2,836
5 acres 14 "	3,536	31,138	13,981
15 " 29 "	3,897	80,309	25,333
30 " 49 "	3,284	125,895	34,023
50 " 99 "	5,998	432,307	93,693
100 " 199 "	8,103	1,144,521	204,474
200 " 320 "	11,664	3,315,835	415,368
321 " 400 "	1,132	407,982	62,586
401 " 500 "	920	414,704	60,201
501 " 600 "	590	325,006	41,111
601 " 700 "	503	325,065	32,464
701 " 800 "	226	169,558	19,361
801 " 900 "	190	161,372	16,467
901 " 1,000 "	175	166,975	14,025
1,001 " 1,500 "	381	468,607	36,055
1,501 " 2,000 "	170	298,424	20,416
2,001 " 3,000 "	148	367,520	17,672
3,001 " 4,000 "	84	294,106	12,769
4,001 " 5,000 "	56	256,607	10,110
5,001 " 7,500 "	74	456,714	15,830
7,501 " 10,000 "	49	426,266	5,650
10,001 " 15,000 "	76	947,101	27,046
15,001 " 20,000 "	50	870,023	6,285
20,001 " 30,000 "	47	1,119,836	27,974
30,001 " 40,000 "	21	712,138	12,841
40,001 " and upwards	10	532,120	2,534
Total	43,057	13,855,003	1,231,105

294. Under the present Land Act the maximum extent allowed to be selected by one individual is 320 acres. It appears, therefore, that the policy of the State of late years has been to discourage the aggrandizement of estates beyond this limit. It will be interesting to discover Estates under and over 320 acres.

\* See also paragraphs 265 and 266 ante.

what proportion of the total number of holdings, the total quantity of occupied land, and the total quantity of cultivated land, is on blocks which do and do not exceed it. This may be done by analysing the above table, whereby it will be found that—

- (a.) Out of every 100 holders, 11, on the average, occupied lots exceeding, and 89 not exceeding, 320 acres in extent.
- (b.) Out of every 100 acres in occupation, 63, on the average, formed portion of lots exceeding, and 37 of lots not exceeding, 320 acres in extent.
- (c.) Out of every 100 acres cultivated, 36, on the average, were on lots exceeding, and 64 on lots not exceeding, 320 acres in extent.
- (d.) Whilst holders of upwards of 320 acres cultivated, on the average, only 5 per cent. of their holdings, holders of 320 acres and under cultivated, on the average, 15½ per cent. of theirs.

Holdings of  
from 100 to  
320 acres.

295. It may further be ascertained from the same table that 46 per cent. of the holdings, 32 per cent. of the occupied land, and 50 per cent. of the cultivated land, are on lots from 100 to 320 acres; also that, whilst holders of less than 100 acres cultivated, on the average, 25 per cent. of their holdings, holders of from 100 to 320 acres cultivated, on the average, only 14 per cent. of theirs. It has been already stated, that holders of upwards of 320 acres cultivated no more, on the average, than 5 per cent. of their holdings.\*

Average  
size of  
holdings.

296. The following is the average size of holdings in the year under review, and at the two previous quinquennial periods. It will be noticed that holdings were largest at the first and smallest at the middle period :—

#### AVERAGE SIZE OF HOLDINGS.†

1866-7	...	...	...	...	325 acres
1871-2	...	...	...	...	300 „
1876-7	...	...	...	...	322 „

Area occu-  
pied per  
head of  
population.

297. The average area in occupation to each person in the colony has been steadily increasing since the first period, as will be seen by the following figures :—

#### AVERAGE AREA IN OCCUPATION† TO EACH PERSON IN THE COLONY.

1866-7	...	...	...	...	11.5 acres
1871-2	...	...	...	...	13.4 „
1876-7	...	...	...	...	16.7 „

\* The cultivation on holdings of this size is generally confined to laying the land down in permanent artificial grass.

† Including alienated land or land in process of alienation only.

298. The proportion of occupied land enclosed was returned as lowest at the first, and highest at the middle period :—

PROPORTION OF OCCUPIED LAND \* ENCLOSED.

1866-7	...	...	...	...	88.3 per cent.
1871-2	...	...	...	...	92.9 „
1876-7	...	...	...	...	91.7 „

Occupied land enclosed.

299. An increase at each successive period will be noticed in the average extent of land placed under cultivation by each holder :—

AVERAGE AREA CULTIVATED BY EACH HOLDER.

1866-7	...	...	...	...	21.7 acres
1871-2	...	...	...	...	27.8 „
1876-7	...	...	...	...	28.6 „

Area cultivated to each holder.

300. The area in cultivation was less than an acre per head of the population at the first period, but over an acre per head at the second and third periods. The exact amounts were as follow :—

AVERAGE AREA CULTIVATED TO EACH PERSON IN THE COLONY.

1866-7	...	...	...	...	.93 acres
1871-2	...	...	...	...	1.25 „
1876-7	...	...	...	...	1.47 „

Area cultivated per head of population.

301. The proportion of occupied land in cultivation was highest at the middle period, and lowest at the first period:—

PROPORTION OF OCCUPIED LAND CULTIVATED.

1866-7	...	...	...	...	8.04 per cent.
1871-2	...	...	...	...	9.28 „
1876-7	...	...	...	...	8.89 „

Occupied land cultivated.

302. The average duration of leases of farms from private persons was returned by the collectors of statistics as averaging from 3 to 6 years; the extreme figures being 1 and 10 years. The average rental of agricultural land per acre was stated to be from 6s. to 12s.; the extreme figures being 2s. 6d., which, however, was returned for a portion of the county of Grant only, and 30s., which was the rent paid for market garden land in the county of Bourke and for some lands in Villiers. The average rental of pastoral land was said to be from 3s. to 6s.; the extreme figures being 2s. and 14s., the latter being for certain paddocks of artificial grass in the county of Tanjil.

Leases and rental of farms.

303. Each collector furnishes a statement of the price of the principal articles of agricultural produce in his district at the time he makes his rounds. The following is an average deduced from the returns of all the districts during each of the last ten years :—

Prices of agricultural produce.

\* Including alienated land or land in process of alienation only.

## PRICES OF AGRICULTURAL PRODUCE,\* 1868 TO 1877.

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. d.
1868	...	...	7 3	3 11	4 4	82 0	72 6
1869	...	...	5 5	4 6	4 11	124 10	113 4
1870	...	...	4 3	3 7	4 0	75 0	77 0
1871	...	...	5 4	3 9	4 11	70 0	76 0
1872	...	...	4 8	2 11½	3 6¼	65 6	64 0
1873	...	...	4 9	3 5	4 1	67 4	81 0
1874	...	...	5 9	5 6	5 3	118 3	88 0
1875	...	...	4 5	4 3	4 6	89 0	89 0
1876	...	...	4 7	3 3	3 10	87 0	82 0
1877	...	...	5 10	3 7	3 10	114 0	93 0

Years of highest and lowest prices.

304. It will be observed that wheat was highest in 1868 and lowest in 1870; that oats and barley were highest in 1874 and lowest in 1872; and that potatoes and hay were highest in 1869 and lowest in 1872.

Value of agricultural produce.

305. Subjoined is an estimate of the value of the crops raised during the year ended 31st March 1877. It will be seen the total amount exceeded five and a half millions sterling :—

## VALUE OF AGRICULTURAL PRODUCE, 1876-7.

Name of Crop.	Gross Produce and Price.			Estimated Value.	
			£	s.	d.
Wheat ... ..	5,279,730 bushels	@	0	5	10
Oats ... ..	2,294,225 "	@	0	3	7
Barley ... ..	530,323 "	@	0	3	10
Other cereals ... ..	415,043 "	@	0	4	8
Potatoes ... ..	134,082 tons	@	5	14	0
Other green crops ... ..	24,164 "	@	5	0	0
Hay ... ..	180,560 "	@	4	13	0
Green forage ... ..	362,554 acres	@	3	0	0
Tobacco ... ..	14,413 cwt.	@	2	16	0
Grapes, not made into wine ... ..	85,111 "	@	1	0	0
Wine ... ..	481,588 gallons	@	0	4	0
Brandy ... ..	3,725 "	@	0	10	0
Other crops ... ..	3,192 acres	@	5	0	0
Garden and orchard produce	18,641 "	@	20	0	0
	Total ... ..		5,574,239	8	1

Weight of crops.

306. The standard weight of crops in Victoria is reckoned to be 60 lbs. to the bushel for wheat and maize, 40 lbs. for oats, and 50 lbs. for barley. The actual weight, however, differs in different districts. Thus, wheat, during the past year, ranged from 58 lbs. to 64 lbs.; oats, from 35 lbs. to 44 lbs.; barley, from 45 lbs. to 56 lbs.; and maize, from 50 lbs. to 60 lbs. The average weight per bushel of these crops in all the districts during the past two years was as follows :—

\* See also table of prices published in Part VII., Interchange, *post*.

SPECIFIC WEIGHT OF CROPS, 1876 AND 1877.

Average Weight per Bushel of—				1875-6.	1876-7.
				lbs.	lbs.
Wheat	...	...	...	61	61
Oats	...	...	...	40	40
Barley	...	...	...	50	51
Maize	...	...	...	55	55

307. As compared with the numbers returned in 1876, a falling off <sup>Hands em-  
ployed.</sup> took place in the hands employed on stations; but this was more than counterbalanced by the increase of the hands on farms. The following are the returns of the two years. The proprietors or managers of farms and stations are included:—

HANDS EMPLOYED ON FARMS AND STATIONS,\* 1876 AND 1877.

Year ended 31st March.				Hands employed on Farms.		
				Males.	Females.	Total.
1876	...	...	...	61,273	27,446	88,719
1877	...	...	...	63,394	28,747	92,141
Increase ...				2,121	1,301	3,422

Year ended 31st March.				Hands employed on Stations.		
				Males.	Females.	Total.
1876	...	...	...	4,669	1,339	6,008
1877	...	...	...	4,276	1,332	5,608
Decrease ...				393	7	400
Net increase on farms and } stations ...				1,728	1,294	3,022

308. A return of the average rates of labor on farms in the last two <sup>Rates of  
labor on  
farms.</sup> years is given below. An increase will be observed under several heads. Rations are allowed in all cases in addition to the wages quoted:—

RATES OF LABOR ON FARMS,† 1876 AND 1877.

Description of Labor.				1875-6.		1876-7.	
				s.	d.	s.	d.
Ploughmen,	per week	...	...	21	4	21	3
Farm laborers,	"	...	...	17	7	17	4
Married couples,	"	...	...	24	6	26	3
Females,	"	...	...	10	7	10	8
Mowers,	"	...	...	28	11	31	1
"	per acre	...	...	5	1	5	9
Reapers,	per week	...	...	31	11	33	4
"	per acre	...	...	14	1	12	11
Threshers,	per bushel	...	...	0	7	0	8

\* The word "farm," as used in connection with the agricultural statistics, implies a holding of which no portion is subject to a squatting license. The word "station" implies a holding of which portion is subject to a squatting license. "Farms" consist of alienated land only. "Stations" consist either of Crown lands only, or of Crown and alienated lands occupied in the same holdings.

† See also table of wages published in Part VII., Interchange, *post*. For definition of the term "farm," see last footnote.

Rates of  
labor on  
stations.

309. The average rates returned as paid for pastoral labor will be found in the next table. These are in addition to rations, which are in every case supplied. It will be observed that, in most cases, the rates in 1877 are higher than those in 1876:—

RATES OF LABOR ON STATIONS,\* 1876 AND 1877.

Description of Labor.	1875-6.			1876-7.		
	£	s.	d.	£	s.	d.
Stockmen, per annum ... ..	45	12	0	49	8	0
Boundary riders, per annum ... ..	41	12	0	43	1	0
Shepherds, " ... ..	35	3	0	38	1	0
Hutkeepers, " ... ..	30	8	0	32	13	0
Married couples, " ... ..	60	2	0	59	13	0
Females, " .. ..	29	0	0	28	16	0
Station laborers, per week ... ..	0	17	2	0	17	11
Sheepwashers, " ... ..	0	19	10	1	2	7
Shearers, per 100 sheep shorn ... ..	0	13	0	0	14	9

Live stock.

310. The live stock on farms and land not attached to squatting stations, and the live stock on squatting stations, were returned as follow for the last two years. An increase will be observed in the number of cattle and pigs, but a falling off in the number of sheep. On farms all the stock show increase except horses, but on stations all the stock fell off in numbers except cattle, and of these a reduction took place in the number used for dairying purposes. The live stock on farms is returned by the collectors of agricultural statistics, who are instructed to supplement the information they obtain at the holdings they visit with estimates of the stock running on commons, of that kept by persons having allotments of less than an acre in extent, of that stalled and stabled in towns and villages, and of that belonging to road carters traversing their districts. For some of the larger towns the collectors have been unable to furnish estimates, and for these the census figures have been taken. The return of stock on stations has been compiled, as far as possible, from estimates furnished by the squatters in reply to enquiries made by the Government Statist. In a considerable number of instances, however, these enquiries have not been responded to, and in such cases it has been necessary to supply the particulars from the returns of former years. Every endeavor is made to give as true a statement as possible of the numbers of all the stock in the colony; but it is necessary to point out that portion of the information is derived from estimates which can only be verified at a general census:—

\* See also table of wages published in Part VII., Interchange, *post*. For definition of the term "station," see footnote to table following paragraph 307 *ante*.

LIVE STOCK ON FARMS AND ON STATIONS,\* 1876 AND 1877.

Year ended 31st March.	Horses.	Cattle.			Sheep.	Pigs.
		Milch Cows.	Exclusive of Milch Cows.	Total.		

ON FARMS AND LAND UNCONNECTED WITH STATIONS.

1876	...	177,679	242,694	653,926	896,620	6,426,698	136,844
1877	...	177,483	264,648	694,498	959,146	6,444,786	171,729
Increase	...	...	21,954	40,572	62,526	18,088	34,885
Decrease	...	196	...	...	...	...	...

ON STATIONS.

1876	...	18,505	12,443	145,535	157,978	5,322,834	3,921
1877	...	17,285	12,424	156,695	169,119	4,834,107	3,849
Increase	...	...	...	11,160	11,141	...	...
Decrease	...	1,220	19	...	...	488,727	72

TOTAL LIVE STOCK.

1876	...	196,184	255,137	799,461	1,054,598	11,749,532	140,765
1877	...	194,768	277,072	851,193	1,128,265	11,278,893	175,578
Increase	...	...	21,935	51,732	73,667	...	34,813
Decrease	...	1,416	...	...	...	470,639	...

311. The live stock slaughtered in 1876, and the purposes to which the carcasses were appropriated, were returned as follow by the local bodies. It is probable that 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 figures show :—

Live stock slaughtered.

LIVE STOCK SLAUGHTERED, 1876.

Description of Live Stock.	Numbers Slaughtered for—			
	The Butcher and Private Use.	Preserving or Salting.	Boiling Down for Tallow.	Total Number.
Sheep and lambs	1,704,929	287,315	185,965	2,178,209
Cattle and calves	166,638	10,525	24,000	201,163
Pigs	53,855	13,813	2,700	70,373
Total	1,925,422	311,658	212,665	2,449,745

\* A definition of the terms "farm" and "station," as used in connection with these returns, has already been given in the footnote to the table following paragraph 307 ante. It may, however, be necessary still further to explain that these designations refer not to the size of the holding, but simply to the tenure under which it is held. All holdings are set down as farms except those subject to a pastoral license. Holdings of which any portion is subject to a pastoral license are set down as stations. When the last portion of a run has been purchased or selected by the occupier or others, and the pastoral license is consequently thereafter no longer in existence, the holding which previously had been a "station" thenceforth becomes a "farm," and this notwithstanding that the area of the holding may not at all or only very slightly have been reduced. In the more settled districts a gradual process of removal of holdings from the list of stations to that of farms has, for some time since, been going on.



Value of  
pastoral  
produce.

312. The following is an estimate of the value of pastoral produce raised on holdings of all descriptions in 1876-7 :—

## VALUE OF PASTORAL PRODUCE, 1876-7.

Nature of Produce.	Value.
	£
Milk, butter, and cheese, from average number of milch cows kept, viz., 277,072, @ £10 ... ..	2,770,720
Estimated net numbers of stock slaughtered in 1876 :—	
Cattle, 199,656, @ £11 ... ..	2,196,216
Sheep, 745,064, @ 12s. ... ..	447,038
Pigs, 101,081, @ £2 10s. ... ..	252,702
Estimated value of produce of horse stock, 9,738, @ £8 ... ..	77,904
Excess of exports over imports of wool, Customs value ... ..	4,234,570
Estimated value of wool used in the colony for manufacturing purposes, 1,205,595 lbs., @ 1s. 6d. ... ..	90,420
Total ... ..	10,069,570

NOTE.—The gross numbers of live stock slaughtered in the year may be estimated as follow :— Cattle 205,000, sheep 2,220,000, pigs 71,500. The “net numbers” slaughtered are made up by adding to these figures those showing the increase of stock appearing in the returns of 1876 as compared with those of 1875, viz., cattle 73,667, pigs 34,813; also those showing the live stock exported in 1876, viz., cattle 2,133, sheep 10,889, pigs 3, and deducting from the sum of these numbers the figures showing the decrease of stock appearing in the returns of 1876 as compared with those of 1875, viz., sheep 470,639; also the figures showing the stock imported in 1876, viz., cattle 81,144, sheep 1,015,186, pigs 5,235. The produce of horse stock has been arbitrarily estimated at 5 per cent. upon the total number of horses in the colony. 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 slaughtered.

Steam  
engines on  
farms and  
stations.

313. The returns show an increase in the use of steam machinery in the furtherance of both agricultural and pastoral pursuits during the year under review as compared with the previous one. The following are the figures :—

## STEAM ENGINES ON FARMS AND STATIONS,\* 1876 AND 1877.

Year ended 31st March.	Steam Engines.					
	On Farms.		On Stations.		Total.	
	Number.	Horse-power.	Number.	Horse-power.	Number.	Horse-power.
1876 ... ..	253	2,081	23	201	276	2,282
1877 ... ..	315	2,332	27	237	342	2,569
Increase ...	62	251	4	36	66	287

Agricultural  
implements,  
&c.

314. An increase appears in the value of agricultural implements and machines on farms, but a falling off in the value of those on stations. The same circumstance was noticed last year :—

\* For definition of the terms “farm” and “station,” see footnotes to tables following paragraphs 307 and 310 ante.

IMPLEMENTS AND MACHINES ON FARMS AND STATIONS,\*  
1876 AND 1877.

Year ended 31st March.	Value of Implements and Machines.		
	On Farms.	On Stations.	Total.
	£	£	£
1876 ... ..	1,623,697	80,467	1,704,164
1877 ... ..	1,734,976	74,883	1,809,859
Increase ... ..	111,279	...	105,695
Decrease... ..	...	5,584	...

315. An increase also appears in the value of improvements on farms, but a falling off in the value of those on stations, of which a statement is given in the following table. The improvements to which reference is made are buildings of all descriptions, fencing, dips, wells, dams, &c., but the cost of clearing or cropping land is not given :—

Improvements on farms and stations.

IMPROVEMENTS ON FARMS AND STATIONS,\* 1876 AND 1877.

Year ended 31st March.	Value of Improvements.		
	On Farms.	On Stations.	Total.
	£	£	£
1876 ... ..	11,987,818	1,889,866	13,877,684
1877 ... ..	13,757,526	1,869,725	15,627,251
Increase ... ..	1,769,708	...	1,749,567
Decrease... ..	...	20,141	...

316. The following figures, which have been obtained by means of averages struck from the returns of the collectors in all the districts, show that increments took place in the rates paid for all descriptions of machine labor :—

Machine labor.

MACHINE LABOR, 1876 AND 1877.

Average Rates Paid for—	1875-6.	1876-7.
	£ s. d.	£ s. d.
Machine reaping, per acre ... ..	0 4 9	0 6 3
„ mowing, „ ... ..	0 4 5	0 5 1
„ threshing, per 100 bushels... ..	1 3 3	1 3 6

317. A decrease of 5 took place in the number of flour mills in operation during 1877 as compared with those in 1876 ; the hands employed, however, during the two years, were nearly identical in numbers. A falling off took place in the quantity of wheat operated upon, but this, apparently, caused no diminution in the quantity of flour produced, which, on the contrary, showed a small increase. A slight

Flour mills.

\* For definition of the terms “ farm ” and “ station,” see footnotes to tables following paragraphs 307 and 310 ante.

falling off, according to the returns, took place in the value of machinery and lands, but a small increase in the value of buildings. The following are the figures for the two years :—

### FLOUR MILLS, 1876 AND 1877.

Year ended 31st March.	Number of Mills.	Mills employing—		Amount of Horse-power.	Number of Pairs of Stones.	Number of Hands employed.
		Steam-power.	Water-power.			
1876 ...	157	145	12	2,848	476	704
1877 ...	152	138	13	2,811	458	707
Increase	...	...	1	...	...	3
Decrease	5	7	...	37	18	...

  

Year ended 31st March.	Bushels of Grain operated upon.		Tons of Flour made.	Tons of Meal made.	Approximate Total Value of—		
	Wheat.	Other.			Machinery and Plant.	Lands.*	Buildings.
1876 ...	5,287,596	271,682	114,727	596	£ 217,335	£ 55,400	£ 201,520
1877 ...	5,069,850	309,839	117,473	3,724	213,723	54,616	201,815
Increase	...	38,157	2,746	3,128	...	...	295
Decrease	217,746	...	...	...	3,612	784	...

Breweries.

318. One brewery less was returned in 1877 than in 1876, but all the other items relating to breweries show increase. The following is a comparative return of the results in the two years :—

### BREWERIES, 1876 AND 1877.

Year ended 31st March.	Number of Breweries.	Materials used.			Number of Hands employed.	Number of Horses employed.
		Sugar.	Malt.	Hops.		
1876 ...	103	lbs. 9,356,144	bushels. 600,035	lbs. 871,051	882	617
1877 ...	102	10,777,453	628,963	945,529	902	633
Increase	...	1,421,309	28,928	74,478	20	16
Decrease	1	...	...	...	...	...

Year ended 31st March.	Number of Drays and Waggon employed.	Gallons of Beer made.	Approximate Total Value of—		
			Machinery and Plant.	Lands.†	Buildings.
1876 ...	332	12,666,265	£ 139,950	£ 61,892	£ 196,872
1877 ...	356	14,236,359	152,995	68,839	203,832
Increase	24	1,570,094	13,045	6,947	6,960

\* Four mills in 1876, and 5 in 1877, were upon Crown lands. In these cases no estimate of the value of the land is given.

† Six of the breweries in 1876, and 5 in 1877, were upon Crown lands. In these cases no estimate of the value of the land is given.

319. Although the number of brickyards and potteries returned was the same in 1876 and in 1877, 3 more of these establishments used steam-power in the latter than in the former year. A slight increase appears in the number and value of bricks made, but the value of pottery made fell off by more than a fifth. A falling off in the manufacture of pottery was also noticed last year. The value of machinery and plant was somewhat higher, and that of lands and buildings somewhat lower in the year under review than in the previous one. The following is an abstract of the returns :—

BRICKYARDS AND POTTERIES, 1876 AND 1877.

Year ended 31st March.	Number of Brick-yards and Potteries.	Number of Machines in use.		Brickyards, &c., employing—			Amount of Horse-power employed.	Number of Hands employed.
		For tempering or crushing Clay.	For making Bricks or Pottery.	Steam-power.	Horse-power.	Manual Labor.		
1876 ...	241	169	87	13	101	127	336	1,083
1877 ...	241	164	111	16	97	128	336	1,194
Increase	...	...	24	3	...	1	...	111
Decrease	...	5	...	...	4	...	...	...

Year ended 31st March.	Number of Bricks made.	Approximate Total Value of—				
		Bricks made.	Pottery made.	Machinery and Plant.	Lands.*	Buildings.
1876 ...	73,853,000	£ 148,188	£ 21,905	£ 42,016	£ 49,782	£ 50,210
1877 ...	75,081,000	152,139	17,312	45,110	47,959	49,260
Increase	1,228,000	3,951	...	3,094	...	...
Decrease	...	...	4,593	...	1,823	950

320. An increase of 5 in the total number of tanneries, and of 9 in the number employing steam-power, took place during the year. With a trifling exception, all the other items show increase. This may be observed by means of the following table :—

TANNERIES, 1876 AND 1877.

Year ended 31st March.	Number of Tanneries.	Tanneries employing—			Amount of Horse-power employed.	Number of Hands employed	Number of Pits.
		Steam-power.	Horse-power.	Manual Labor.			
1876 ...	91	29	46	12	398	965	3,058
1877 ...	96	38	36	22	432	1,140	3,201
Increase ...	5	9	...	10	34	175	143
Decrease ...	...	...	10	...	...	...	...

\* Fifty-five of the brickyards in 1876, and 56 in 1877, were upon Crown lands. In these cases no estimate of the value of the land is given.

## TANNERIES, 1876 AND 1877—continued.

Year ended 31st March.	Number of Hides Tanned.	Number of Skins Tanned.	Approximate Total Value of—			
			Leather produced.	Machinery and Plant.	Lands.*	Buildings.
1876 ...	316,394	514,832	£ 617,873	£ 64,842	£ 28,853	£ 73,150
1877 ...	323,693	1,310,229	680,563	66,967	31,920	86,454
Increase ...	7,299	795,397	62,690	2,125	3,067	13,304

Woollen  
mills.

321. Two more woollen mills appear in the returns for 1877 than in those for 1876. A trifling falling off took place in the number of blankets made, but the total value of the fabrics manufactured increased 5 per cent. With this exception, and that of the value of lands, all the items show increase. The following are the returns of the two years :—

## WOOLLEN MILLS, 1876 AND 1877.

Year ended 31st March.	Number of Woollen Mills.	Steam Engines used—		Quantity of Wool used.	Goods Manufactured : Quantity of—		
		Number.	Horse- power.		Tweed, Cloth, Flannel, &c.	Blan- kets.	Shawls.
1876 ...	6	6	368	lbs. ...	yards. 644,714	number. 2,973	number. 1,776
1877 ...	8	10	471	1,205,595	719,887	2,816	2,941
Increase ...	2	4	103	...	75,173	...	1,165
Decrease ...	...	...	...	...	...	157	...

Year ended 31st March.	Hands employed.		Approximate Total Value of—			
	Males.	Females.	Goods Manufactured	Machinery and Plant.	Lands.	Buildings.
1876 ...	357	254	£ 140,939	£ 104,059	£ 5,976	£ 51,565
1877 ...	428	282	148,182	127,203	4,182	59,293
Increase ...	71	28	7,243	23,144	...	7,728
Decrease ...	...	...	...	...	1,794	...

Other ma-  
nufactories,  
works, &c.

322. The manufactories and works, exclusive of those of which mention has already been made—viz., flour mills, breweries, brickyards,

\*Four of the tanneries in 1876, and 3 in 1877, were upon Crown lands. In these cases no estimate of the value of the land is given.

potteries, tanneries, and woollen mills—increased from 1,643 in 1876 to 1,703 in 1877. The steam engines used in these works increased by 11, the hands employed by 1,249, and the capital invested, so far as it is represented by the stated value of machinery, plant, lands, and buildings, increased by £201,508. Most of the establishments are of an extensive character, and over 40 per cent. of them, both in 1876 and 1877, used steam-power. The following is a comparison of the results of the two years :—

**MANUFACTORIES, WORKS, ETC., 1876 AND 1877.**

(Exclusive of Flour Mills, Breweries, Brickyards, Potteries, Tanneries, and Woollen Mills.)

Year ended 31st March.	Number of Manufactories, Works, &c.	Manufactories, &c., employing—					Amount of Horse-power employed.
		Steam.	Water.	Wind.	Horse- power.	Manual Labor.	
1876 ...	1,643	707	16	1	104	815	8,612
1877 ...	1,703	718	13	4	95	873	8,949
Increase ...	60	11	...	3	...	58	337
Decrease ...	...	...	3	...	9	...	...

Year ended 31st March.	Number of Hands employed.		Approximate Total Value of—		
	Males.	Females.	Machinery and Plant.	Lands.*	Buildings.
1876 ...	21,058	4,518	£ 1,980,643	£ 881,534	£ 1,547,892
1877 ...	22,033	4,792	2,101,670	1,077,042	1,432,865
Increase ...	975	274	121,027	195,508	...
Decrease ...	...	...	...	...	115,027

NOTE.—It has hitherto been customary, wrongly as I conceive, to include certain waterworks in the returns of manufactories. This year they are excluded from all the manufactory tables, not only from such portions of them as relate to the year under review, but also from such as refer to former years. A general table of waterworks will be found in the table following paragraph 326 *post*.

323. By summarising the returns of manufactories and works of all descriptions, including not only such as are embraced in the above table, but those excluded therefrom—viz., flour mills, breweries, potteries, tanneries, and woollen mills—it is found that the latter year shows larger numbers than the former in all the columns. The establishments increased by 61, the steam engines used by 18, the horse-power of engines by 460, the hands employed by 1,657, and the capital invested in lands, buildings, machinery, and plant, by £272,254. The following are the figures relating to the two years :—

Manufac-  
tories of  
all descrip-  
tions.

\* One hundred and ninety-nine of the manufactories, &c., in 1876, and 203 in 1877, were upon Crown lands. In these cases no estimate of the value of the land is given.

## MANUFACTORIES, WORKS, ETC., 1876 AND 1877.

(Including Flour Mills, Breweries, Brickyards, Potteries, Tanneries, and Woollen Mills, as well as other Manufactories and Works.)

Year ended 31st March.	Total Number of Establishments.	Number of Establishments using Steam.	Horse-power of Engines.	Number of Hands employed.	Approximate Value of Lands, Buildings, Machinery, and Plant.*
1876† ...	2,241	900	12,311	29,821	£ 5,753,491
1877 ...	2,302	918	12,771	31,478	6,025,745
Increase ...	61	18	460	1,657	272,254

Names of manufactories.

324. The manufacturing establishments of all kinds, respecting which returns are obtained, are named in the following table, and their numbers are given for the year under review, and for the first year of each of the two previous quinquennials. 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, water, wind, or horse-power is used‡ :—

\* 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 268 in 1876, and 272 in 1877.

† The amounts in this line are less than those shown in the *Victorian Year-Book*, 1875, in consequence of the items relating to waterworks having been removed. The last column is the one most affected, the value of the lands, buildings, machinery, and plant of those waterworks which were included last year having been set down at no less a sum than £1,591,970. See note to last table.

‡ The collectors of statistics, being furnished with instructions as to the nature of the establishments they are expected to visit, do not, as a rule, return those which do not fulfil the conditions described in this paragraph. Each year, however, some of the returns sent in by them are rejected by the Government Statist as not being of sufficient importance to warrant their being placed in the list. The following are those which have been excluded on this ground during the last two years :—

	1876.	1877.		1876.	1877.
Printing establishments .. ..	9	6	Life-preserving apparatus manu- factory .. ..	..	1
Wax model manufactory .. ..	..	1	Patent medicine manufactory .. ..	1	1
Wax flower manufactory .. ..	..	1	Boot manufactories .. ..	17	11
Architectural modelling works .. ..	1	..	Clothing factories .. ..	6	5
Picture-frame manufactories .. ..	2	2	Hat, cap, manufactories .. ..	16	12
Turnery and carving works .. ..	12	2	Wig manufactories .. ..	..	3
Philosophical instrument manufac- tory .. ..	..	1	Rope works .. ..	..	1
Medical galvanic apparatus manu- factory .. ..	1	1	Tarpaulin manufactories .. ..	..	2
Surgical instrument manufactory .. ..	..	1	Biscuit manufactories .. ..	..	8
Agricultural implement manufac- tories .. ..	..	4	Confectionery works .. ..	..	1
Bellows manufactory .. ..	..	1	Fancy leather manufactory .. ..	..	1
Cutlery works .. ..	..	1	Glue manufactory .. ..	..	1
Engine, machine—manufactories .. ..	2	1	Tallow-rendering works .. ..	..	1
Coach, waggon, &c.—manufactories .. ..	14	9	Wool-washing establishments .. ..	..	1
Saddle, harness—manufactories .. ..	34	20	Basket-making works .. ..	..	1
Wheelwrights' establishments .. ..	2	4	Blind (window) manufactory .. ..	1	1
Joinery works .. ..	..	6	Cooperage works .. ..	..	7
Window-frame works .. ..	..	1	Goldsmiths' and jewellers' establish- ments .. ..	..	8
Bedding and upholstery manufac- tories .. ..	6	4	Brass works .. ..	..	1
Cabinet works .. ..	11	4	Iron and tin works .. ..	..	4
Electric bell manufactory .. ..	..	1	Wire-working establishments .. ..	..	2
			Total .. ..	135	144

MANUFACTORIES, WORKS, ETC., 1867, 1872, AND 1877.

Description of Manufactory, Work, &c.	Number of Establishments.		
	1866-7.	1871-2.	1876-7.
<b>BOOKS AND STATIONERY.</b>			
Account-book manufactories, manufacturing stationers	4	13	16
Printing establishments ... ..	13	21	33
<b>MUSICAL INSTRUMENTS.</b>			
Organ-building establishments ... ..	2	1	2
Pianoforte manufactories ... ..	5	9	7
<b>PRINTS, PICTURES, ETC.</b>			
Picture-frame makers ... ..	...	...	6
<b>CARVING, FIGURES, ETC.</b>			
Carving and gilding establishments ... ..	...	...	5
Indiarubber stamp manufactories ... ..	...	...	3
Modelling (architectural and figure), &c.—works	...	...	3
Statuary works ... ..	...	...	1
Turnery works ... ..	...	...	12
Wood-carving and ornamental works ... ..	...	...	1
Wooden pipe manufactories ... ..	...	2	2
<b>DESIGNS, MEDALS, AND DIES.</b>			
Diesinkers, engravers, medalists, trade-mark makers	...	...	5
<b>PHILOSOPHICAL INSTRUMENTS, ETC.</b>			
Philosophical instrument manufactories ... ..	...	...	2
Spectacles manufactories ... ..	...	...	1
<b>SURGICAL INSTRUMENTS.</b>			
Surgical instrument, truss—manufactories ... ..	...	...	5
<b>ARMS, AMMUNITION, ETC.</b>			
Blasting powder, dynamite, &c.—manufactories	...	...	3
Fuze manufactories ... ..	1	...	1
Gunmakers ... ..	...	...	4
<b>MACHINES, TOOLS, AND IMPLEMENTS.</b>			
Agricultural implement manufactories ... ..	22	43	46
Bellows manufactories ... ..	...	...	1
Cutlery, machine-tool—manufactories ... ..	...	2	7
Engine, machine—manufactories ... ..	20	24	53
<b>CARRIAGES AND HARNESS.</b>			
Coach, waggon, &c.—manufactories ... ..	3	5	116*
Perambulator manufactories ... ..	...	...	1
Saddle, harness—manufactories ... ..	...	...	29
Saddle-tree, &c.—manufactories ... ..	...	...	2
Saddlers' ironmongery and coach-spring manufactories	...	...	3
Whip manufactories ... ..	...	2	5
<b>SHIPS AND BOATS.</b>			
Ship, boat—builders ... ..	14	13	19
Ships' wheels, blocks, &c.—manufactories ... ..	...	...	2
Floating-docks ... ..	} 6	} 8	...
Graving-docks ... ..			3
Patent slips ... ..			4
<b>HOUSES, BUILDINGS, ETC.</b>			
Door and window-frame works ( <i>see also</i> Moulding, &c., mills, <i>post</i> )	...	...	2
Lime works ... ..	19	36	24
Marble mantelpiece manufactories ( <i>see also</i> Marble works <i>post</i> )	...	...	3
Patent ceiling ventilator manufactories ... ..	...	...	1
Roof-covering composition manufactories ... ..	...	...	1

\* Including all extensive manufactories, whether employing steam or not. For 1867 and 1872 those only which used steam were returned.



## MANUFACTORIES, WORKS, ETC.—continued.

Description of Manufactory, Work, &c.	Number of Establishments.		
	1866-7.	1871-2.	1876-7.
<b>FURNITURE.</b>			
Bedding and upholstery manufactories ...	...	9	11
Cabinet works, including billiard-table makers	4	3	26*
Earth-closet manufactories ...	...	2	3
Iron safe manufactories ...	...	1	1
Looking-glass manufactories ...	...	2	5
<b>CHEMICALS.</b>			
Chemical works ...	6	6	5
Dye works ...	9	11	14
Essential oil manufactories ...	...	2	5
Ink, blacking, blue, washing-powder, &c — manufactories	1	4	8
Japanners ...	...	...	1
Match (vesta) manufactories ...	1	...	1
Paint, varnish—manufactories ...	...	1	2
Salt works ...	1	2	5
Tar-distilling, asphalte—works ...	...	1	3
<b>TEXTILE FABRICS.</b>			
Woollen mills ...	...	3	8
<b>DRESS.</b>			
Boot manufactories ...	3	29	67
Clothing factories ...	18	30	53
Crinoline manufactories ...	4	...	...
Fur manufactories ...	...	...	3
Hat, cap—manufactories ...	2	10	22
Oilskin, waterproof-clothing—manufactories	...	...	2
Umbrella and parasol manufactories ...	...	...	7
<b>FIBROUS MATERIALS.</b>			
Bag and sack manufactories ...	1	...	...
Jute factories ...	...	...	1
Rope, twine—works ...	3	10	13
<b>ANIMAL FOOD.</b>			
Cheese factories ...	...	...	25
Meat-curing establishments ...	6	22	15
<b>VEGETABLE FOOD.</b>			
Biscuit manufactories ...	8	8	7
Confectionery works ...	4	4	8
Flour mills ...	114	154	152
Jam manufactories ...	1	4	8
Macaroni works ...	...	1	1
Maizena, oatmeal, starch—manufactories ...	1	1	3
Rice mills ...	...	2	1
<b>DRINKS AND STIMULANTS.</b>			
Aërated waters, gingerbeer, liqueur, &c.—works	63	115	114
Breweries ...	86	126	102
Coffee, chocolate, spice—works ...	9	13	10
Chicory mills ...	...	...	1
Distilleries ...	4	6	6
Malthouses ...	9	16	13
Saccharine works ...	...	1	...
Sauce, pickle—manufactories ...	...	4	3
Sugar refineries ...	1	1	2
Tobacco, cigars, snuff—manufactories ...	9	9	13
Vinegar works ...	...	...	5

\* Including all extensive manufactories, whether employing steam or not. For 1867 and 1872 those only which used steam were returned.

MANUFACTORIES, WORKS, ETC.—*continued.*

Description of Manufactory, Work, &c.	Number of Establishments.		
	1866-7.	1871-2.	1876-7.
<b>ANIMAL MATTERS.</b>			
Boiling-down establishments	7	27	19
Bone-cutting mills	...	...	1
Bone manure manufactories	12	18	15
Brush manufactories	1	2	6
Catgut manufactories	...	1	...
Curled hair manufactories	1	...	3
Fellmongeries, wool-washing—establishments	23	36	52
Flock manufactories	2	4	3
Glue, oil—manufactories	2	5	8
Morocco, fancy leather—manufactories	...	1	2
Parchment and skin manufactories	...	1	...
Portmanteau, trunk—manufactories	...	...	7
Soap, candle, tallow—works	28	31	42
Tanneries	43	69	96
<b>VEGETABLE MATTERS.</b>			
Bark mills	...	...	4
Basket-making works	...	...	9
Blind (window) manufactories	...	...	10
Broom manufactories	...	2	2
Chaff-cutting, corn-crushing—works*	69	172	177
Cooperage works	...	8	19
Cork manufactories	...	...	1
Fancy-box manufactories	...	2	2
Hat-box manufactories	...	...	2
Ladders and steps joineries	...	...	2
Moulding, framing, turning, and saw mills ( <i>see also Houses, buildings, &amp;c. ante</i> )	102	141	159
Packing-case manufactories	1	...	...
Paper manufactories	...	1	1
Paper-bag manufactories	...	...	6
<b>COAL.</b>			
Gasworks	8	11	15
<b>STONE, CLAY, EARTHENWARE, AND GLASS.</b>			
Brickyards and potteries	151	328	241
Filter manufactories	...	...	2
Glass manufactories, works	1	4	8
Kaolin works	...	1	...
Marble and monumental works ( <i>see also Marble mantelpiece works ante</i> )	...	3	19
Stone-breaking works	1	} 1 {	5
Stone-sawing, polishing works	...		4
<b>WATER.†</b>			
Ice manufactories	1	2	3
<b>GOLD, SILVER, AND PRECIOUS STONES.</b>			
Electro-plating and gilding works	...	1	4
Goldsmiths and jewellers (manufacturing)	...	...	19
Lapidaries	...	...	1

\* 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 and stations, which numbered 11,752 in 1876-7.

† Works for the storage and supply of water are not included in the manufacturing tables. A table of waterworks follows paragraph 326 *post*. See footnotes to tables following paragraphs 322 and 323 *ante*.

MANUFACTORIES, WORKS, ETC.—*continued.*

Description of Manufactory, Work, &c.	Number of Establishments.		
	1866-7.	1871-2.	1876-7.
<b>METALS OTHER THAN GOLD AND SILVER.</b>			
Antimony-smelting works ... ..	...	3	5
Bell foundries ... ..	...	...	1
Iron and tin works ... ..	5	11	53
Iron, brass, and copper foundries ... ..	45	59	77
Lead works ... ..	2	2	1
Tin-smelting works ... ..	...	...	1
Type foundries ... ..	...	1	...
Wire-working establishments ... ..	...	...	6
Total ... ..	982	1,740	2,302

Summary of  
manufac-  
tories.

325. Summarised particulars respecting these manufactories are given for the same three periods in the following table. Increasing numbers at each successive period will be observed in all the columns, the augmentation shown being no doubt almost entirely due to the starting of fresh works and the extension of old ones. It is possible, however, that in consequence of the greater care exercised of late years by the collectors in returning every establishment, an appearance of increase may have sometimes resulted without any actual increase having occurred :—

## SUMMARY OF MANUFACTORIES, WORKS,\* ETC., 1867, 1872, AND 1877.

Year ended 31st March.	Total Number of Establishments.	Number of Establishments using Steam.	Horse-power of Engines.†	Number of Hands employed.	Approximate Value of Lands, Buildings, Machinery, and Plant.
1867	982	419	7,072	11,330	£ 1,747,702
1872	1,740	701	9,442	19,468	3,731,461
1877	2,302	918	12,771	31,478	6,025,745

Waterworks.

326. The following table contains a list of the works for the storage and supply of water for domestic, mining, and irrigation purposes, situated in various parts of the colony; 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 was formerly the practice to include some of the waterworks with the manufactories, but it is now thought better to remove them from that portion of the statistics, and to embody them all in a special table. It will be observed that the storage capacity of these works is over twelve thousand million gallons, and their cost nearly two and three-quarter millions sterling :—

\* Works for the storing and supply of water are not included. See footnotes to tables following paragraphs 322 and 323 *ante*.

† It is possible that the numbers in this column may include the power of a few water and wind machines used in manufacturing, in addition to the power of the steam engines.

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	1,435,000
	Preston ...	15,000,000	
Castlemaine ...	Expedition Pass ...	128,000,000	80,130
Sandhurst ...	Spring Gully ...	149,000,000	224,939
	Crusoe Gully ...	320,000,000	
	Big Hill ...	68,000,000	
Coliban scheme (Castle- maine and Sandhurst districts)	Malmsbury ...	2,841,000,000	259,416
Geelong and suburbs	Stony Creek (Old) ...	157,000,000	195,594
	Stony Creek (New) ...	141,000,000	
	Lovely Banks ...	6,000,000	
Creswick ...	Bullarook ...	45,000,000	1,077
Tarnagulla ...	Tarnagulla ...	5,000,000	1,168
Inglewood (New) ...	Inglewood ...	13,000,000	1,610
Maryborough ...	Maryborough ...	8,100,000	1,065
Maldon ...	Maldon ...	8,591,504	2,102
Ararat ...	Oliver's Gully ...	19,615,554	1,731
	Langi-Giran ...	14,600,000	35,000
	Opossum Gully ...	24,621,547	1,831
Beechworth ...	Lake Kerferd ...	60,000,000	10,000
Chiltern ...	Barrambogie Springs ...	...	5,000
Wangaratta ...	Tank at Railway Station	40,000	3,000
Rutherglen ...	Rutherglen ...	27,000,000	3,500
Beaufort ...	Service Reservoir ...	1,200,000	3,500
Ballarat ...	Three in Bungaree ...	212,960,000	300,000
Clunes ...	Newlyn ...	237,000,000	80,500
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) ...	56,860,375	4,003
	Grassy Flat (2) ...	26,769,369	1,755
Kilmore ...	Kilmore ...	14,466,000	845
Myers Creek ...	Myers Creek ...	13,000,000	844
Echuca ...	Echuca (tank) ...	40,000	2,748
Dunolly ...	Dunolly ...	17,200,000	1,912
Inglewood (Old) ...	Inglewood ...	5,670,000	1,112
St. Arnaud ...	St. Arnaud ...	40,600,000	2,903
Redbank ...	Redbank ...	27,100,000	2,785
Laplough ...	Laplough ...	9,261,946	1,232
Amherst ...	Amherst ...	13,813,284	1,193
Wedderburn ...	Wedderburn ...	3,100,000	1,013
Castlemaine ...	Barker's Creek, Harcourt	611,500,000	34,500
Chewton ...	Commissioner's Gully ...	7,000,000	1,203
Daylesford ...	Wombat Creek ...	31,284,413	2,527
Fryerstown ...	Crocodile Gully ...	5,407,462	767
	Spring Gully ...	7,000,000	1,049
Stawell ...	Quartz Reefs (1) ...	9,725,627	1,080
	Pleasant Creek (2) ...	17,000,000	...
	Pleasant Creek (3) ...	7,905,750	775
	Four Posts (4) ...	3,100,000	802
Moyston ...	Campbell's Reef ...	5,400,000	1,054
Beaufort ...	Beaufort ...	85,881,110	1,991
	Total ...	12,067,419,225	2,719,665

Capital invested in manufactories and water-works.

327. If the value of the lands, buildings, plant, and machinery used in connection with manufactories be added to the actual or estimated cost of the waterworks, their sum will represent an amount equal to close upon eight and three-quarter millions sterling. The following are the figures :—

Value of lands, buildings, machinery, &c., used in connection with manufactories, 1877	...	...	...	£ 6,025,745
Actual or estimated cost of waterworks	...	...	...	2,719,665
				£8,745,410

Stone quarries.

328. The number of stone quarries at work in 1877 was less by 5 than that in 1876, but an increase took place in the quantity and value of stone raised. An increase is also observable under most of the other heads. The following are the figures :—

#### STONE QUARRIES, 1876 AND 1877.

Year ended 31st March.	Number of Quarries.	Cubic Yards of Stone raised.				Steam Engines in use.	
		Bluestone.	Slate and Flagging.	Sandstone.	Granite.	Number.	Horse-power.
1876	160	332,593	894	11,203	2,645	6	44
1877	155	373,975	865	11,165	4,400	9	114
Increase	...	41,382	...	...	1,755	3	70
Decrease	5	...	29	38	...	...	...

Year ended 31st March.	Number of Hands employed.	Approximate Total Value of—			
		Stone raised.	Machinery and Plant.	Lands.*	Buildings.
1876	587	£ 57,276	£ 13,343	£ 16,318	£ 1,659
1877	808	62,721	17,074	13,582	3,192
Increase	221	5,445	3,731	...	1,533
Decrease	...	...	...	2,736	...

Gold raised, 1876.

329. The quantity of gold raised in Victoria during any given year may be estimated in several ways; the following are the results for 1876 of four different methods of making the calculation :—

#### ESTIMATES OF GOLD YIELD, 1876.

	Estimated Quantity.		
	oz.	dwt.	gr.
1. Exported gold entered as the produce of Victoria, added to Victorian gold received at Melbourne Mint ... ..	934,224	2	0
2. Gross exports of gold, less gross imports, added to gross quantity of gold received at Melbourne Mint ... ..	930,273	10	19
3. Gold raised, according to estimates made by the Mining Registrars throughout the country ... ..	963,760	0	0
4. Gold purchased, according to returns made by managers of banks and others ... ..	949,468	12	17

\* Fifty-one of the stone quarries in 1876, and the same number in 1877, were upon Crown lands. In these cases no estimate of the value of the land has been given.

330. As the mining registrars live in the gold-producing districts, and, it may be presumed, have every opportunity of obtaining correct information, I propose to adopt their estimate. It will be observed that it gives a somewhat higher result than that obtained by any of the other methods. Estimates of mining registrars.

331. This quantity, and its value at £4 per oz., are compared in the following table with the quantity and assumed value of the gold estimated to have been raised in 1875 :— Gold raised, 1875 and 1876.

QUANTITY AND VALUE OF GOLD RAISED IN 1875 AND 1876.

Year.	Gold raised in Victoria.	
	Estimated Quantity.	Estimated Value, at £4 per oz.
1875	oz. 1,095,787	£ 4,383,148
1876	963,760	3,855,040
Decrease	132,027	528,108

332. The following figures give an estimate of the quantity of gold raised in 1870 and each subsequent year. It will be seen that since 1871 the yield of gold has been steadily decreasing :— Gold raised, 1870 to 1876.

ESTIMATED QUANTITY OF GOLD RAISED, 1870 TO 1876.

1870	oz. 1,222,798	1874	oz. 1,155,972
1871	1,355,477	1875	1,095,787
1872	1,282,521	1876	963,760
1873	1,241,205		

333. Carrying on to the end of 1876 the calculations given in previous Year-Books, 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 :— Gold raised, 1851 to 1876.

ESTIMATED TOTAL QUANTITY AND VALUE OF GOLD RAISED IN VICTORIA, 1851 TO 1876.

Gold raised in Victoria.	Estimated Quantity.	Estimated Value, at £4 per oz.
	oz.	£
Prior to 1876	45,509,964	182,039,856
During 1876	963,760	3,855,040
Total	46,473,724	185,894,896

334. The estimated value of gold raised in proportion to the number of miners at work\* was much less in 1876 than in 1875, or than in any other year since 1870. The following figures, which have been taken from the reports of the Secretary for Mines, express this proportion for each of the last seven years :— Value of gold per miner.

\* For the number of miners at work at the end of each year, see paragraph 49 ante.

## VALUE OF GOLD PER MINER,\* 1870 TO 1876.

			£	s.	d.				£	s.	d.	
1870	...	...	81	0	6.46		1874	...	...	99	8	3.07
1871	...	...	93	6	0.62		1875	...	...	104	4	4.02
1872	...	...	93	17	1.47		1876	...	...	89	19	6.84
1873	...	...	93	16	2.62							

Gold derived from alluvial and quartz workings.

335. The mining surveyors and registrars estimate that in 1876 605,859 oz., or 63 per cent. of the whole quantity of gold raised, was obtained from quartz reefs, and 357,901 oz., or 37 per cent. of the whole quantity raised, was obtained from alluvial deposits. In the two previous years the same officers estimated that 60 per cent. of the gold was got from quartz, and 40 per cent. from alluvial mines.

Steam engines used in mining.

336. Of the steam engines employed in connection 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 four years. It will be noticed that a slight falling off has taken place from year to year:—

## STEAM ENGINES USED IN GOLD MINING, 1873 TO 1876.

		Number.	Horse-power.			Number.	Horse-power.
1873	...	1,151	... 25,100		1875	... 1,101	... 24,224
1874	...	1,141	... 24,866		1876	... 1,081	... 23,947

Mining machinery.

337. The number of mining machines of all descriptions fell from 5,220 in 1874, and 5,098 in 1875, to 4,893 in 1876, and the value of such machines fell from £2,078,936 in 1874, and £2,033,629 in 1875, to £1,989,500 in 1876.

Auriferous reefs.

338. According to estimates made by the Mining Department, the number of quartz reefs proved to be auriferous was 3,479 in 1875, and 3,307 in 1876. It is 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.

Extent of auriferous ground.

339. The area of auriferous ground worked upon was stated to be approximately 1,063 square miles in 1874, 1,094 square miles in 1875, and 1,134 square miles in 1876. The figures are derived from estimates, not from actual surveys, and they vary from year to year. As the shallow alluviums of the older goldfields 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.

\* These amounts are sometimes incorrectly spoken of as the "average earnings" of the miners. I pointed out last year 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.

340. 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 949,469 tons in 1875, and 1,011,808 tons in 1876. The average yield per ton of these crushings was 11 dwt. 21·92 gr. in the former, and 10 dwt. 13·48 gr. in the latter year. From similar estimates, extending over a series of years, and embodying information respecting the crushing of more than 13,000,000 tons of quartz, an average is furnished of 11 dwt. 6·3 gr. of gold to the ton of quartz crushed.

Average yield of quartz.

341. Since the first issue of gold-mining leases, the total number granted has been 10,147 giving the right to mine over an area amounting in the aggregate to 185,150 acres. Of these leases, 274, for 4,078 acres, were granted in 1876, and 1,400, for 19,249 acres, were in force at the end of that year.

Gold-mining leases.

342. At the end of 1876 the following leases of Crown lands, conferring the privilege of working for minerals and metals other than gold, were in force. The leases exceeded by 1 the number at the end of 1875, but the area embraced therein was less by 2,618 acres than that at the end of 1875:—

Leases for other minerals.

LEASES FOR MINERALS AND METALS OTHER THAN GOLD, 1876.

Metals and Minerals.	Leases in force at end of 1876.	
	Number.	Area.
Antimony ... ..	18	351
Argentiferous galena ... ..	1	154
Coal ... ..	10	4,957
Coal shale and lignite ... ..	1	640
Copper and the ores of copper ... ..	2	873
Flagging ... ..	1	10
Lignite ... ..	1	476
Silver ... ..	2	370
Silver, lead, and copper ... ..	1	562
Slate ... ..	1	50
Slate and flagging ... ..	2	20
Ironstone ... ..	1	320
Red ochre clay ... ..	1	2
Tin and iron ... ..	1	51
Tin and the ores of tin ... ..	8	1,076
Total ... ..	51	9,912

343. The following, according to the estimate of the Secretary for Mines, are the values of metals and minerals other than gold raised in

Minerals other than gold raised.





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

COPYRIGHTS, 1870 TO 1876.

Subject of Copyright.	Copyrights Registered.		
	Prior to 1876.	During 1876.	Total.
<b>DESIGNS.</b>			
Articles of manufacture, chiefly of—			
Metals ... ..	96	11	107
Wood, stone, cement, or plaster ...	31	3	34
Glass ... ..	2	...	2
Earthenware ... ..	1	...	1
Ivory, bone, papier-maché, &c. ...	7	1	8
Woven fabrics ... ..	8	2	10
Miscellaneous ... ..	12	...	12
<b>LITERARY PRODUCTIONS.</b>			
Literary works ... ..	510	55	565
Dramatic „ ... ..	21	1	22
Musical „ ... ..	47	15	62
<b>WORKS OF ART.</b>			
Paintings ... ..	2	...	2
Drawings ... ..	10	1	11
Engravings ... ..	400	139	539
Photographs ... ..	540	61	601
Total ... ..	1,687	289	1,976

PART VI.—ACCUMULATION.

349. Since the first opening in 1872 of a branch of the Royal Mint in Melbourne the following quantities of gold have been received thereat. A steady increase in the business is observable from year to year:—

Royal Mint, 1872 to 1876.

GOLD RECEIVED AT THE MELBOURNE MINT, 1872 TO 1876.

Year.	Quantity.	Value.
	oz.	£
1872 ... ..	190,738	764,917
1873 ... ..	221,870	887,127
1874 ... ..	335,318	1,349,102
1875 ... ..	489,732	1,947,713
1876 ... ..	543,198	2,149,481
Total ... ..	1,780,856	7,098,340

350. From the Mint both coin and bullion are issued; the coin, with the exception of 165,000 half-sovereigns which were issued in 1873,

Coin and bullion issued.