

AGRICULTURE.

AUSTRALASIA may, as a whole, be considered as in the first phase of agricultural settlement, indeed several Colonies have not yet emerged from the pastoral stage. Nevertheless, the value of agricultural produce, estimated at farm prices, is considerable, and amounts to £23,613,700, which is about two-thirds the value of the pastoral produce. The return from agriculture in each Colony during 1890 was, approximately :—

	Total value of crops.	Average value of produce per acre under crop.	Percentage of value to total value of Australasia.
	£	£ s. d.	
New South Wales	4,131,422	4 16 11	17·5
Victoria	7,520,298	3 14 0	31·8
Queensland	2,233,151	9 18 6	9·5
South Australia	3,569,686	1 14 1	15·1
Western Australia	366,936	5 5 4	1·6
Tasmania	962,751	6 2 4	4·1
New Zealand	4,829,456	2 19 0	20·4
Australasia	23,613,700	3 6 10	100·0

From this estimate it would seem that the value of crops, in proportion to the area cultivated, is much larger in Queensland and Tasmania than in the other Colonies, which, in the case of Queensland, is due to the proportionately large area under sugarcane and maize, while in Tasmania the area devoted to fruit and hops accounts for the high average per acre which the province shows. In point of gross value Victoria occupies a position much in advance of the other members of the group, the produce of

VALUE OF PRINCIPAL CROPS.

Value of
principal crops.

that province having a value little short of one-third of that of all Australasia. The value of the principal crops, and the percentage of each to the total production, are given in the following statement :—

Name of Crop.	Value.	Percentage to Total.
	£	
Wheat	5,884,673	24·9
Maize	1,379,940	5·8
Barley	487,618	2·1
Oats	1,708,687	7·2
Other grain	67,437	0·3
Hay	4,317,359	18·3
Potatoes	1,827,869	7·7
Other root-crops	1,094,039	4·6
Sugar-cane	1,416,419	6·0
Tobacco	24,957	0·1
Grapes for wine, table, and other purposes	919,269	3·9
Green forage	772,215	3·3
Hops	85,593	0·4
Orchards and market-gardens	3,046,082	12·9
Other crops	581,543	2·5
Total	23,613,700	100·0

Compared with the principal countries of the world Australasia does not take a high position in regard to the gross value of the produce of its tillage, but in value per inhabitant it compares fairly well. The following figures, designed to illustrate this, are taken

from various places in Mulhall's latest issue of the *Dictionary of Statistics* :—

Value of Agricultural Production for principal countries in
1887 :—

Countries.	Value.	Per head.
	Million	
	£	£
United Kingdom	141	3·3
France	322	8·3
Germany	262	5·4
Russia	373	4·0
Austria	225	5·6
Italy	153	5·0
Spain	126	7·1
Portugal	23	4·9
Sweden	31	6·5
Norway.....	9	4·5
Denmark ..	20	9·5
Holland ..	20	4·3
Belgium ..	41	6·7
Switzerland	9	3·0
United States	467	7·5
Canada	35	7·0
Cape Colony	2	1·3
Argentina	18	5·8
Uruguay	2	3·3
Australasia (1890)	24	6·3

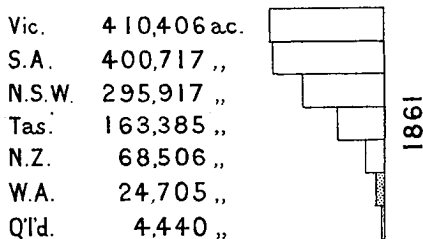
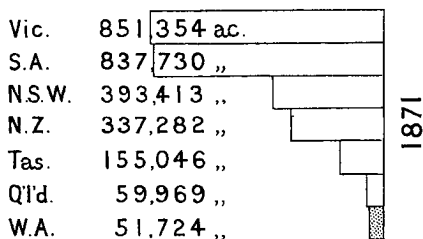
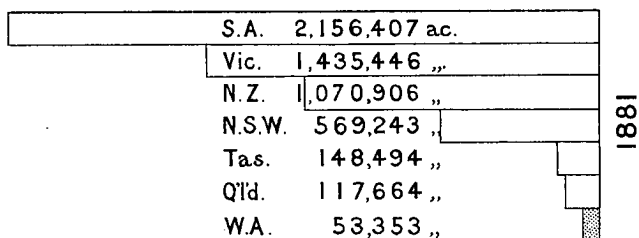
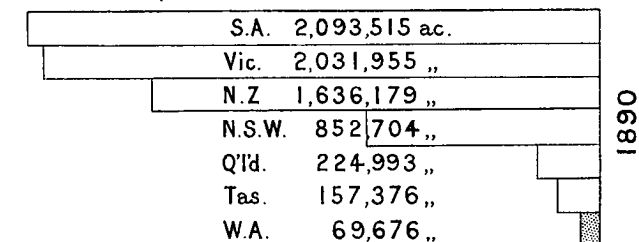
The following figures, giving the areas under the principal grain and other crops, and the total extent of land under cultivation in each of the Colonies at different epochs since the year 1861, will serve to illustrate the progress agriculture has made. In this table, as well as throughout the whole of the chapter, the years 1861, '71, '81, and '90 embrace the periods from 1st April in those years to the 31st March subsequently.

Area under
cultivation in
Australasia,
1861-90.

Agricultural
year.

Colony.	Year.	Area under								Total Area under Crops.	Land under Permanent Artificial Grasses.
		For Grain.				Potatoes.	Vines.	Hay.	Other Crops.		
		Wheat.	Oats.	Maize.	Barley.						
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
New South Wales ...	1861	123,468	7,224	57,050	2,924	10,040	1,692	45,175	47,435	295,917	1,658
	1871	154,030	13,795	119,956	3,461	14,770	6,618	51,805	28,978	393,413	24,388
	1881	221,888	16,348	117,478	6,427	15,943	6,624	146,610	37,925	569,243	75,825
	1890	333,233	14,102	191,152	4,937	19,406	8,044	175,242	106,588	852,704	388,715
Victoria.....	1861	196,922	91,061	1,714	3,419	27,174	1,464	74,681	13,971	410,406	12,654
	1871	334,609	175,944	1,709	16,772	39,064	5,523	103,206	174,527	851,354	6,282
	1881	926,729	146,995	1,783	48,652	39,129	4,923	212,150	55,085	1,435,446	241,947
	1890	1,145,163	221,048	10,357	87,751	53,818	20,686	413,052	80,080	2,031,955	235,241
Queensland ..	1861	392	69	1,914	13	512	40	280	1,220	4,440	.....
	1871	3,024	131	20,329	971	3,121	568	3,828	27,997	59,969	838
	1881	10,958	88	46,480	256	5,086	1,212	16,926	36,658	117,664	8,565
	1890	10,390	411	99,400	584	8,994	1,981	31,106	72,127	224,993	22,252
South Australia..	1861	310,636	1,638	18	10,637	2,612	3,918	62,874	8,384	400,717	838
	1871	692,508	3,586	.....	17,225	3,156	5,455	97,812	17,988	837,730	5,213
	1881	1,768,781	3,023	.....	11,953	6,136	4,202	333,467	28,845	2,156,407	16,438
	1890	1,673,573	12,475	.....	14,472	6,626	9,535	345,150	31,684	2,093,515	21,431

AREA UNDER CROP



Lithographed and Printed at the Department of Lands, Sydney, N.S.W. 1892.
No. of Lithograph 2,324

Colony.	Year.	Area under.								Total Area under Crops.	Land under Permanent Artificial Grasses.
		For Grain.				Potatoes.	Vines.	Hay.	Other Crops.		
		Wheat.	Oats.	Maize.	Barley.						
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Western Australia	1861	13,584	507	73	2,412	277	457	6,676	719	24,705	.....
	1871	25,697	1,474	113	5,083	494	692	.....	18,171	51,724	.....
	1881	21,951	827	36	3,679	278	527	24,445	1,610	53,353	.....
	1890	33,820	1,934	81	5,322	510	1,023	23,183	3,803	69,676	.....
Tasmania	1861	58,823	29,022	.....	7,279	9,349	.....	31,803	27,109	163,385	.....
	1871	63,332	29,631	.....	4,275	8,154	.....	31,578	18,076	155,046	90,247
	1881	51,757	27,535	.....	4,597	9,670	.....	34,790	20,145	148,494	136,321
	1890	39,452	20,740	.....	4,376	20,133	.....	45,381	27,294	157,376	201,060
New Zealand	1861	29,531	15,872	770	3,457	7,292	.....	.....	11,584	68,506	157,994
	1871	108,720	139,185	.....	13,305	11,933	.....	30,717	33,422	337,282	792,529
	1881	365,715	243,387	3,177	29,808	22,540	.....	68,423	337,856	1,070,906	3,369,646
	1890	301,460	346,224	5,759	32,740	32,691	.....	44,045	873,260	1,636,179	6,922,173
Australasia ..	1861	733,356	145,393	62,448	30,141	57,256	7,571	221,489	110,422	1,368,076	173,144
	1871	1,381,920	363,746	142,107	61,092	80,692	18,856	318,946	319,159	2,686,518	929,497
	1881	3,367,779	438,203	168,954	105,372	98,782	17,488	836,811	518,124	5,551,513	4,348,742
	1890	3,537,091	616,934	306,749	150,182	142,178	41,269	1,077,159	1,194,836	7,066,398	7,790,872

AREA UNDER CROPS.

As will be seen from the foregoing figures, the area under crop in Australasia is now more than five times as large as it was in 1861. If, however, the land artificially grassed be included the total is 14,857,270 acres, or nine and a half times the area under cultivation in 1861. A comparison with the increase of population may perhaps best serve to give an idea of the progress of agriculture. This is shown in the following table:—

Average acreage under crop per inhabitant in each Colony.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	0·8	0·8	0·7	0·8
Victoria	0·8	1·1	1·7	1·8
Queensland.....	0·1	0·5	0·5	0·6
South Australia.....	3·2	4·5	7·5	6·6
Western Australia	1·6	2·0	1·8	1·5
Tasmania	1·8	1·5	1·2	1·1
New Zealand	0·7	1·3	2·1	2·6
Australasia.....	1·1	1·4	2·0	1·9

Great increase
of area under
crop.

Progress since
1861.

Taking the Colonies as a whole, the ratio of the increase of the area under crop has been greater than that of the population. The decade from 1871 to 1881 exhibits the greatest amount of progress. This is what naturally might be expected, as the gold fever had then altogether subsided, and a large portion of the population was seeking employment of a more settled nature than that afforded by the gold-fields. Three provinces, however, monopolized the increase—South Australia, Victoria, and New Zealand. The first-named of these added to the area under cultivation 3 acres per inhabitant—an increase which cannot but be regarded as remarkable. During the period from 1881 to 1890 the ratio showed a slight decline as regards the Colonies as a

group. All the more important provinces, South Australia excepted, exhibit an increase, and it is to the falling off in the area per inhabitant cultivated in this province, that the slight decline in the total is due. The increase of agriculture, as compared with that of population, will be clearly seen in the following table, which shows the growth for each period, all the provinces being grouped as one :—

Increase per cent. of average under crop compared to that of population.

	1861-1871.	1871-1881.	1881-1890.	Whole period 1861-1890.
	Per cent.	Per cent.	Per cent.	Per cent.
Increase of acreage under crop	96·4	106·6	27·3	416·5
Increase of population.....	55·6	43·2	34·2	199·2

During the period covered by the table the population of Australasia was trebled, while the breadth of land devoted to agriculture increased more than five-fold, so that the ratio of increase of agriculture was one and three-quarters that of the population. This improvement took place entirely during the period from 1861 to 1881, and chiefly during the latter portion of that time; while in the years from 1881 to 1890 the rate of increase in the acreage under crops fell far short of the increase of the population. This comparative decrease is owing to various causes, such as the general tendency elsewhere alluded to, of the population to congregate in the several metropolitan centres, the difficulty of taking up good land within easy access to markets; and also to the fact that there have been large accessions to the numbers of those engaged in other callings, without a corresponding increase in the agricultural classes. Under any circumstances the area of land devoted to agriculture cannot be increased illimitably, and although enormous tracts of land adapted for tillage still remain untouched by the plough, it is not likely their cultivation will be attempted until a more certain market is assured for the produce.

Area under crop compared with population.

Area under crop. In the following table will be found the proportion of land under crop to the total area of each Colony, and to Australasia as a whole. In instituting comparisons between the several Colonies, however, it must be borne in mind that other circumstances than the mere area under cultivation require to be taken into consideration. It would not be fair, for instance, to compare Tasmania, with 5·5 persons per square mile, to Western Australia, which has only 0·05 inhabitant to the square mile. The table has a value chiefly because it shows how each Colony has progressed in regard to cultivation during the periods named :—

Proportion of area under crop to total area of each Colony.

Proportion of land under various crops.

Colony.	1861.	1871.	1881.	1890.
	Per cent.	Per cent.	Per cent.	Per cent.
New South Wales	·15	·20	·29	·43
Victoria	·73	1·51	2·55	3·61
Queensland.....	·001	·01	·03	·05
South Australia.....	·07	·15	·37	·36
Western Australia	·004	·008	·009	·01
Tasmania	·97	·92	0·88	·94
New Zealand	·10	·50	1·60	2·45
Australasia	·07	·13	·27	·35

The subjoined table shows the proportion of cultivated area devoted to the principal crops in each province, as well as in the whole taken together. It will be seen that all except two devote the greater proportion of their tillage to wheat and hay. This is especially the case in regard to South Australia, where little else is grown, but in Victoria also the proportion of wheat amounts to 56 per cent. of the total area cultivated, and under hay crops there is more than 20 per cent.

Percentage of tillage devoted to each of the principal crops.

Crops.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Australasia.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Wheat	39·1	56·4	4·6	79·9	48·5	25·1	18·4	50·1
Oats	1·6	10·9	0·2	0·6	2·8	13·2	21·2	8·7
Maize	22·4	0·5	44·2	.....	0·1	.....	0·3	4·4
Barley	0·6	4·3	0·3	0·7	7·6	2·8	2·0	2·1
Potatoes	2·3	2·7	4·0	0·3	0·7	12·8	2·0	2·0
Vines	0·9	1·0	0·9	0·5	1·5	.....	.....	0·6
Hay	20·6	20·3	18·8	16·5	33·3	28·8	2·7	15·2
Sugar-cane	2·4	.....	22·6	.....	.....	.....	.....	1·0
Other crops	10·1	3·9	9·4	1·5	5·5	17·3	53·4	15·9
Total.	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

PROPORTION OF EACH CROP.

The relative position of each of the principal agricultural products, in proportion to the total area under crop in Australasia since the year 1861, may be ascertained from the following set of figures, which should, however, be used with the former table, giving the actual areas, since a decline in the proportion of land devoted to any form of cultivation does not necessarily mean a falling off in the area devoted to it; on the contrary, in few instances has there been any actual retrogression. It will be satisfactory to observe that the proportion of cultivation devoted to the valuable crops has greatly increased. Thus, in 1890, the percentage devoted to vines, sugar-cane, and "other crops," under which are included gardens and orchards, was 17·5, as against 9·6 in 1881 and 8·6 in 1861.

Proportion of land under principal crops.

Product.	1861.	1871.	1881.	1890.
	Per cent.	Per cent.	Per cent.	Per cent.
Wheat	53·6	51·4	60·7	50·1
Oats.....	10·6	13·5	7·9	8·7
Maize	4·6	5·3	3·0	4·4
Barley	2·2	2·3	1·9	2·1
Potatoes.....	4·2	3·0	1·8	2·0
Vines	0·5	0·7	0·3	0·6
Hay.....	16·2	11·9	15·1	15·2
Sugar-cane.....	.....	0·5	0·7	1·0
Other crops	8·1	11·4	8·6	15·9
Total	100·0	100·0	100·0	100·0

WHEAT.

Wheat-producing Colonies.

Only three of the seven Colonies of Australasia—Victoria, South Australia, and New Zealand—produce sufficient wheat for their own requirements; but after the deficiencies of the rest of Australasia are supplied by these Colonies, there is, in most seasons, a large balance for external export, which finds a ready market in Great Britain, where Australian wheat is well and favourably known.

The amount of wheat exported, the produce of each of these Colonies, to countries outside Australasia, during 1890, was 13,541,115 bushels, valued at £2,318,038, of which 11,153,550 bushels, or over 82 per cent., were despatched to Great Britain.

The subjoined table shows the progress of wheat-growing for 30 years :—

Area under Wheat.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales	123,468	154,030	221,888	333,233
Victoria	196,922	334,609	926,729	1,145,163
Queensland	392	3,024	10,958	10,390
South Australia	310,636	692,508	1,768,781	1,673,573
Western Australia	13,584	25,697	21,951	33,820
Tasmania	58,923	63,332	51,757	39,452
New Zealand	29,531	108,720	365,715	301,460
Australasia	733,356	1,381,920	3,367,779	3,537,091

Production.

Colony.	1861.	1871.	1881.	1890.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales	1,606,034	2,229,642	3,405,966	3,649,216
Victoria	3,607,727	4,500,795	8,714,377	12,751,295
Queensland	5,880	36,288	39,612	207,990
South Australia	3,410,756	3,967,079	8,087,032	9,399,389
Western Australia	160,155	345,368	153,657	465,025
Tasmania	1,380,913	847,962	977,365	642,980
New Zealand	772,531	2,448,203	8,297,890	5,723,610
Australasia	10,943,996	14,375,337	29,675,899	32,839,505

AVERAGE PRODUCTION OF WHEAT.

The production of wheat per acre varies from 6 bushels in South Australia to 24·5 bushels in New Zealand, the average for the whole of Australasia being little short of 10 bushels. In the following statement is given the average yield for each province during the 10 years which closed with 1890 :—

Average Production of Wheat per Acre.

Colony.	Average for the ten years, 1881-90.
	Bushels.
New South Wales	13·3
Victoria	10·1
Queensland	10·5
South Australia	6·0
Western Australia	11·8
Tasmania	18·3
New Zealand	24·5
Australasia	9·7

Yield per acre.

A yield of 10 bushels per acre is certainly small compared with the average obtained in European countries, but a bare statement of averages may mislead. Thus, in South Australia it is found that owing to favourable conditions of culture a yield of 7 bushels is a very satisfactory crop, paying better than 15 bushels in New South Wales, or 20 in New Zealand. Taking into consideration that an expansion of the area devoted to wheat may be expected to occur in New South Wales, which now produces far less than is required for the consumption of its population, and that it is possible New Zealand and Tasmania will revert to wheat-growing, it may reasonably be concluded that the

average for Australasia will advance considerably during the next few years, seeing that all the provinces named have a yield considerably in excess of that of Australasia. Assuming that New South Wales obtains sufficient for its requirements, and that the area formerly devoted to wheat is again brought under this crop in New Zealand and Tasmania, the average for Australasia will be not less than 13·5 bushels.

The proportion of wheat produced by each province, compared with the total Australasian production in 1881 and 1890, is exemplified in the following figures :—

Percentage of Production of Wheat in each Colony.

Colony.	1881.	1890.
	Per cent.	Per cent.
New South Wales	11·5	11·1
Victoria	29·4	38·8
Queensland	0·1	0·7
South Australia	27·2	28·6
Western Australia	0·5	1·4
Tasmania	3·3	2·0
New Zealand.....	28·0	17·4
Australasia	100·0	100·0

Victoria takes the lead among the seven Colonies with regard to the production of wheat, having to its credit more than one-third of the total yield. South Australia comes next with 28·6 per cent. of the total production, and New Zealand, which in the former period held a leading position, has now declined to 17·4, while New South Wales is about stationary for the two periods.

Tasmania, in 1881, produced wheat to the extent of 3·3 of the total Australasian production, and was able to export a trifling quantity, but in 1890 that Colony only produced 2 per cent., and had to import wheat to the amount of 234,826 bushels.

Yield of wheat
in other
countries.

Compared with most European countries the yield of wheat in Australasia must appear inconsiderable, both in regard to the total quantity obtained, and the produce per acre. Thus, in the United Kingdom the average yield for the last five years was 28·5; for the United States the average was 11·9 bushels; the average for Manitoba during the same time was 18·4 bushels, and for Ontario 16·5 bushels, as against the Australasian yield of 9·7 bushels. With regard to other European countries the averages for the last available five-year periods are—Holland, 27·6 bushels; Germany, 18 bushels; France, 17·1 bushels; Hungary, 15·3 bushels; and Russia (excluding Poland) 7·4 bushels.

The following table shows the net imports or exports of wheat and flour of each of the colonies during 1890, flour being stated in terms of wheat, on the assumption of one ton of flour being equal to 48 bushels:—

Net Import or Export of Wheat and Flour for each Colony, 1890.

Colony.	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales	1,798,042	.....
Victoria .....	.....	2,297,872
Queensland	2,295,459	.....
South Australia .....	.....	10,959,102
Western Australia	136,725	.....
Tasmania	234,826	.....
New Zealand .....	.....	4,943,652
Net exports .....	.....	13,735,574

The season of 1890 was an exceptionally good one, so that there was a larger surplus for export than is usually the case.

The following table shows the annual yield and consumption of each Colony for the ten years ending with 1890, with the surplus or deficiency in each case :—

Yield and consumption of wheat in each Colony.

Wheat Yield and Consumption in Australasia.—Ten Years' Average, 1881-90.

Colony.	Average Annual.			
	Yield, less required for Seed.	Consumption.	Surplus available for Export.	Deficiency to be Imported.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales.....	3,604,000	6,104,000	.....	2,500,000
Victoria	9,455,000	5,894,000	3,561,000	.....
Queensland.....	88,000	1,917,000	.....	1,829,000
South Australia	8,298,000	1,983,000	6,315,000	.....
Western Australia ...	292,000	440,000	.....	148,000
Tasmania	676,000	868,000	.....	192,000
New Zealand.....	7,339,000	4,241,000	3,098,000	.....
Australasia.....	29,752,000	21,447,000	8,305,000	.....

If the acreage under wheat in 1890 in the various colonies be compared with that of 1881, it will be found that the extension of this cultivation has not been uniform, for, while Victoria and New South Wales have increased their acreage, there has been a tendency in the other provinces to lessen the area devoted to this cereal. This has been notably the case in New Zealand and Tasmania. Taking Australasia as a whole, the area under wheat was only 169,312 acres in excess of that of 1881, notwithstanding that in Victoria and New South Wales, 330,778 acres were added to the breadth of land previously under crop. As already pointed out the greater portion of the area devoted to agriculture is laid under wheat, and in an ordinary season the produce of over 1,000,000 acres is available for export to Europe. Whether the extension of wheat-growing for export, after supplying local demands, will be profitable is for the present a matter determined by the prices obtained in the London markets. But as far as

YIELD OF WHEAT PER ACRE.

present indications can be followed, it is hardly possible that any large expansion of this industry can be expected, unless perhaps in New South Wales, the only Colony of importance which, though adapted for wheat-growing, produces less than the requirements of its population.

Value of yield
per acre.

In the subjoined table is given the value of the yield per acre for three of the Colonies estimated on the market rates ruling in February and March of each year. It will be seen that a considerable decline has taken place since 1882, due for the most part to the fall in prices rather than to any decrease of production. In regard to the value per acre the fall has been most marked in New South Wales :—

Value of Yield per acre of Wheat.

Year. ending March.	Average.					
	Yield in Bushels per Acre.			Value of Yield per acre.		
	New South Wales.	Victoria.	South Australia.	New South Wales.	Victoria.	South Australia.
	Bushels.	Bushels.	Bushels.	£ s. d.	£ s. d.	£ s. d.
1882	15·4	9·4	4·6	4 4 0	2 7 0	1 2 5
1883	16·3	9·0	4·2	4 4 3	2 2 9	1 1 6
1884	15·0	14·1	7·8	3 3 9	2 11 8	1 11 3
1885	15·5	9·5	7·5	2 18 2	1 11 8	1 5 4
1886	10·4	9·0	*	2 5 1	1 14 6	*
1887	17·4	11·5	*	3 8 2	2 3 2	*
1888	12·1	10·8	*	2 2 10	1 16 0	*
1889	4·8	7·1	*	1 2 10	1 12 6	*
1890	15·6	9·7	7·8	2 14 7	1 15 7	1 8 0
1891.	10·9	11·1	5·6	2 0 10	1 19 9	19 7

* No returns.

The United Kingdom is the largest importer of wheat, and the British demand largely influences the price throughout the world. The average rate per bushel in 1891 in London was 4s. 7d., which was higher than any year since 1883. This increased price was due to the failure of the European wheat crop.

Average Value of Wheat per bushel on London Market,
1882-91.

Year.	Price.	Year.	Price.
	s. d.		s. d.
1882	5 7½	1887	4 1
1883	5 2½	1888	4 0
1884	4 5½	1889	3 9
1885	4 1	1890	4 0
1886	3 10½	1891	4 7

The importance of Australasia as a producer of wheat is but small when compared with the great wheat-producing centres of the world. Out of 2,195,450,000 bushels produced in 1890, only 32,840,000 bushels, or 1·5 per cent., were of Australasian growth. The subjoined statement, based on the returns of the United States Department of Agriculture, except as regards Australasia, gives the approximate crop of the world for the year mentioned :—

Relative importance of Australasian wheat.

Wheat crop of the world.

Wheat Crop of the World in 1890.

Countries.	Bushels.	Countries.	Bushels.
Europe—		Asia—	
Austria	51,440,667	India	235,345,600
Hungary	165,345,000	Asia Minor.....	37,134,720
Belgium	19,573,075	Persia	22,693,440
Denmark	5,776,512	Syria	12,378,240
France	338,902,124	Africa—	
Germany	94,899,840	Algeria	22,693,440
Great Britain	75,576,383	Egypt	8,252,160
Ireland	2,639,399	Cape Colony	3,713,472
Greece	12,378,240	Tunis	4,256,250
Italy	126,640,746	North America—	
Netherlands.....	6,189,120	United States.....	399,262,000
Portugal	8,252,160	Canada	40,527,562
Roumania.....	63,954,240	South America—	
Russia	220,082,325	Argentina	41,703,683
Servia	10,315,200	Chili	18,567,360
Spain	70,143,360	Australasia	32,839,505
Sweden	3,956,043		
Norway.....	412,608		
Switzerland	2,475,648	Total	2,195,454,842
Turkey	37,134,720		

CULTIVATION OF OATS.

Consumption of
wheat.

The following figures show that the average consumption for Australasia is higher than that of any other part of the world for which records are available, with the exception of France:—

	Consumption per Head. (Bushels.)
United Kingdom.....	5·9
France	8·1
Germany	3·0
Russia	2·1
Austria	2·9
Italy	5·4
Spain and Portugal.....	6·4
Belgium and Holland.....	5·0
Scandinavia	1·4
Turkey	6·1
United States	5·0
Canada	6·5
Australasia	6·6

That of the Australasian Colonies will be found below:—

New South Wales	6·5
Victoria	6·0
Queensland	6·1
South Australia	6·5
Western Australia	9·3
Tasmania	6·7
New Zealand	7·5

The figures for Western Australia may appear abnormal, but are the result of a careful computation from the official returns for the last seven years.

OATS.

Cultivation of
oats.

The cultivation of oats, coming next in importance to wheat as a grain crop, is rapidly increasing, as the following figures show:—

Area under Oats.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales...	7,224	13,795	16,348	14,102
Victoria	91,061	175,944	146,995	221,048
Queensland.....	69	131	88	411
South Australia.....	1,638	3,586	3,023	12,475
Western Australia..	507	1,474	827	1,934
Tasmania	29,022	29,631	27,535	20,740
New Zealand	15,872	139,185	243,387	346,224
Australasia.....	145,393	363,746	438,203	616,934

Production.

Colony.	1861.	1871.	1881.	1890.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales...	152,426	280,887	356,566	256,659
Victoria	2,136,430	3,299,889	3,612,111	4,919,325
Queensland.....	.....	.....	1,121	8,967
South Australia	33,160	38,894	32,219	116,229
Western Australia..	8,162	28,330	8,270	37,713
Tasmania	751,475	593,477	783,129	519,395
New Zealand.....	512,665	3,726,810	6,924,848	9,947,036
Australasia:.....	3,594,318	7,968,287	11,718,264	15,805,324

The average yield per acre in each province for the ten years which closed with 1890, was:— Average production of oats.

Average Production of Oats per Acre.

Colony.	Bushels.
New South Wales	21·9
Victoria	22·6
Queensland	14·6
South Australia	11·6
Western Australia	17·5
Tasmania	26·8
New Zealand	31·0
Australasia.....	27·5

The average yield of oats for the group was therefore 27·5 bushels per acre, New Zealand, with its high average yield, furnishing nearly 63 per cent. of the total production. The cultivation of this cereal is comparatively neglected in New South Wales; in Victoria, however, it is next in importance to wheat, whilst in Queensland and South Australia, the yield being small and the climate ill-adapted, oats count for very little in the total grain production. High yield of New Zealand.

The average yield of oats in the United Kingdom for the last available quinquennial period was 26·2 bushels; the average for Average yield of oats.

IMPORT AND EXPORT OF OATS.

the United States was 25 bushels; for Holland, 43·2 bushels; France, 25·9 bushels; Hungary, 20·3 bushels; Austria, 16·5 bushels; Russia in Europe, 14·5 bushels; while the Australasian average was 27·5 bushels.

Proportion of
oats grown by
each Colony.

The proportion grown by each individual Colony of the total production of oats in Australasia in 1889-90, was:—

Percentage of Production of Oats in each Colony.

Colony.	1881.	1890.
	Per cent.	Per cent.
New South Wales	3·0	1·6
Victoria	30·8	31·1
Queensland .....	.....	.....
South Australia	0·3	0·8
Western Australia	0·1	0·3
Tasmania	6·7	3·3
New Zealand	59·1	62·9
Australasia	100·0	100·0

Import and
export of oats

The net import or export of oats for each of the Colonies is given below. New Zealand was the only province which exported to any considerable extent, the major part of her export being to the neighbouring Colonies; but, nevertheless, 738,838 bushels were forwarded to the United Kingdom:—

Imports and Export of Oats.

Colony.	Oats.	
	Net imports.	Net exports.
	Bushels.	Bushels.
New South Wales	1,459,173	.....
Victoria.....	502,457	.....
Queensland	170,529	.....
South Australia	113,903	.....
Western Australia	100,136	.....
Tasmania .....	.....	146,860
New Zealand .....	.....	3,019,151
Net Exports.....	.....	819,813

MAIZE.

Maize is the principal crop grown in Queensland, and is one of the most important products of New South Wales; in the other Colonies the climate is little adapted to its growth, and the cultivation of this cereal does not extend to more than 16,000 acres.

The following figures show that fair progress has been made in the cultivation of maize since 1861 :—

Area under Maize.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales...	57,959	119,956	117,478	191,152
Victoria	1,714	1,709	1,783	10,357
Queensland	1,914	20,329	46,480	99,400
New Zealand	770	.....	3,177	5,759
Other Colonies	91	113	36	81
Australasia	62,448	142,107	168,954	306,749

Production.

Colony.	1861.	1871.	1881.	1890.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales...	1,727,434	4,015,973	4,330,956	5,713,205
Victoria	20,788	30,833	81,007	574,083
Queensland	42,100	508,000	1,313,655	2,373,803
New Zealand	31,570	.....	127,257	238,864
Other Colonies	367	2,000	648	2,146
Australasia	1,822,259	4,556,806	5,853,523	8,902,101

MAIZE PRODUCED BY EACH COLONY.

Rate of production of Maize.

The following is the average rate of production of each Colony, and of the whole group for the ten years ending with 1890 :—

Average Production of Maize per Acre :—

Colony.	Bushels.
New South Wales	31·2
Victoria.....	47·8
Queensland	23·4
New Zealand	41·7
Australasia	29·3

The figures for Victoria and New Zealand are worth little, as the land under maize is small in area, and very favourably situated. The average yield of maize in the United States for the last five years was 23·3 bushels, while for Austria and Hungary the average was a little over 19 bushels, and Italy produced at the rate of about 16 bushels. Little good, however, is to be gained by placing these figures with the Australasian averages, as the acreage devoted to maize in Australasia is too small to make any such comparison useful.

Proportion of Maize grown by each Colony.

The proportion of the total Australasian yield of maize grown by each Colony in 1881 and 1890, was :—

Percentage of Maize Production of each Colony.

Colony.	1881.	1890.
	Per cent.	Per cent.
New South Wales	74·0	64·2
Victoria	1·4	6·4
Queensland	22·4	26·7
New Zealand	2·2	2·7
Australasia.....	100·0	100·0

The net import or export of maize for each Colony during 1890 was :— Imports and Exports of Maize.

Imports and Exports of Maize.

Colony.	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales	532,910	.....
Victoria	8,634	.....
Queensland .....	..	163,615
South Australia	2,734	.....
Western Australia.....	4,160	.....
Tasmania	560	.....
New Zealand .....	.....	287,749
Net imports.....	97,634	.....

New South Wales is the only Colony importing maize to any extent from abroad, chiefly from United States and New Caledonia.

BARLEY.

Barley is the least cultivated of the cereal productions of Australasia. The area and production for each period under review were as follows :— Cultivation of Barley.

Area under Barley.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	2,924	3,461	6,427	4,937
Victoria	3,419	16,772	48,652	87,751
Queensland.....	13	971	256	584
South Australia.....	10,637	17,225	11,953	14,472
Western Australia	2,412	5,083	3,679	5,322
Tasmania	7,279	4,275	4,597	4,376
New Zealand	3,457	13,305	29,808	32,740
Australasia.....	30,141	61,092	105,372	150,182

AVERAGE PRODUCTION OF BARLEY.

Production.				
Colony.	1861.	1871.	1881.	1890.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales.....	41,054	55,284	135,218	81,383
Victoria	68,118	335,506	927,566	1,571,599
Queensland.....	158	11,836	3,207	12,673
South Australia.....	168,137	164,161	137,165	175,583
Western Australia	2,412	5,083	36,790	87,813
Tasmania	169,381	76,812	102,475	99,842
New Zealand	96,658	287,646	664,093	758,833
Australasia.....	545,918	936,328	2,006,514	2,787,726

Production of
Barley.

The average production of barley per acre for each Colony is given in the following table for the ten years ended December 31, 1890:—

Average Production of Barley per Acre.

Colony.	
New South Wales	Bushels. 19·4
Victoria	18·6
Queensland	22·4
South Australia	12·4
Western Australia.....	14·8
Tasmania.....	24·1
New Zealand	27·8
Australasia	20·4

New Zealand has the largest yield of barley per acre of all the Colonies, and, as will be seen by the next table, she produces fully 27 per cent. of the total Australasian crop, while Victoria produces 56 per cent., with an average yield of 17·9 per acre. The figures appended show the proportion produced by each Colony in 1881 and in 1890:—

Percentage of Production of Barley in each Colony.

Colony.	1881.	1890.
	Per cent.	Per cent.
New South Wales	6·8	2·9
Victoria	46·2	56·4
Queensland	0·2	0·5
South Australia	6·8	6·3
Western Australia	1·8	3·1
Tasmania	5·1	3·6
New Zealand.....	33·1	27·2
Australasia	100·0	100·0

The trade in barley and malt for each Colony in 1890 was :— Barley and Malt.

Barley and Malt.

Colony.	Barley.		Malt.	
	Net Imports.	Net Exports.	Net Imports.	Net Exports.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales	45,862	.....	349,244	.....
Victoria .....	.....	5,992	5,182	.....
Queensland	5,560	.....	103,810	.....
South Australia	26,912	.....	62,514	.....
Western Australia	3,327	.....	5,740	.....
Tasmania	23,345	.....	489	.....
New Zealand .....	.....	240,933	.....	81,627
	.....	141,919	445,352	.....

Barley is not cultivated to the extent it deserves. In fruitful seasons, such as that of 1889, Australasia produces sufficient barley, exclusive of that required for malt, for home requirements, and a small surplus for export; but if the combined trade in barley and malt be considered, all the Colonies, with the exception of Victoria and New Zealand, are dependent upon external sources. The high import duties in Victoria on both these articles practically prohibit importations. Limited Cultivation of Barley.

POTATOES.

Potatoes.

The cultivation of the potato is not confined to any particular Colony, but Victoria and New Zealand are the leading growers, as will be seen from the subjoined table :—

Area under Potatoes.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	10,040	14,770	15,943	19,406
Victoria	27,174	39,064	39,129	53,818
Queensland	512	3,121	5,086	8,994
South Australia.....	2,612	3,156	6,136	6,626
Western Australia.....	277	494	278	510
Tasmania	9,349	8,154	9,670	20,133
New Zealand	7,292	11,933	22,540	32,691
Australasia.....	57,256	80,692	98,782	142,178

Production.

Colony.	1861.	1871.	1881.	1890.
	Tons.	Tons.	Tons.	Tons.
New South Wales.....	30,942	44,758	44,323	52,791
Victoria	59,364	125,841	134,290	204,155
Queensland.....	1,080	6,585	11,984	28,810
South Australia.....	7,726	10,980	18,154	23,963
Western Australia	817	1,457	556	1,655
Tasmania	47,428	22,608	33,565	73,158
New Zealand.....	37,554	42,130	121,890	178,121
Australasia	184,911	254,368	364,762	562,653

Production of potatoes.

The average production of potatoes per acre, expressed in tons, for Australasia and for each of the separate Colonies is next given,

for the ten years which ended with 1890. New Zealand, it will be seen, shows a considerably larger return per acre than any of the Colonies :—

Average Production of Potatoes for each Colony.

Colony.	Per acre.
	Tons.
New South Wales	2·7
Victoria.....	3·7
Queensland	3·1
South Australia	3·5
Western Australia	2·9
Tasmania	4·0
New Zealand	5·2
Australasia	3·9

The percentage of the total Australian production of potatoes due to each Colony is shown by the following figures. It will be seen that Tasmania and Queensland have relatively increased while Victoria holds about the same position as in 1881 :—

Percentage of Production of Potatoes in each Colony.

Colony.	1881.	1890.
	Per cent.	Per cent.
New South Wales	12·1	9·4
Victoria	36·8	36·3
Queensland	3·3	5·1
South Australia	5·0	4·3
Western Australia	0·2	0·3
Tasmania	9·2	13·0
New Zealand	33·4	31·6
Australasia	100·0	100·0

Only three of the Colonies are in a position to export potatoes, Imports and exports of potatoes. Tasmania, New Zealand, and Victoria, in the order named ; but the surplus available for export in the last-mentioned province, though at one time considerable, has now almost vanished.

AREA UNDER HAY.

Imports and Exports of Potatoes.		
Colony.	Net Imports.	Net Exports.
	Tons.	Tons.
New South Wales	39,523	.....
Victoria .....	.....	1,635
Queensland	15,011	.....
South Australia	2,783	.....
Western Australia	936	.....
Tasmania .....	.....	33,374
New Zealand .....	.....	28,872
	.....	5,628

HAY.

Hay.

Considerable quantities of wheat, oats, and barley are grown for the purpose of being converted into hay. This crop in point of value is second in importance of the agricultural production. The area under crop for hay has since 1881 steadily and largely increased, as will be seen from the table herewith. The returns of this crop for New Zealand are, unfortunately, imperfect, as the area sown under oaten hay, and the production reaped, are not given; the combined area cropped as oaten hay and green food was 203,694 acres in 1890, but as the portion devoted to hay is probably not large, this figure has not been included in the area shown, and the production is exclusive of the oaten hay crop.

Area under Hay.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	45,175	51,805	146,610	175,242
Victoria	74,681	103,206	212,150	413,052
Queensland	280	3,828	16,926	31,106
South Australia	62,874	97,812	333,467	345,150
Western Australia	6,676	*14,342	24,445	23,183
Tasmania.....	31,803	31,578	34,790	45,381
New Zealand	†27,160	30,717	68,423	44,045
Australasia.....	248,649	333,288	836,811	1,077,159

* In 1869.

† In 1867.

AVERAGE PRODUCTION OF HAY.

Production.

Colony.	1861.	1871.	1881.	1890.
	Tons.	Tons.	Tons.	Tons.
New South Wales.....	57,363	77,460	198,532	213,034
Victoria	92,497	144,637	238,793	567,779
Queensland.....	459	6,278	19,640	50,116
South Australia.....	78,886	98,266	240,827	310,125
Western Australia	6,609	14,288	24,445	26,495
Tasmania	59,851	30,891	44,957	52,021
New Zealand	36,666	35,674	89,081	62,901
Australasia.....	332,331	407,494	856,275	1,282,471

The average production of hay per acre for each Colony will be found in the next table, the period embraced by the average being the ten years which closed with 1890 :—

Average Production of Hay per Acre.

Colony.	Production of hay.
	Tons.
New South Wales	1·3
Victoria.....	1·2
Queensland	1·7
South Australia	1·0
Western Australia	1·0
Tasmania	1·2
New Zealand.	1·4
Australasia	1·2

Victoria and South Australia are the largest growers of hay, as will be seen by the following figures, which show the proportion of the total yield of Australasia which each of the Colonies produces :—

IMPORTS AND EXPORTS OF HAY.

Percentage of Production of Hay by each Colony.

Colony.	1881.	1890.
	Per cent.	Per cent.
New South Wales	23·2	16·6
Victoria.....	27·9	44·3
Queensland.....	2·3	3·9
South Australia.....	28·1	24·2
Western Australia.....	2·9	2·1
Tasmania.....	5·2	4·0
New Zealand.....	10·4	4·9
Australasia.....	100·0	100·0

The greater portion of the hay is made from wheat, though large quantities of oaten hay are produced in Victoria and New South Wales. Hay is, for the most part, grown in each province in quantities sufficient for its own requirements, New South Wales being the only one which imports largely, and Victoria being the chief exporter.

Imports and
exports of hay.

The net import or export of hay and chaff for each Colony for the year 1890 was :—

Imports and Exports of Hay and Chaff.

Colony.	Net Imports.	Net Exports.
	Tons.	Tons.
New South Wales	34,669	.....
Victoria.....	.....	17,677
Queensland.....	2,969	.....
South Australia.....	.....	5,893
Western Australia.....	429	.....
Tasmania.....	.....	8,402
New Zealand.....	.....	1,288
Net imports.....	4,807	.....

GREEN FORAGE AND SOWN GRASSES.

The cultivation of maize, sorghum, barley, oats, and other ^{Green Fodder.} cereals for the purpose of green food, and the laying down of lands under lucerne and grass, engage attention in the districts where dairy-farming is carried on. The agricultural returns of some of the Colonies do not admit of a distribution being made between these forms of cultivation prior to 1887. The following table shows the area under such green food for 1887 and 1890, and it will be seen that there have been large developments in most of the Colonies, chiefly in New Zealand. After a consideration of the figures relating to the last-mentioned province, little difficulty will be experienced in accounting for its superiority in the dairy-farming industry:—

Grasses and Green Food.

	Green Food.		Sown Grasses.	
	1887.	1890.	1887.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales	20,403	37,473	192,678	388,715
Victoria	6,036	10,091	154,612	235,241
Queensland	9,582	9,546	13,619	22,252
South Australia	10,079	7,340	23,217	21,431
Tasmania	1,246	1,497	184,653	201,060
New Zealand	421,719	607,695	5,869,247	6,922,173
Australasia	469,065	673,651	6,438,026	7,790,872

THE VINE.

The history of the vine in these Colonies dates from the year ^{The grape-vine.} 1828, when cuttings from the celebrated vineyards of France, Spain, and the Rhine Valley, were planted in the Hunter River District of New South Wales, and formed the nursery for the principal vineyards of that Colony. Years afterwards the vine was planted in the Murray River District and other parts of New South Wales, and was afterwards introduced into Victoria

and South Australia, and is now cultivated in all the Colonies on the Australian continent. In South Australia a large proportion of Germans are employed in the industry of wine-making.

Climate and soil adapted to the vine.

The climate and soil of Australia are peculiarly adapted to the successful cultivation of the vine, and with a demand which the present production hardly satisfies, and also the opening up of a market in England, where Australian wines have obtained due appreciation, the future expansion of wine-growing appears fairly assured. The depreciation which French and other foreign wines have suffered, both in quantity and quality, owing to the devastation of the vineyards by phylloxera is an additional reason for the vine-growers of this continent looking forward to largely increased operations for their industry.

Progress of vine cultivation.

The progress of vine cultivation since the year 1861 is illustrated by the table subjoined. The areas given include the vines grown for table use, as well as for wine-making; also the young vines not yet in bearing :—

Areas under Cultivation with Vines.

Colony.	1861.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales	1,692	6,618	6,624	8,044
Victoria	1,464	5,523	4,923	20,686
Queensland	40	568	1,212	1,981
South Australia.....	3,918	5,455	4,202	9,535
Western Australia	457	692	527	1,023
Australasia	7,571	18,856	17,488	41,269

Until the year 1881 New South Wales contained the principal wine-growing districts, but at present the area devoted to vines is much larger in Victoria and South Australia. Of recent years great attention has been paid to the industry in Victoria, and that province now produces more than half the wine made in Australasia. The following table shows the progress made during thirty years :—

Production of Wine and Table Grapes.

Colony.	1861.		1871.		1881.		1890.	
	Wine.	Table Grapes.	Wine.	Table Grapes.	Wine.	Table Grapes.	Wine.	Table Grapes.
	Gallons.	Tons.	Gallons.	Tons.	Gallons.	Tons.	Gallons.	Tons.
New South Wales	85,328	224	413,321	508	513,058	1,103	842,181	3,355
Victoria.....	47,568	840	713,589	1,545	530,191	740	2,008,493	3,177
Queensland .....	....	....	....	....	72,121	255	189,274	1,074
South Australia ..	312,021	1,161	852,315	1,692	313,060	1,498	762,776	5,631
Western Australia	....	....	....	....	99,600	....	194,465	....
Australasia	444,917	2,234	1,979,225	3,745	1,537,600	3,596	3,907,189	13,237

It is impossible to tabulate the averages of all the Colonies, as in many instances the acreage under cultivation for wine-making purposes cannot be separated from young unproductive vineyards, or areas cultivated for table varieties of grape only. Making, however, due allowance for this fact, it would appear that the average production for the season 1890-91 was about 190 gallons in Western Australia, 161 gallons in South Australia, 156 gallons in Victoria, 216 gallons in New South Wales, and 274 gallons in Queensland. Taking an average year, the production for Australasia may be set down at 170 gallons. The average production in gallons per acre for other countries is shown by the following figures:—

Country.	Gallons per acre.	Country.	Gallons per acre.
Algeria	300	France	133
Cape Colony.....	220	Spain	130
Switzerland	210	Russia	130
Germany	185	Hungary	117
Portugal	175	Chili	100
Austria	152	Argentine Republic...	100
Servia	150	Italy	89
Roumania	150		
United States	140	Australia	170

AUSTRALIAN EXPORT OF WINE.

Compared with the wine production of other countries, as given hereunder, that of Australia appears small, but the prospects of this industry are sufficiently promising to encourage a hope that the coming years will witness important developments:—

Wine Production of the World.

Country.	Production in million gallons.	Country.	Production in million gallons.
Italy	715	Roumania	30
France	624	Turkey and Cyprus...	20
Spain	550	Chili	20
Hungary	100	United States	18
Austria	90	Switzerland	15
Portugal	90	Argentine Republic...	6
Germany	55	Cape Colony.....	6
Servia	45	Australia	4
Russia	40		
Algeria	40	Total	2,502
Greece	34		

Wine trade with Europe.

The following table illustrates the progress of the Australian wine trade with Europe since 1881. The total value of this trade in 1890, it will be noticed, had grown to nearly ten times what it was in 1881, while the number of gallons exported to Europe had increased over fourteen fold:—

Australian Wine Trade with Europe.

Colony.	1881.		1890.	
	Quantity.	Value.	Quantity.	Value.
	Galls.	£	Galls.	£
New South Wales	13,271	3,520	21,275	5,228
Victoria	5,588	2,341	128,289	26,122
Queensland	124	60	110	26
South Australia	2,859	580	166,849	31,942
Australasia.....	21,842	6,501	316,523	63,318

Including the trade of one province with another, as well as the foreign trade, the exports of each during the same years is shown as under :—

Colony.	1881.		1890.	
	Gallons.	£	Gallons.	£
New South Wales.....	22,377	7,233	48,480	14,009
Victoria	12,544	5,388	146,663	31,990
Queensland.....	124	60	110	26
South Australia.....	57,812	12,879	220,519	50,272
Australasia.....	92,857	25,560	415,772	96,297

SUGAR CANE.

The growth of the cane and manufacture of sugar are important Sugar Cane. features in the industry of Queensland and New South Wales, but whilst the climate of the former Colony renders the employment of white labour in the field almost impossible, the plantations of the latter are worked without the assistance of coloured labour. The owners of Queensland plantations usually combine the functions of cane-growers and sugar manufacturers, but in New South Wales, where the numerous holdings are, as a rule, small in area, the cane is purchased from the planters principally by the Colonial Sugar Refining Company, whose various crushing mills and refinery are fitted with machinery of the most modern character. The importation of coloured labour must, according to Queensland legislation, cease in the year 1892; leaving the planters the difficult problem to solve as to whether successful sugar-growing is compatible with the employment of white labour. Attempts are now being made to introduce Italian farm-labourers under contract to work in the sugar plantations for a number of years, and the first shipment of these immigrants arrived towards the close of 1891. Whether the experiment will be a success or not is a question looked upon with very great interest throughout Australasia.

AREA PLANTED WITH CANE.

The area under cane for the years specified below was :—

	1864.	1871.	1881.	1890.
	Acres.	Acres.	Acres.	Acres.
New South Wales	22	4,394	12,167	20,446
Queensland	94	9,581	28,026	50,922
Total	116	13,975	40,193	71,368

Progress of
sugar-growing.

The progress of this industry has been very rapid, especially in Queensland, the area of suitable land being very large in that Colony. Some years ago sugar-growing was started on the Daly River, in the Northern territory of South Australia, but no statistics are available regarding acreage or production.

The progress made in sugar-growing during the six years which closed with 1890 is illustrated by the following figures :—

	1885.	1886.	1887.	1888.	1889.	1890.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales ...	16,418	15,117	15,287	15,281	18,730	20,446
Queensland	59,186	54,010	51,815	47,340	49,741	50,922
Total.....	75,604	69,127	67,102	62,621	68,471	71,368

The industry, judged by the area devoted to cane, declined steadily from 1885 to 1888, owing to the low price of sugar. Since the year last named prices have been more satisfactory, and there has been a tendency to increase the area planted, but the figures of 1890 were still below those of 1885, as far as Queensland is concerned, while New South Wales showed a small increase.

Acreage of cane
actually cut.

The area given includes all the cane planted, whether cut during the year or not. The following table shows the acreage actually cut during the last six years :—

	1885.	1886.	1887.	1888.	1889.	1890.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales ...	9,583	5,915	8,380	4,997	7,348	8,344
Queensland	38,557	34,657	36,806	32,375	29,438	40,208
Total.....	48,140	40,572	45,186	37,372	36,786	48,552

The returns of the sugar industry, both for Queensland and New South Wales, are incomplete. In those of the former Colony the yield of cane per acre is not stated; and in the latter the production of sugar per ton of cane crushed is not given. As regards the latter it varies, of course, with the density of the juice, but in ordinary seasons it may be set down at something over 9 per cent.

The production of sugar from cane crushed for the last six years was as follows :— Quantity of
sugar produced

	1885.	1886.	1887.	1888.	1889.	1890.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales ...	18,464	13,750	22,500	11,279	19,016	26,533
Queensland	59,225	56,859	57,960	34,022	44,411	69,983
Total	77,689	70,609	80,460	45,301	63,427	96,516

The figures in the foregoing are from the returns made by the mill-owners, and, possibly, as regards Queensland, somewhat understate the truth.

The net imports of sugar by each Colony for 1890 are shown in the following table. Queensland was the only Colony that was able to supply sugar enough for its own requirements, and spare some for export. The surplus amounted to 40,521 tons valued at £695,892, which was mostly exported to the other Colonies, only 869 tons having been for foreign export :— Australasian
imports of
sugar.

Net imports of Sugar, 1890.

	Intercolonial and Foreign Imports.	
	Quantity.	Value.
	Tons.	£
New South Wales	34,266	691,321
Victoria	59,188	1,066,873
South Australia	13,796	279,283
Western Australia	2,403	60,065
Tasmania	6,149	127,954
New Zealand	24,612	347,663
Australasia	140,414	2,573,159

CULTIVATION OF TOBACCO.

The foregoing figures include the Queensland export of 40,521 tons mentioned above; the import from abroad was, therefore, 99,893 tons, of which only 97,746 can be traced to the original country of shipment, viz. :—

Australasian Import of Sugar from abroad, 1890.

Country.	Quantity.
	Tons.
Mauritius	31,753
Fiji	14,767
Java	35,571
Hong Kong	4,594
Other countries	11,061
Total	97,746

TOBACCO.

Tobacco.

The cultivation of the tobacco plant has received attention in the three eastern Colonies, especially in New South Wales, as the following table shows :—

Area and Production of Tobacco.

Year.	New South Wales.		Victoria.		Queensland.		Australasia.	
	Acres.	cwt. of leaf.	Acres.	cwt. of leaf.	Acres.	cwt. of leaf.	Acres.	cwt. of leaf.
1861	224	2,647	220	2,552	..	.. .. .	444	5,199
1871	567	4,475	299	2,307	44	.....	910	6,782
1881	1,025	18,311	1,461	12,876	68	521	3,154	31,708
1890	1,148	14,021	618	*326	540	2,392	2,306	16,739

* Crop failed.

Decline of the industry.

Owing to over production, and the want of a foreign market, the area devoted to tobacco culture has greatly declined since 1888, when 6,341 acres were occupied in this industry, and 70,251 cwt. of leaf was grown. The Australasian tobacco leaf has not yet been prepared in such a way as to find acceptance abroad, and until such is accomplished it will be useless to expect the cultivation of the plant to become a settled industry. The

soil and climate of Australia appear to be suitable for the growth of the plant, but sufficient care and skill have not been expended upon the preparation of the leaf. The quantity just mentioned as having been produced in 1888 was so greatly in excess of local requirements that very low prices only could be obtained, and a large portion of the crop was left upon the growers' hands. The result was that many farmers abandoned the cultivation of tobacco, so that the area under this crop during 1889 was only 3,239 acres in New South Wales, and 955 acres in Victoria, producing respectively 27,724 cwt. and 4,123 cwt. of leaf—less than half the crop of the previous year. In 1890 the acreage showed a further decline to 1,148 acres in New South Wales, and 618 acres in Victoria, with a yield of 14,021 cwt. and 326 cwt. respectively. Of the 618 acres still planted with tobacco in Victoria 505 acres failed to yield any crop. In Queensland, on the other hand, the acreage increased from 123 acres in 1888 to 266 acres in 1889, and 540 acres in 1890, but the production of the last-mentioned year was disappointing, as the total yield was less than that of the previous season, notwithstanding that the acreage had been more than doubled.

The average production of tobacco per acre for the year which closed with 1890, was :— Average production.

Average Production per Acre.

Colony.	Cwt.
New South Wales	10·8
Victoria	6·5
Queensland	7·3
New Zealand	5·4
Australasia	9·0

This average is somewhat larger than that of countries where the plant is grown under like circumstances, but the cultivation in Australia is altogether too restricted to make any comparison with other countries valuable.

IMPORTS OF TOBACCO.

Production per acre in Foreign Countries.

Country.	Cwt. per acre.	Country.	Cwt. per acre.
Russia	13·6	Turkey	7·8
Germany	12·3	Manilla, &c.....	7·4
France	11·4	United States	7·0
Austria	9·3	Brazil	7·0
West Indies	8·8	India	5·9
Java	8·4		
Japan	8·0	Australia	9·0

The Agricultural Department of Queensland is endeavouring to assist the tobacco-growers by the importation of American seed of first quality, suitable to the Queensland climate. New Zealand also has commenced the cultivation of tobacco. In 1889 that Colony had 25 acres cropped with the plant, and produced 102 cwt. of leaf, but in 1890 the area had decreased to 16 acres, with a yield of 51 cwt. of leaf.

Imports of
tobacco, &c.

The following table shows the imports for home consumption of tobacco, cigars, and cigarettes into Australasia during 1890 :—

Colony.	Quantity.
	lb.
New South Wales	1,687,462
Victoria	2,324,003
Queensland	1,172,861
South Australia	620,617
Western Australia	167,636
Tasmania	283,600
New Zealand	1,278,959
Australasia	7,535,138

GARDENS AND ORCHARDS.

Cultivation of
fruit.

The cultivation of fruit does not attract anything like the attention it deserves, although the soil and climate of large areas in all the provinces are well adapted to fruit-growing. Nevertheless,

some progress has been made, especially of recent years. In 1890 the proportion of the total cultivation allotted to fruit was 1·8 per cent., while in 1881 the proportion was 1·5; the area per 1,000 persons in the first-named year was 35 acres; in 1881 it was 29·4 acres. Grapes, oranges, apples, pears, and peaches are the principal fruits grown, but with an unlimited area suitable for this class of cultivation, and the climatic conditions so varied, varying from extreme cold in New Zealand and the high lands of New South Wales and Victoria, to tropical heat in Queensland, a large variety of fruits could be cultivated, and the industry only languishes for want of sustained demand for fruit products. The area under orchards and gardens in 1881 and 1890 was:—

Colony.	1881.		1890.	
	Area.	Percentage to total area under crops.	Area.	Percentage to total area under crops.
	acres.		acres.	
New South Wales.....	24,565	4·3	38,741	4·5
Victoria	20,630	1·4	26,955	1·3
Queensland	3,262	2·8	8,270	3·7
South Australia.....	9,864	0·4	15,362	0·7
Western Australia ...	.....	.....	3,140	0·5
Tasmania	6,717	4·5	10,345	6·6
New Zealand.....	16,360	1·5	26,857	1·6
Australasia.....	81,398	1·5	129,670	1·8

With the extension of artificial irrigation, and the increased facilities of export by the adoption of the cool chambers for the preservation of fruit for long voyages the fruit growers of Australasia are now enabled to compete with foreign rivals in the fruit supply for the English market, which in 1890 was valued at over £8,000,000. The Tasmanian fruit trade with England has passed the experimental stage, and every season large steamers visit Hobart to receive fruit for the home market. Exportation of fruit.

The following table shows the import and export trade of each Colony in green fruit and pulp for 1890, from which it will be

MINOR CROPS.

seen that with the exception of Tasmania and South Australia all the other Colonies import very largely :—

Colony.	Imports.	Exports of Domestic Produce.
	£	£
New South Wales	241,474	133,981
Victoria	222,574	14,319
Queensland	64,657	37,047
South Australia	9,702	27,262
Western Australia	1,163	.....
Tasmania	13,305	122,322
New Zealand	52,611	702
Australasia.....	605,486	340,633

MINOR CROPS.

Minor Crops.

Besides the crops already specifically noticed there are small areas on which are grown a variety of products, chiefly rye, bere, onions, beans, peas, turnips, mangel wurzel, pumpkins, melons, and hops, but none of these crops are sufficiently important to warrant a special notice. The area under such crops for each province in 1890 was :—

Area under Minor Crops.

Colony.	Acres.
New South Wales	8,780
Victoria.....	42,416
Queensland	2,849
South Australia	8,973
Tasmania	15,452
New Zealand	28,183
Australasia	106,653

Condition of Agriculture in the Colonies.

Although considerable progress has of late years been made in some directions, it must be admitted generally, that agriculture in the Australasian Colonies has scarcely passed the tentative stage. The typical Australian agriculturist, relying largely on a bountiful Nature, does not exercise upon crops anything approaching the same patience, care, and labour that are bestowed by the European cultivator ; nor, as a rule, does he avail himself of the benefits of

scientific farming and improved implements to the extent that prevails in America and Europe. It may be expected that improvements will take place in this respect and that the efforts made by the Governments of New South Wales, Victoria, and South Australia for the promotion of scientific farming, will bear good fruit. Agricultural colleges and model farms have been established in the three Colonies, and travelling lecturers are sent to agricultural centres. It is confidently anticipated that the expenditure of the States in the direction indicated will meet with abundant reward.

IRRIGATION.

Originally cultivation in Australia was confined to the banks ^{Necessity for irrigation.} of the coastal rivers, and the country near the sea, and within the influence of regular rainfall. Now, however, that cultivation has spread beyond the coastal districts and the adjacent tablelands, into the interior of the continent, where the irregular character of the rainfall makes harvesting uncertain, irrigation has become necessary to insure successful husbandry. For some years past small areas have been irrigated by private enterprise; 23,106 acres were returned as irrigated in New South Wales during 1891, and in 1889 there were 24,574 acres irrigated in Victoria.

A few years ago a special Act was passed by the Victorian ^{Mildura.} Legislature, enabling the Government to hand over to the firm of Chaffey Brothers an area of 250,000 acres of mallee scrub, situated at Mildura, in the Swan Hill district, about 340 miles north-west of Melbourne. The land was then uninhabited and practically valueless. Now it has grown into a flourishing Colony, with about 3,000 inhabitants. The Act obliged the promoters to spend £35,000 on the land within the first five years, but they actually expended £275,000 within less than four years, and have thus become entitled to the freehold of 40,000 acres, holding the balance of the 250,000 acres on lease. In addition to the sum mentioned it is estimated that the settlers have spent at least £100,000 in improving the land.

Production of raisins.

The raisin industry is so far the leading one at Mildura, but all kinds of fruit grow to perfection, and out of 6,500 acres cultivated no less than 6,000 acres are orchards and gardens.

Irrigation in Victoria.

A number of irrigation trusts have been formed in Victoria, and extensive works constructed in various districts, chiefly on the Goulburn, Loddon, Wimmera, and Avoca Rivers.

Irrigation in New South Wales.

In New South Wales matters are in a more backward state. The water conservation branch attached to the Department of Mines is at present engaged in obtaining sufficient hydrographical data to form the basis of a scheme of irrigation for vast areas in the vicinity of the Murray, Murrumbidgee, Lachlan, Macquarie, and Darling Rivers.

Mulgoa.

A company of capitalists has also commenced operations under what appears to be great promise of success, and has secured an area of about 20,000 acres in the Mulgoa district, within a distance of 30 miles of the metropolitan market. The soil consists chiefly of a rich friable loam, but the district suffers from an unequal rainfall. An Act, passed by the New South Wales Legislature in 1890, gives the right to tap the Nepean, and if necessary the Warragamba River, for the purpose of irrigating this area. The promoters intend to spend, if necessary, £20,000 on the scheme, and when the works are completed the area dealt with is expected to support a population of 5,000, instead of 50 as at present. It is proposed to devote the land chiefly to the cultivation of vines and fruit-trees.

Renmark.

In October, 1888, the firm of Chaffey Brothers commenced operations in South Australia, at a place called Renmark, situated on the River Murray, close to the boundary of New South Wales, and about 70 miles below Mildura, where an area of 250,000 has been set apart for irrigation purposes, and although Renmark has not progressed so rapidly as Mildura, it promises in time to become an important settlement.