

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 £24,806,453, which is about seven-tenths of the value of pastoral produce. The return from agriculture in each Colony during 1889 was, approximately :—

Value of agricultural products.

	Total value of crops.	Value of produce per acre under crop.	Percentage of value to total value of Australasia.
	£	£ s. d.	
New South Wales	4,931,620	5 4 2	19·88
Victoria	6,945,392	3 6 3	28·00
Queensland	1,855,929	7 19 7	7·48
South Australia	4,780,557	2 2 7	19·27
Western Australia	298,300	4 1 3	1·20
Tasmania	1,254,885	6 12 1	5·06
New Zealand	4,739,770	3 8 5	19·11
Australasia	24,806,453	3 9 2	100·00

From this estimate it would seem that the value of crops, in proportion to the area cultivated, is much larger in Queensland, Tasmania, and New South Wales than in the other Colonies. The reason of this, as far as Queensland and New South Wales are concerned, will be found in the more extended cultivation of maize, sugar-cane, fruit, and vines in proportion to the total extent cropped. In point of gross value Victoria and New Zealand are much in advance of the other members of the group.

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.

Area under cultivation in Australasia, 1861-89.

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	57,959	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
	1889	419,758	22,358	173,836	5,440	17,551	11,470	212,106	84,553	947,072	217,403
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
	1889	1,178,735	236,496	8,447	90,724	47,139	15,662	451,546	69,196	2,097,945	149,616
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
	1889	8,459	750	97,698	1,254	7,185	2,418	45,617	69,262	232,643	16,120
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
	1889	1,842,961	10,297	.....	19,679	6,383	7,352	329,643	28,799	2,245,114	28,331

AREA UNDER CROPS.

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	.....
	1889	35,517	2,075	80	5,475	462	1,088	25,694	3,017	73,408	.....
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
	1889	49,055	40,169	.....	4,446	17,015	.....	50,913	28,361	189,959	190,717
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	3,869,646
	1889	335,861	426,071	6,253	42,402	30,577	.....	45,889	499,234	1,336,287	6,479,160
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
	1889	3,870,346	738,216	286,314	169,420	126,312	37,990	1,161,408	782,422	7,172,428	7,081,347

AREA UNDER CROPS.

Agricultural
year.

In this table, as well as in the whole chapter on Agriculture, the years 1861, '71, '81, and '89 embrace the periods from 1st April 1861, '71, '81, and '89 to 31st March, 1862, '72, '82 and '90 respectively.

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 14,253,775 acres, or nine and a quarter times the area under crop 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:—

Great increase
of area under
crop.

Average acreage under crop to each person in the several Colonies.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	·83	·76	·73	·84
Victoria	·76	1·14	1·63	1·88
Queensland.....	·13	·48	·52	·57
South Australia.....	3·16	4·51	7·53	6·92
Western Australia	1·57	2·04	1·78	1·68
Tasmania	1·81	1·52	1·25	1·25
New Zealand	·69	1·26	2·14	2·23
Australasia.....	1·08	1·36	1·97	1·89

Progress since
1861.

Taking the Colonies as a whole, the area under crop has increased in a greater ratio than that of the increase of the population. The decade from 1861 to 1871 exhibits the greatest amount of progress. This is what naturally might be expected, as the gold fever had then subsided to a considerable extent, and a large portion of the population were seeking employment of a more settled nature than that afforded by the gold-fields. During the

next ten years—from 1871 to 1881—the advance was most marked in the case of the Colony of South Australia, which increased from 4·51 acres per cent. to 7·53. With reference to the other Colonies the changes were unimportant. During the period from 1881 to 1889 the ratio showed a slight decline as regards the Colonies as a group, but South Australia had fallen off from 7·53 acres to 6·92. 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 Colonies being grouped as one :—

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

	1861-1871.	1871-1881.	1881-1889.
	Per cent.	Per cent.	Per cent.
Increase of acreage under crop	96·4	106·6	29·2
Increase of population	55·6	43·2	34·2

During the period covered by the table the population of Australasia was trebled, while the breadth of land devoted to agriculture increased five and a quarter times, 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 1889 the percentage of increase of acreage under crops had fallen off by 5 per cent., as compared with the increase of population. This comparative decrease is owing to various causes, such as the general tendency already 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. As regards the Colony of New South Wales, it is very probable that

Area under crop compared with population.

Extension of
agriculture in
New South
Wales.

the agricultural returns will show a more than usual increase during the next few years, principally in consequence of the falling in of the pastoral leases in the Eastern Division in 1889, through which large tracts of arable land in close proximity to extensively settled districts became available for settlement.

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 5·78 persons per square mile, to Western Australia, which has only 0·4 inhabitant to the square mile. The table is valuable chiefly as showing how each Colony has progressed in regard to cultivation during the periods named :—

Percentage of areas under crop.

Colony.	1861.	1871.	1881.	1889.
	Per cent.	Per cent.	Per cent.	Per cent.
New South Wales	·15	·20	·29	·48
Victoria	·73	1·51	2·55	3·73
Queensland.....	·001	·01	·03	·05
South Australia.....	·07	·15	·37	·39
Western Australia	·004	·008	·009	·01
Tasmania	·97	·92	0·88	1·13
New Zealand	·10	·50	1·60	2·07
Australasia	·07	·13	·27	·35

The relative position occupied by each of the principal agricultural products, in proportion to the total area under crop in

Australasia, may be seen by inspection of the table appended. It will be observed that the proportions of the different crops cultivated in 1861 differed very little from those in 1889, with the exception of potatoes, which had fallen from 4·19 to 1·76 per cent. of the total area under crop. Wheat took up 53·60 per cent. of the total area in 1861, and 53·96 per cent. in 1889, but had attained the large proportion of 60·67 per cent. in 1881. Oats and maize were at their maximum in 1871, with the respective proportions of 13·54 and 5·29 per cent. of the total area. Barley, in the ratio of 2·36 per cent., was at its highest in 1889; potatoes, as already indicated, were at the minimum in the same year. Grape vines stood at the ratio of ·53 per cent. in 1889, as against ·55 in 1861; but the proportion had gone up to ·70 in 1871, and dropped to ·32 in 1881. Hay occupied almost the same position in 1889 as in 1861, the rates given being 16·19 at the earlier period, and 16·20 last year, while in 1871 the proportion had dropped down as low as 11·88.

Proportion of land under Principal Crops.

Product.	1861.	1871.	1881.	1889.
	Per cent.	Per cent.	Per cent.	Per cent.
Wheat	53·60	51·44	60·67	53·96
Oats	10·63	13·54	7·89	10·29
Maize	4·56	5·29	3·04	3·99
Barley	2·20	2·28	1·90	2·36
Potatoes	4·19	3·00	1·78	1·76
Hay	16·20	11·87	15·07	16·20
Vines	·55	·70	·32	·53
Other crops	8·07	11·88	9·33	10·91
Total	100·00	100·00	100·00	100·00

WHEAT.

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,

Wheat-producing Colonies.

a large balance for external export, which finds a ready market in Europe, where the grain of Victoria and South Australia is well and favourably known.

Progress of
wheat-growing.

The subjoined table shows the progress since 1861 of this branch of agriculture :—

Area under Wheat.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales	123,468	154,030	221,888	419,758
Victoria	196,922	334,609	926,729	1,178,735
Queensland	392	3,024	10,958	8,459
South Australia	310,636	692,508	1,768,781	1,842,961
Western Australia.....	13,584	25,697	21,951	35,517
Tasmania.....	58,523	63,332	51,757	49,055
New Zealand	29,531	108,720	365,715	335,861
Australasia	733,356	1,381,920	3,367,779	3,870,346

Production.

Colony.	1861.	1871.	1881.	1889.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales	1,606,034	2,229,642	3,405,966	6,570,335
Victoria	3,607,727	4,500,795	8,714,377	11,495,720
Queensland	5,880	36,288	39,612	134,335
South Australia	3,410,756	3,967,079	8,087,032	14,577,358
Western Australia	160,155	345,368	153,657	497,238
Tasmania.....	1,380,913	847,962	977,365	756,639
New Zealand	772,531	2,448,203	8,297,890	8,448,506
Australasia	10,943,996	14,375,337	29,675,899	42,480,131

The average production of wheat per acre for the years 1881 and 1889, and also for the decade which concluded with the last-named year, are shown in the following table. It will be seen that the year 1889 was a prolific one, giving an average produce per acre in excess of the average for the decennial period :—

Average Production of Wheat per Acre.

Colony.	1881.	1889.	Average for the ten years, 1880-89.
New South Wales	15·35	15·65	13·68
Victoria	9·43	9·73	10·01
Queensland	3·62	15·88	10·38
South Australia	4·56	7·91	6·59
Western Australia	7·00	14·00	11·94
Tasmania	18·88	15·42	17·79
New Zealand	22·68	25·15	25·09
Australasia	8·81	10·98	10·25

Average amount of wheat produced.

The average production of wheat per acre in 1889 was above the decennial average in all the Colonies except Victoria and Tasmania, but as the production of Victoria in that year was 27 per cent. of the whole, it is obvious that a reduction in the ratio of production of this province must largely affect the general rate ; hence the slight increase for Australasia which 1889 shows over the general average.

The proportion of wheat produced by each separate Colony to the total Australasian production is exemplified in the following figures :—

Wheat produced by each Colony.

Percentage of Production of Wheat in each Colony.

Colony.	1881.	1889.
New South Wales	11·48	15·47
Victoria	29·37	27·06
Queensland	·13	·32
South Australia	27·25	34·31
Western Australia	·52	1·17
Tasmania	3·29	1·78
New Zealand	27·96	19·89
Australasia	100·00	100·00

South Australia takes the lead among the seven Colonies with regard to the production of wheat, having to her credit more than one third of the total yield. Victoria comes next, with 27·06 of the gross production, but nevertheless showing a small decline since 1881; New Zealand exhibits a still greater falling-off since that date, while New South Wales shows an increase of some 4 per cent. Tasmania, in 1881, produced wheat to the extent of 3·29 of the total Australasian production, and was able to export a trifling quantity, but in 1889 that Colony only produced 1·78 per cent., and had to import wheat to the amount of 171,989 bushels.

Yield of wheat in other countries.

Compared with the majority of European countries, the yield of wheat in Australasia must appear inconsiderable, both in regard to the total quantity obtained and the produce per acre. The return from some of the chief wheat-growing countries averages as follows :—

Yield of Wheat in Other Countries.

Wheat-growing Countries.	Average produce of wheat per acre.
	Bushels.
Denmark	31·1
United Kingdom	26·9
Norway	25·1
Belgium	21·5
Holland	21·5
Manitoba	20·3
Germany	18·8
France	16·9
Austria	16·4
British Columbia	15·0
Ontario	14·1
Hungary	13·6
Italy	12·1
United States	11·7
Quebec, Nova Scotia, and New Brunswick	9·9
Russia in Europe	4·6
Australasia	10·25

Imports of wheat and flour.

The following is a statement of the imports of wheat and flour, in 1889, expressed in bushels of wheat, for each of the Austral-

asian Colonies. In using these figures it should be remembered that the season referred to was one of drought, in which the failure of the wheat crop was almost general.

Net Import and Export of Wheat and Flour for each Colony.

Colony.	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales	5,077,928	.....
Victoria .....	.....	1,486,650
Queensland	2,173,113	.....
South Australia .....	.....	3,811,872
Western Australia	193,682	.....
Tasmania	171,989	.....
New Zealand .....	.....	2,802,471
Net exports .....	.....	484,281

New South Wales, it thus appears, was the largest importer of wheat, Queensland being second, followed by Western Australia, and Tasmania. South Australia, New Zealand, and Victoria were the only exporting Colonies, the amount they had to spare being slightly above the requirements of the importing Colonies. The external imports of Australasia for the year 1889, chiefly from the United States, amounted to 972,656 bushels, and the external exports, mostly to the United Kingdom, were to the amount of 2,532,478 bushels. The following table shows the annual yield and consumption of each Colony for the ten years ending with 1889, 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.

Colony.	Annual Yield, less required for Seed.	Annual Consumption.	Annual Surplus available for Export.	Annual Deficiency to be Imported.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales.....	3,709,000	5,913,000	.....	2,204,000
Victoria	9,445,000	6,022,000	3,423,000	.....
Queensland.....	92,000	1,838,000	.....	1,746,000
South Australia .. .	8,600,000	1,962,000	6,638,000	.....
Western Australia ...	297,200	385,000	.....	87,800
Tasmania .. .	694,000	874,000	.....	180,000
New Zealand.....	7,656,000	4,172,000	3,484,000	.....
Australasia.....	30,493,200	21,166,000	9,327,200	.....

Relative
importance of
Australasian
wheat.

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 2,057 million bushels produced in 1889, only 42 million bushels, or 2.06 per cent., were of Australasian growth. The subjoined statement, based on the returns of the United States Department of Agriculture, gives the approximate crop of the world for the year mentioned:—

Wheat Crop of the World in 1889.

Countries.	Bushels.	Countries.	Bushels.
Europe—		Asia—	
Austria	42,000,000	India	243,076,549
Hungary	94,020,333	Asia Minor.....	36,887,500
Belgium	19,000,000	Persia	22,500,000
Denmark	5,000,000	Syria	12,768,750
France ..	316,268,369	Africa—	
Germany ..	82,000,000	Algeria	22,400,000
Great Britain	75,576,353	Egypt ..	7,945,000
Ireland	2,680,838	Cape Colony	3,800,000
Greece	5,000,000	North America—	
Italy	103,832,354	United States.....	490,560,000
Netherlands.....	5,675,000	Canada	31,217,494
Portugal	8,512,500	South America—	
Roumania.....	44,784,853	Argentina	11,350,000
Russia	188,535,989	Chili	12,768,750
Servia	5,000,000	Australasia	42,480,131
Spain	75,622,213		
Sweden	3,708,045		
Norway.....	283,750		
Switzerland	2,270,000	Total	2,057,249,801
Turkey	39,725,000		

Wheat crop of
the world.

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 and Canada, Consumption of wheat.

	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	5·4
Canada	6·6
Australasia	6·6

That of the Australasian Colonics will be found below :—

New South Wales.....	6·50
Victoria	6·28
Queensland.....	6·09
South Australia	6·50
Western Australia	11·00
Tasmania	6·70
New Zealand	7·56

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

During the period from 1881 to 1889 the area under wheat in Australasia increased at an annual average rate of 1·76 per cent. Surplus for export. Assuming that the same rate held good for 1890, the area cropped in that year would be 3,938,464 acres, which area, at the average rate of production for the last ten years—10·25 bushels per acre—would yield 40,369,256 bushels of wheat. Taking the population at four million souls, and the average consumption per head at 6·5 bushels, a total of 26,000,000 bushels would be required for food, in addition to 4,923,000 bushels for seed, being at the rate of 1·25 bushels per acre for 3,938,464 acres. The aggregate requirements for Australasia would thus be 30,923,000 bushels

of wheat for the year, which, deducted from the total production as above, would leave 9,446,000 bushels available for external exportation. But as the yield per acre for the present year promises to exceed the average of the last ten years, this estimate will probably be exceeded. The average production of 1889 was 10.98 bushels, and if the same average should be reached in 1890, the production for that year would be 43,244,000 bushels, which is higher than the production of any previous year except 1886 and 1887; and, indeed, even for those years the production may have been over-stated, owing to the lack of reliable figures from South Australia. A production of 43,244,000 bushels would leave a surplus for external export of 12,321,000 bushels, or about equal to the amount exported in 1888, which was the highest on record.

Increase of
Australasian
wheat culture.

Taking Australasia as a whole, the acreage under wheat has increased by about 503,000 acres since 1881. The larger proportion of the increase is due to Victoria and New South Wales. South Australia shows some slight increase, while New Zealand, on the contrary, exhibits a decline of nearly 30,000 acres. From this it will be seen that, with the exception of the farmers of Victoria, those of the other wheat-exporting Colonies show a disposition to decrease the acreage under wheat and extend the cultivation of other crops. Nor is this experience exceptional. Mr. Roper, the compiler of the "Year-Book of Canada," states that "Were it not for the British demand it is questionable whether wheat would be any longer a profitable crop beyond the limit of home consumption; and in any case one thing appears certain, that only under some unexpected and untoward circumstances can wheat ever approach in value to the price in former years." The statistician of the Department of Agriculture, United States, is of opinion that, "Western Europe alone now is left to supplement its nearly full garners with the contributions of all other countries, those of Europe included." Taking all the circumstances of the case into consideration, it is evident that any large extension

of wheat-growing cannot 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.

OATS.

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

Area under Crop.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales...	7,224	13,795	16,348	22,358
Victoria	91,061	175,944	146,995	236,496
Queensland.....	69	131	88	750
South Australia.....	1,638	3,586	3,023	10,297
Western Australia..	507	1,474	827	2,075
Tasmania	29,022	29,631	27,535	40,169
New Zealand	15,872	139,185	243,387	426,071
Australasia.....	145,393	363,746	438,203	738,216

Production.

Colony.	1861.	1871.	1881.	1889.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales...	152,426	280,887	356,566	543,330
Victoria	2,136,430	3,299,889	3,612,111	5,644,867
Queensland.....	.....	.....	1,121	14,561
South Australia	33,160	38,894	32,219	131,449
Western Australia..	8,162	28,330	8,270	41,500
Tasmania	751,475	593,477	783,129	1,148,935
New Zealand	512,665	3,726,810	6,924,848	13,673,584
Australasia.....	3,594,318	7,968,287	11,718,264	21,198,226

The following table shows the average production per acre for 1881, 1889, and the decennial period, 1880-89. It will be observed that the season of 1889 was an exceptionally good one, the averages in all cases exceeding those for the decade:—

Average production of oats.

AVERAGE PRODUCTION OF OATS.

Average Production of Oats per Acre.

Colony.	1881.	1889.	Average for the ten years, 1880-1889.
New South Wales	21·81	24·30	22·05
Victoria	24·58	23·87	22·28
Queensland	12·74	19·15	14·90
South Australia	10·69	12·76	12·50
Western Australia	10·00	20·00	17·35
Tasmania	28·44	28·60	26·61
New Zealand	28·45	32·09	31·36
Australasia	26·74	28·71	27·62

High yield of New Zealand.

For Australasia as a whole the average yield of oats for the last ten years was 27·62 bushels per acre, New Zealand, with its high average yield, furnishing 64·5 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. Large areas are, nevertheless, sown for hay.

Average yield in principal countries.

The average yield in the principal countries of the world where oats are extensively grown is as follows:—

Average Produce of Oats per Acre.

	Bushels.
Holland	42·1
Belgium	41·8
Norway	39·7
United Kingdom	37·7
Denmark	32·3
France	26·0
United States of America	26·0
Germany	21·9
Austria	20·9
Hungary	20·2
Italy	19·3
Russia	12·3
Cape of Good Hope	8·1
Australasia	27·6

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

Proportion of oats grown by each Colony.

Percentage of Production of Oats in each Colony.

Colony.	1881.	1880.
New South Wales	3·05	2·56
Victoria	30·82	26·63
Queensland	·01	·07
South Australia	·27	·62
Western Australia	·07	·20
Tasmania	6·68	5·42
New Zealand	59·10	64·50
Australasia	100·00	100·00

The net import or export of oats for each of the Colonies was :—

Import and export of oats.

Imports and Export of Oats.

Colony.	Oats.	
	Net imports.	Net exports.
	Bushels.	Bushels.
New South Wales	882,479	.....
Victoria.....	1,231,974	.....
Queensland	181,829	.....
South Australia	51,254	.....
Western Australia	53,320	.....
Tasmania .....	.....	267,506
New Zealand .....	.....	2,655,893
Net Exports.....	.....	522,543

MAIZE.

Maize is the principal crop grown in Queensland, and is one of the most important products of New South Wales; it is not cultivated to a great extent in any of the other Colonies.

The following figures disclose the progress made in the cultivation of this cereal since 1861:—

AREA AND PRODUCTION OF MAIZE.

Cultivation of Maize.

Area.

Colony.	1861.	1871.	1881.	1880.
	Acres.	Acres.	Acres.	Acres.
New South Wales...	57,959	119,956	117,478	173,836
Victoria	1,714	1,709	1,783	8,447
Queensland	1,914	20,329	46,480	97,698
New Zealand	770	.....	3,177	6,253
Other Colonies	91	113	36	80
Australasia	62,448	142,107	168,954	286,314

Production.

Colony.	1861.	1871.	1881.	1889.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales...	1,727,434	4,015,973	4,330,956	5,354,827.
Victoria	20,788	30,833	81,007	357,047
Queensland	42,100	508,000	1,313,655	1,743,051
New Zealand	31,570	.....	127,257	270,282
Other Colonies	367	2,000	648	1,200
Australasia	1,822,259	4,556,806	5,853,523	7,726,407

Rate of production of Maize.

The following is the average rate of production of each Colony, and of the whole group for 1881, 1889, and the decade ended with the last-mentioned year :—

Average Production of Maize per Acre :—

Colony.	1881.	1889.	Average for ten years, 1880-89.
New South Wales	36·86	30·80	31·73
Victoria	45·43	42·27	45·10
Queensland	28·26	17·84	23·92
Western Australia.....	18·00	15·00	*15·51
New Zealand	40·05	43·22	*41·83
Australasia	34·64	26·98	29·62

* Last three years.

Although the table shows a high rate of production for Victoria and New Zealand, it must be remembered that the quantity of maize produced in those Colonies is exceedingly small. The following are the rates of production for this cereal in other countries :—

Average Maize Production in other Countries.

Country.	Acreage, per acre.	Country.	Acreage, per acre.
Austria	16·0	United States.....	23·5
Italy	20·0	Australasia.....	29·6
Portugal	25·0		
Spain	25·0		

The proportion of the total Australasian yield of maize grown by each Colony in 1881 and 1889, was :—

Proportion of Maize grown by each Colony.

Percentage of Maize Production of each Colony.

Colony.	1881.	1889.
New South Wales	73·99	69·30
Victoria	1·38	4·62
Queensland	22·45	22·56
Western Australia.....	·01	·02
New Zealand	2·17	3·50
Australasia.....	100·00	100·00

The net import or export of maize for each Colony during 1889 was :—

Imports and Exports of Maize.

Imports and Exports of Maize.

Colony.	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales .....	.....	128,403
Victoria	185,630	.....
Queensland	216,138	.....
South Australia	2,006	.....
Western Australia.....	7,060	.....
Tasmania	1,219	.....
New Zealand .....	.....	92,668
Net imports.....	190,982	.....

BARLEY.

Barley.

Barley is not cultivated to the extent it deserves, as the sub-joined table shows:—

Area.

Colony.	1861.	1871.	1881.	1880.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	2,924	3,461	6,427	5,440
Victoria	3,419	16,772	48,652	90,724
Queensland.....	13	971	256	1,254
South Australia.....	10,637	17,225	11,953	19,679
Western Australia	2,412	5,083	3,679	5,475
Tasmania	7,279	4,275	4,597	4,446
New Zealand	3,457	13,305	29,808	42,402
Australasia.....	30,141	61,092	105,372	169,420

Production.

Colony.	1861.	1871.	1881.	1880.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales.....	41,054	55,284	135,218	113,109
Victoria	68,118	335,506	927,566	1,831,132
Queensland.....	158	11,836	3,207	26,630
South Australia.....	168,137	164,161	137,165	246,841
Western Australia	2,412	5,083	36,790	93,075
Tasmania	169,381	76,812	102,475	105,574
New Zealand	96,658	287,646	664,093	1,342,823
Australasia.....	545,918	936,328	2,006,514	3,759,184

The average production of barley per acre for each Colony is given in the following table for 1881, 1889, and for the decade 1880-89:—

Production of Barley.

Average Production of Barley per Acre.

Colony.	1881.	1889.	Average for ten years, 1880-89.
	Bushels.	Bushels.	Bushels.
New South Wales	21·04	20·79	19·77
Victoria	19·06	20·18	18·37
Queensland	12·53	21·23	12·19
South Australia	11·47	12·54	12·31
Western Australia	10·00	17·00	15·04
Tasmania	22·29	23·74	23·53
New Zealand	22·28	31·67	27·96
Australasia	19·04	22·19	20·54

These figures show that the yield of barley was exceptionally good in 1889 for all the Colonies—better in every case than the decennial average. 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 nearly 36 per cent. of the total Australasian yield, while Victoria produces 48·71 per cent., or nearly one-half. The figures appended show the proportion produced by each Colony in 1881 and in 1889:—

Large yield of barley in 1889.

Percentage of Production of Barley in each Colony.

Colony.	1881.	1889.
New South Wales	6·74	3·01
Victoria	46·23	48·71
Queensland	·16	·71
South Australia	6·83	6·57
Western Australia	1·83	2·47
Tasmania	5·11	2·81
New Zealand	33·10	35·72
Australasia	100·00	100·00

IMPORTS AND EXPORTS OF BARLEY.

The average production of barley per acre for some of the principal producing countries of the world is as follows :—

Production of Barley in other Countries.

Country.	Average produce of barley per acre.	Country.	Average produce of barley per acre.
	Bushels.		Bushels.
Austria	17·5	Italy	9·9
Belgium	56·0	Norway	31·0
Denmark	29·8	Russia	7·3
France	20·3	United Kingdom	31·1
Germany	24·1	United States.....	20·7
Holland.....	39·5		
Hungary	14·2	Australasia.....	20·5

Imports and exports of barley.

The net import or export of barley for each Colony for the year 1889 was :—

Import and Export of Barley.

Colony.	Barley.	
	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales	103,803	.....
Victoria	359,392	.....
Queensland	13,132	.....
South Australia	20,195	.....
Western Australia.....	5,220	.....
Tasmania .....	.....	1,210
New Zealand .....	.....	494,669
Net Imports.....	5,863	.....

New Zealand and Tasmania, and the latter to a very small extent, are the only Colonies that are able to produce sufficient barley for home requirements, and have a surplus left for exportation. It is remarkable that, while Victoria produced nearly 49 per cent. of the whole Australasian yield of barley in 1889 and New South Wales only 3 per cent., Victoria imported this cereal to the amount of 359,392 bushels, while New South Wales only required to import to the extent of 103,803 bushels.

The explanation of this seeming anomaly will probably be found in the Victorian high import duty on malt, which practically prohibits the importation of that article, and necessitates its manufacture from barley in the Colony.

POTATOES.

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

Area.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	10,040	14,770	15,943	17,551
Victoria	27,174	39,064	39,129	47,139
Queensland	512	3,121	5,086	7,185
South Australia.....	2,612	3,156	6,136	6,383
Western Australia	277	494	278	462
Tasmania	9,349	8,154	9,670	17,015
New Zealand	7,292	11,933	22,540	30,577
Australasia	57,256	80,692	98,782	126,312

Production.

Colony.	1861.	1871.	1881.	1889.
	Tons.	Tons.	Tons.	Tons.
New South Wales.....	30,942	44,758	44,323	50,096
Victoria	59,364	125,841	134,290	157,104
Queensland.....	1,080	6,585	11,984	25,889
South Australia.....	7,726	10,989	18,154	23,853
Western Australia	817	1,457	556	1,386
Tasmania	47,428	22,608	33,565	72,275
New Zealand..	37,554	42,130	121,890	159,720
Australasia	184,911	254,368	364,762	490,323

FOREIGN PRODUCTION OF POTATOES.

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 years 1881 and 1889, as well as the average for the ten years which ended with 1889. New Zealand, it will be seen, shows a considerably larger return per acre than any of the other Colonies :—

Average Production of Potatoes for each Colony.

Colony.	1881.	1889.	Average for the 10 years, 1880- 1889.
	Tons.	Tons.	Tons.
New South Wales	2·78	2·85	2·70
Victoria	3·43	3·33	3·05
Queensland	2·36	3·60	* 2·11
South Australia	2·96	2·94	3·30
Western Australia	2·00	3·00	2·95
Tasmania	3·47	4·25	3·98
New Zealand	5·41	5·22	5·15
Australasia	3·69	3·88	3·83

* For six years.

The average production of potatoes for other countries was :—

Country.	Average produce of Potatoes per acre.	Country.	Average produce of Potatoes per acre.
	Tons.		Tons.
Austria	2·3	Italy	2·5
Brazil	3·7	Russia	3·0
Canada	3·0	Spain.....	2·5
France	3·0	United Kingdom ...	3·5
Germany	3·1	United States	1·9
Holland	3·7	Australasia	3·8

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 increased their ratio of production, while New South Wales and Victoria exhibit a decline :—

Percentage of Production of Potatoes in each Colony.

Colony.	1881.	1889.
New South Wales	12·15	10·22
Victoria	36·82	32·04
Queensland	3·28	5·28
South Australia	4·98	4·87
Western Australia	·15	·28
Tasmania	9·20	14·74
New Zealand	33·42	32·57
Australasia	100·00	100·00

Only three of the Colonies are in a position to export potatoes. Of these Tasmania stands first, with a surplus nearly twice that of New Zealand, which ranks second, while Victoria, in the third place, has little over 7,000 tons to send away. New South Wales and Queensland are the chief importers :—

Imports and exports of potatoes.

Imports and Exports of Potatoes.

Colony.	Net Imports.	Net Exports.
	Tons.	Tons.
New South Wales	48,941	.....
Victoria .....	.....	7,195
Queensland	17,262	.....
South Australia	1,557	.....
Western Australia	808	.....
Tasmania .....	.....	41,381
New Zealand .....	.....	21,596
Net Exports.....	.....	1,604

HAY.

Hay.

Considerable quantities of wheat, oats, and barley are grown for the purpose of being converted into hay. The average under crop for hay has of late years steadily and largely increased, as will be seen from the table herewith—

Area under Hay.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	45,175	51,805	146,610	212,106
Victoria	74,681	103,206	212,150	451,546
Queensland.....	280	3,828	16,926	45,617
South Australia	62,874	97,812	333,467	329,643
Western Australia	6,676	*14,342	24,445	25,694
Tasmania.....	31,803	31,578	34,790	50,913
New Zealand	†27,160	30,717	68,423	45,889
Australasia.....	248,649	333,288	836,811	1,161,408

* In 1869.

† In 1867.

Production.

Colony.	1861.	1871.	1881.	1889.
	Tons.	Tons.	Tons.	Tons.
New South Wales.....	57,363	77,460	198,532	366,229
Victoria	92,497	144,637	238,793	666,385
Queensland.....	459	6,278	19,640	88,172
South Australia.....	78,886	98,266	240,827	395,920
Western Australia	6,609	14,288	24,445	25,694
Tasmania	59,851	30,891	44,957	73,859
New Zealand	36,666	35,674	89,081	65,476
Australasia.....	332,331	407,494	856,275	1,681,735

Production of hay.

The average production of hay per acre for each Colony will be found in the next table for the years 1881 and 1889, as well as for the decade ended with the last-mentioned period :—

Average Production of Hay per Acre.

Colony.	1881.	1889.	Average for the years 1880-9.
	Tons.	Tons.	Tons.
New South Wales	1·35	1·72	1·36
Victoria	1·12	1·47	1·17
Queensland	1·16	1·83	1·64
South Australia	·72	1·20	1·08
Western Australia	1·00	1·00	·99
Tasmania	1·29	1·47	1·23
New Zealand	1·30	1·42	1·35
Australasia	1·02	1·44	1·20

Victoria, New South Wales, 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 :—

Percentage of Production of Hay by each Colony.

Colony.	1881.	1889.
New South Wales	23·19	21·78
Victoria	27·89	39·63
Queensland	2·29	5·24
South Australia	28·13	23·54
Western Australia	2·85	1·53
Tasmania	5·25	4·39
New Zealand	10·40	3·89
Australasia	100·00	100·00

Imports and exports of hay.

The net import or export of hay for each Colony for the year 1889 was :—

Imports and Exports of Hay.

Colony.	Net Imports.	Net Exports.
	Tons.	Tons.
New South Wales	51,998	.....
Victoria .....	.....	20,636
Queensland	1,491	.....
South Australia .....	.....	23,015
Western Australia	268	.....
Tasmania .....	.....	9,423
New Zealand .....	.....	1,864
Net exports .....	.....	1,181

THE VINE.

The grape vine.

The history of the vine in these Colonies dates from the year 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. Through sustained efforts on the part of the growers the wines of Australia have obtained a large and increasing foreign sale, apart from local consumption. The climate and soil of Australia are peculiarly adapted to the successful cultivation of the vine, and a marked expansion of the wine trade may be confidently expected.

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 1889, 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 nearly fourteen times :—

AREA CULTIVATED WITH VINES.

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Australian Wine Trade with Europe

Colony.	1881.		1880.	
	Quantity.	Value.	Quantity.	Value.
	Galls.	£	Galls.	£
New South Wales	13,271	3,520	26,466	5,492
Victoria	5,588	2,341	147,749	28,573
Queensland	124	60	2,438	879
South Australia	2,859	580	123,168	25,860
Western Australia .....	.....	.....	160	40
Australasia.....	21,842	6,501	301,981	60,844

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 :—

Progress of vine cultivation.

Areas under Cultivation with Vines.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales	1,692	6,618	6,624	11,470
Victoria	1,464	5,523	4,923	15,662
Queensland	40	568	1,212	2,418
South Australia.....	3,918	5,455	4,202	7,352
Western Australia	457	692	527	1,088
Australasia	7,571	18,856	17,488	37,990

The wine-growing industry has, therefore, passed from an experimental to a permanent stage. The production of wine and table grapes for the years specified was :—

Production of Wine and Table Grapes.

Colony.	1861.		1871.		1881.		1889.	
	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	513,688	1,103	688,685	2,951
Victoria	47,568	849	713,589	1,545	539,191	740	1,578,590	2,971
Queensland .. . . . . . . . . . .	.....	.....	.....	.....	72,121	255	164,626	874
South Australia	312,021	1,161	852,315	1,692	313,060	1,498	510,674	4,023
Western Australia .. . . . . . . . . . .	.....	.....	.....	.....	99,600	.....	205,632	.....
Australasia	444,917	2,234	1,979,225	3,745	1,537,660	3,596	3,148,207	10,819

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 :—

Production of Wine in other Countries.

Country.	Production in million gallons.	Country.	Production in million gallons.
Australia	3	Roumania	18
Austria	92	Russia	92
Algeria	72	Servia	53
Cape Colony	5	Spain	608
France	795	Switzerland	29
Greece	46	Turkey and Cyprus	69
Hungary	185	United States	32
Italy	798		
Portugal	132	Total	3,029

The average production for New South Wales, calculated on the yields for 29 years, amounts to 204·52 gallons per acre—the maximum being 262·96, and the minimum 144·83. The average for Queensland and New South Wales for the last ten years has been computed at 231·20 and 202·37 gallons per acre respectively. It is impossible to tabulate the averages of all the various 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.

The quantity of wine produced and exported by each Colony in the years 1881 and 1889 is shown below. The figures include those given on page 101 :—

Australasian Export of Wine.

Colony.	1881.		1889.	
	Gallons.	£	Gallons.	£
New South Wales.....	22,377	7,233	58,378	19,167
Victoria	12,544	5,388	159,114	33,240
Queensland.....	124	60	2,457	891
South Australia.....	57,812	12,879	180,135	44,870
Western Australia			160	40
Australasia.....	92,857	25,560	400,244	98,208

AREA AND PRODUCTION OF TOBACCO.

The average production in gallons per acre for other countries, in comparison with Australia, is shown by the following figures:—

Production of Wine per Acre.

Country.	Average produce of wine per acre.
	Gallons.
Algeria	176
Argentine Republic.....	160
Austria	196
France	140
Germany ..	230
Italy	125
Portugal	190
Russia	170
Spain	118
South Africa.....	220
United States	160
New South Wales	202
Queensland	231
Western Australia	160

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	2,047	220	2,552	..	.. .....	444	5,199
1871	567	4,475	209	2,307	44	.....	910	6,782
1881	1,625	18,311	1,461	12,876	68	521	3,154	31,708
1889	3,239	27,724	955	4,123	266	2,531.	4,400	34,378

The average production of tobacco per acre for 1889, and for the ten years from 1880 to 1889, was :—

Average Production per Acre.

Colony.	Average for 1889.	Average for 1880 to 1889.
New South Wales	Cwt. 8·56	Cwt. 10·71
Victoria	4·32	6·75
Queensland	9·52	8·73
Australasia	7·73	9·03

The average production for other countries, compared with Australasia, was :—

Production of Tobacco in other countries.

Country.	Average Produce per acre.
Austria	Cwt. 9·2
Brazil	7·2
France	11·6
Germany	12·2
Japan	8·0
Russia	13·6
United States	6·4
Australasia	5·0

Tobacco requires much care and attention while in the field, as well as skill and experience in the preparation of the leaf for market. In New South Wales the cultivation of tobacco is chiefly in the hands of Chinese, who, probably, are deficient in their curing processes, for, although the soil is well suited to tobacco, Colonial leaf is inferior to that of American growth, and cannot, therefore, be exported at paying prices. In 1888 there were in New South Wales 4,833 acres, and in Victoria 1,685 acres cropped with tobacco, producing respectively 55,478 cwt. and 13,355 cwt. of leaf—a quantity largely in excess of local requirements. Consequently the tobacco sold to the manufacturers realised very low

Cultivation of tobacco.

prices, and a large portion of the crop remained on the growers' hands. The result was that many farmers abandoned the growing 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 Queensland, on the other hand, the acreage increased from 123 acres in 1888 to 266 acres in 1889, and the production increased from 1,418 to 2,531 cwt. of leaf. 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.

Importation of tobacco and cigars.

The following table shows the net importation of tobacco, cigars, and cigarettes into Australasia for the year 1889 :—

Net Import of Tobacco, Cigars, and Cigarettes, 1889.

Colony.	Quantity.
	lb.
New South Wales	1,432,005
Victoria	2,466,184
Queensland	1,351,406
South Australia	523,098
Western Australia	180,760
Tasmania	310,338
New Zealand ..	1,266,293
Australasia	7,530,084

SUGAR CANE.

Sugar cane.

The growth of the cane and manufacture of sugar are important 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 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.

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

	1864.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales	22	4,394	12,167	18,730
Queensland	94	9,581	28,026	49,741
Total	116	13,975	40,193	68,471

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.

Progress of
sugar-growing.

The progress made in sugar-growing during the last six years is illustrated by the following figures :—

	1884.	1885.	1886.	1887.	1888.	1889.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales ...	17,517	16,418	15,117	15,287	15,281	18,730
Queensland	57,687	59,186	54,010	51,815	47,340	49,741
Total.....	75,204	75,604	69,127	67,102	62,621	68,471

It will be noticed that the area under cane in New South Wales was greater in 1884 than in any subsequent year till 1889, and that a considerable and continuous decline in the Northern Colony

Area undercane.

is observable since 1885. This retrogression was owing to a fall in the price of sugar, joined to the difficulties surrounding the labour question. New South Wales was affected to some extent by the decline in price of the manufactured article, but the prospects of the industry are now thought to be fairly good.

The area given includes all the cane planted, whether cut during the year or not, for sugar-cane is generally cut every alternate year. The following table shows the acreage actually cut during the last six years :—

Acreage of cane actually cut.

	1884.	1885.	1886.	1887.	1888.	1889.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales ...	6,997	9,583	5,915	8,380	4,997	7,348
Queensland	29,930	38,557	34,657	36,806	32,375	29,438
Total.....	36,927	48,140	40,572	45,186	37,372	36,786

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.

Quantity of sugar produced.

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

	1884.	1885.	1886.	1887.	1888.	1889.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales ...	11,500	18,464	13,750	22,500	11,279	19,016
Queensland	33,361	55,796	58,545	60,806	34,659	40,169
Total	44,861	74,260	72,295	83,306	45,938	59,185

The figures in the foregoing are from the returns made by the growers in each Colony. So far as Queensland is concerned, it is probable they considerably understate the truth, and are, therefore, given simply for what they are worth.

The net imports of sugar by each Colony for 1889 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 24,094 tons, valued at £439,517, which was mostly exported to the other Colonies, only 303 tons, having been for foreign export :—

Net imports of Sugar.

	Intercolonial and Foreign Imports.	
	Quantity.	Value.
	Tons.	£
New South Wales	40,338	851,320
Victoria	48,971	859,696
South Australia	12,480	280,542
Western Australia	2,300	69,015
Tasmania	5,532	117,457
New Zealand	24,433	350,228
Australasia	134,054	2,528,258

The foregoing figures include the Queensland export of 24,094 tons mentioned above, the import from abroad was, therefore, 109,960 tons, of which only 104,782 can be traced to the original country of shipment, viz. :—

Australasian Import of Sugar from abroad.

Country.	Quantity.
	Tons.
Mauritius	33,201
Fiji	30,509
Java	15,109
Hong Kong	7,842
Other countries	18,121
Total	104,782

SOWN GRASSES.

Artificial grasses. The cultivation of permanent, sown grasses, commonly called "artificial," is principally confined to districts where dairy-farming is carried on. The area grassed in this way for the years 1881 and 1889, and the increase per cent. for each Colony were :—

	1881.	1889.	Increase per cent.
	Acres.	Acres.	
New South Wales	75,825	217,403	186·72
Victoria	241,947	149,616	38·16*
Queensland	8,565	16,120	88·21
South Australia	16,438	28,331	72·35
Western Australia .....	.....	.....	.....
Tasmania	136,321	190,717	39·90
New Zealand	3,869,646	6,479,160	67·43
Australasia	4,348,742	7,081,347	62·83

* Decrease.

All the Colonies are rapidly extending this kind of cultivation, with the exception of Victoria. New South Wales has increased her area of sown grasses by 186·72 per cent. ; New Zealand has placed over 2,800,000 acres under grass, during eight years, while in Queensland and South Australia the area has been largely increased.

Condition of
Agriculture in
the Colonies.

Notwithstanding the rapid advance made in some of the Colonies in the cultivation of certain crops, it must be allowed that, speaking generally, agriculture in the 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.

IRRIGATION.

Owing to the irregular character of the rainfall in the interior of the continent, irrigation is absolutely necessary to ensure successful husbandry ; and as it has been demonstrated that the irrigation of vast areas in the vicinity of the Murray, Murrumbidgee, Lachlan, and Darling Rivers can be readily effected, the question of carrying out a comprehensive scheme is now seriously entertained by the Government of New South Wales. Victoria, and South Australia were the first to offer facilities for irrigation on a large scale. Necessity for irrigation.

A few years ago a special Act was passed by the Victorian 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 a population of 2,500. The promoters have expended about £200,000 on the scheme, in compliance with the requirements of the Act, and have thus become entitled to the freehold of 40,000 acres, holding the balance of the 250,000 acres on lease. Mildura.

Some time later the South Australian Government also entered into a contract with this firm, An area of 250,000 acres, situated at Renmark, 134 miles E.N.E. of Adelaide, was set apart for irrigation purposes. On this land the Messrs. Chaffey have, so far, expended about £75,000, and although Renmark has not progressed so rapidly as Mildura, it promises in time to become an important settlement. Renmark.

Mulgoa.

The same firm now intends to commence operations in New South Wales under even greater promises of success, if possible, than at Mildura. An area of from 16,000 to 18,000 acres, in the Mulgoa district, has been purchased at an average price, it is said, of about £10 per acre. 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, £150,000 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. A general Irrigation Bill for New South Wales may be expected to be passed at an early date, as there is scarcely any subject which deserves the more immediate attention of the Legislature, or one on the careful treatment of which the future of Australia so much depends.