

PASTORAL RESOURCES AND DAIRY INDUSTRY.

NOTWITHSTANDING the fact that the soil, climate, and indigenous herbage of Australasia are admirably adapted to the sustenance of animal life, no attempt was made to test the capabilities of the land as a feeding-ground for flocks and herds on a large scale until the example of Captain Macarthur had demonstrated beyond doubt that Nature favoured the production in Australasia of a quality of wool which was unsurpassed by that grown in any part of the world. Then the settlers began to understand and utilise the natural resources of the country; and as the indomitable spirit of exploration gradually opened up the apparently boundless plains of the interior, pastoralists extended their domain, and sheep and cattle in increasing numbers spread over the face of eastern Australia. Now the expansion of the pastoral industry is gradually converting the central and western portions of the continent into holdings devoted to the production of the greatest element of the wealth of Australasia.

The beginnings of pastoral enterprise in Australia were very humble. The live stock of the community which accompanied Captain Phillip comprised only 1 bull, 4 cows, 1 calf, 1 stallion, 3 mares, 3 foals, 29 sheep, 12 pigs, and a few goats; and although the whole of the present flocks and herds of Australasia have not sprung from these animals alone, yet the figures show the small scale on which the business of stock-raising was first attempted. No systematic record of the arrival of stock seems to have been kept in the early days of settlement; but it would appear that during the period between Governor Phillip's landing and the year 1800 there were some slight importations, chiefly of sheep from India. In 1800 the stock in Australasia comprised 6,124 sheep, 1,044 cattle, 203 horses, and 4,017 swine; while at the end of the year 1899 there were in these colonies no less than 93,645,309 sheep, 11,049,065 cattle, 1,932,247 horses, and 1,180,896 swine.

The following figures give the number of stock in Australasia at various dates up to 1851:—

Year.	Sheep.	Cattle.	Horses.	Swine.
1792.....	105	23	11	43
1800.....	6,124	1,044	203	4,017
1810.....	33,818	11,276	1,114	8,992
1821.....	290,158	102,939	4,564	33,906
1842.....	6,312,004	1,014,833	70,615	66,086
1851.....	17,326,021	1,921,963	166,421	121,035

The increase in the number of each kind of live stock since the year 1861 is illustrated in the following table :—

Year.	Sheep.	Cattle.	Horses.	Swine.
1861.....	23,741,706	4,039,839	459,970	362,417
1871.....	49,773,584	4,713,820	782,558	737,477
1881.....	78,063,426	8,709,628	1,249,765	903,271
1891.....	124,547,937	11,861,330	1,785,835	1,154,553
1899.....	93,645,309	11,049,065	1,932,247	1,180,896

The average number of sheep, cattle, horses, and swine per head of the population of Australasia at the same periods was as follows :—

Year.	Sheep.	Cattle.	Horses.	Swine.
1861.....	18·8	3·2	0·4	0·3
1871.....	25·3	2·4	0·4	0·4
1881.....	27·7	3·1	0·4	0·3
1891.....	31·8	3·0	0·5	0·3
1899.....	21·0	2·5	0·4	0·3

It will be seen that in 1861 there were 18·8 sheep for every person in Australasia, and that this number had increased to 31·8 in 1891. In 1899, however, in consequence of the continued dry seasons, and the demands made upon the flocks for the export trade, the average number had fallen to 21·0 per inhabitant. During the thirty-nine years the average number of cattle depastured diminished from 3·2 to 2·5 per head. The breeding of horses and swine has about kept pace with the population.

SHEEP.

The suitability for pastoral pursuits of the land discovered in the early days was undoubtedly the means of inducing the infant colony of New South Wales to take its first step on the path of commercial progress, and, looking backward, it is not a little surprising to find how steadily some of the settlers, in the face of the almost insurmountable difficulty of transport which existed a century ago, availed themselves of the opportunities at their disposal. The importation of valuable specimens of sheep from England or the Cape of Good Hope prior to the introduction of steam was at all times attended with great risk, and it frequently happened that many of these costly animals died during the tedious voyage. These enterprises were, however, on the whole successful, and thus the flocks and herds of the colonists surely, if at first slowly, increased and multiplied.

By the year 1795, Captain Macarthur, one of the first promoters of sheep-breeding in New South Wales, had accumulated a flock of 1,000, which were held in great estimation, and gradually increased in value

until, as recorded by an entry in his journal ten years later, the market price of a fat wether had risen to £5. Not satisfied with the natural increase of his flocks, Macarthur sought to improve the quality of his fleeces, by which means he could see opening before him the promise of great wealth and the prospect of establishing important commercial relations with Great Britain. With these ends in view, he procured from the Cape of Good Hope, at great cost and trouble, a number of superior rams and ewes. A happy circumstance favoured his enterprise; for he had the good fortune to secure three rams and five ewes of very fine Spanish breed, which had been presented by the King of Spain to the Dutch Government. These animals, out of a total of twenty-nine purchased at the Cape, arrived in Sydney in 1797, and were disposed of to various breeders. With the exception of Macarthur, however, those who had secured sheep of the superior breed made no attempt to follow up this advantage, being probably amply satisfied with the larger gains from the sale of an increased number of animals. Macarthur, on the other hand, thought little of present profits, and still less of breeding entirely for human consumption. He attentively watched the results of crossing his imported rams with the old stock, and by systematically selecting the finer ewes which were the offspring for further mingling with the sires, he gradually improved the strain, and in a few years obtained fleeces of very fine texture which met with the ready appreciation of English manufacturers. It has been asserted that Macarthur was not the first to introduce merino sheep into Australia; but whether this be so or not, there is no doubt that to him is due the credit of having been the first to prove that the production of fine wool could be made a profitable industry in New South Wales.

Prior to the present century the production of the finest wool had been confined chiefly to Spain, and woollen manufactures were necessarily carried on in England upon a somewhat limited scale, which was not likely to improve in face of certain restrictions which the operatives endeavoured to place upon their employers. These men, in support of their contention that the woollen trade could not be expanded on account of the limited supply of raw material, argued that fine wool was obtainable only in Spain; and it was at this favourable period that Macarthur arrived in England with specimens of the wool obtained from his finest sheep, conclusively proving the capabilities of Australia as a wool-producing country. In this way he opened up with English manufacturers a small trade which, as Australasian wool rose in public estimation, gradually increased until it reached its present enormous dimensions. During his visit to England, Macarthur purchased an additional stock of ten rams and ewes of the noted Spanish breed, nearly equal in quality to those which in 1797 he had procured from the Cape of Good Hope. That these animals were the finest obtainable in Europe may be gathered from the fact they also had formed portion of a present from the King of Spain to George III. After his return to New South Wales, Macarthur patiently continued for many years the process of selection, with such

success that in 1858, when his flock was finally dispersed, it was estimated that his superior ewes numbered fully 1,000. Victoria secured a considerable portion of his flock, and the process of breeding proceeded simultaneously in that and other adjacent colonies.

Although the increase in the numbers of the finer sheep was satisfactory, yet the importation of superior stock was not discontinued, and the stock of the colonies was augmented in 1823 and 1825 by the further introduction of Spanish sheep. Sheep-breeding was about this period commenced in the Mudgee district of New South Wales; the climate of that region had a more favourable effect upon the quality of the fleeces than that of any other part of the colony, and it was thence that the finest merinos were for a long time procured. As was to be expected, the climate has in some respects changed the character of the Spanish fleece. The wool has become softer and more elastic, and while it has diminished in density it has increased in length, so that the weight of the fleece has only slightly altered. Thus, on the whole, the quality of the wool has improved under the beneficial influence of the climate, and if no further enhancement of its intrinsic value can be reasonably hoped for, there is at least every reason to believe that Australasian wool will maintain its present high standard of excellence.

The following table shows the number of sheep in each colony at intervals of ten years since 1861, and at the end of 1899. In Victoria no live stock returns have been collected since 1894, and the figures for that colony in the last column, therefore, refer to that year:—

State.	Number of Sheep.				
	1861.	1871.	1881.	1891.	1899.
New South Wales...	5,615,054	16,278,697	36,591,946	61,831,416	36,213,514
Victoria	6,239,258	10,002,381	10,267,265	12,928,148	13,180,943
Queensland	4,093,381	7,403,334	8,292,883	20,289,633	15,226,479
South Australia	3,038,356	4,412,055	6,810,856	7,745,541	5,721,493
Western Australia..	279,576	670,999	1,267,912	1,962,212	2,282,306
Tasmania	1,714,498	1,305,489	1,847,479	1,662,801	1,672,068
Commonwealth ...	20,980,123	40,072,955	65,078,341	106,419,751	74,296,803
New Zealand... ..	2,761,583	9,700,629	12,985,085	18,123,186	19,348,506
Australasia.....	23,741,706	49,773,584	78,063,426	124,547,937	93,645,309

In Tasmania alone has the business of sheep-breeding decreased since 1861; yet the colony is singularly well adapted for sheep-raising, and its stud flocks are well known and annually drawn upon to improve the breed of sheep in the other colonies. In all the other provinces there has been a material increase in the number of sheep depastured, but more especially in New Zealand, Queensland, and West Australia.

In South Australia the area adapted to sheep is limited, and no great expansion in sheep-farming can be looked for. As regards Victoria, the important strides made by that province in agriculture and kindred pursuits afford sufficient explanation of the slow rate at which its flocks are increasing. The statement given below shows, for 1899, the proportion of sheep in each colony to the total flocks of Australasia. New South Wales, with 38·67 per cent. of the total flock, comes first, and New Zealand, with 20·66 per cent., second, while Queensland, with 16·26 per cent., and Victoria, with 14·07 per cent., are next in order. The other three provinces together possess only a little over 10 per cent. of the whole.

State.	1899.
	per cent.
New South Wales	38·67
Victoria	14·07
Queensland	16·26
South Australia	6·11
Western Australia	2·44
Tasmania	1·79
New Zealand	20·66
Australasia	100·00

In order to show the increase or decrease in sheep during the last fifteen years, the following table has been prepared, giving the numbers in the various colonies at the end of each year since 1885. It will be seen that returns were not collected in some years in Victoria, South Australia, and New Zealand, and that the figures for those provinces are therefore incomplete:—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1885	37,820,906	10,681,837	8,994,322	*	1,702,719	1,648,627	16,564,595
1886	39,169,304	10,700,403	9,690,445	*	1,809,071	1,609,046	*
1887	46,965,152	10,623,985	12,926,153	*	1,909,940	1,547,242	*
1888	46,563,469	10,818,575	13,444,005	*	2,112,392	1,430,065	15,468,800
1889	50,106,768	10,882,281	14,470,095	6,432,401	2,366,681	1,551,429	15,503,263
1890	55,986,431	12,692,843	18,007,234	7,050,544	2,524,913	1,619,256	18,128,136
1891	61,881,416	12,928,148	20,289,633	7,745,541	1,962,212	1,664,218	18,570,752
1892	58,080,114	12,965,306	21,708,310	7,209,500	1,685,500	1,623,338	19,380,369
1893	56,980,688	13,098,725	18,697,015	7,325,003	2,200,642	1,585,047	20,230,829
1894	56,977,270	13,180,943	19,587,091	*	2,132,311	1,727,290	19,826,604
1895	47,617,687	*	19,856,050	*	2,295,832	1,523,846	19,138,493
1896	48,318,790	*	19,593,696	6,402,593	2,248,076	1,650,567	19,687,954
1897	49,952,897	*	17,797,883	5,092,078	2,210,742	1,578,611	19,673,725
1898	41,241,004	*	17,552,603	5,076,696	2,251,548	1,493,638	19,348,506
1899	36 213 514	*	15,226,479	5,721,493	2,382,306	1,672,068	19,347,346

* Returns not collected.

The number of sheep in Australia was at its maximum in 1891, every year since then showing a large decrease from the one preceding. New South Wales, however, was responsible for the greater part of the decline, the flocks of the colony being reduced in eight years by 25,617,902. Very large decreases have also taken place in the flocks of Queensland and South Australia. In the other provinces the numbers have been practically stationary for many years.

The total number of sheep (including lambs) slaughtered in the various colonies during the five years ended 1899 is shown below. In South Australia and New Zealand no slaughtering returns are made, while the figures for Tasmania refer to the numbers killed in Hobart and Launceston only.

Year.	New South Wales.	Victoria.	Queensland.	Western Australia.	Tasmania (Hobart and Launceston.)
1895	8,363,003	2,326,002	.....	.....	104,315
1896	6,196,749	2,559,088	1,726,125	420,952	102,266
1897	5,790,103	2,434,519	1,902,735	505,091	107,223
1898	5,665,763	2,352,694	1,262,313	433,867	104,303
1899	4,795,259	.....	1,497,546	.....	93,913

The value of the sheep depastured in Australasia, on the basis of the average prices ruling in 1899, was £45,811,000, thus distributed among the various provinces:—

	£
New South Wales	14,985,000
Victoria	6,067,000
Queensland	6,661,000
South Australia	2,503,000
Western Australia.....	1,150,000
Tasmania	900,000
Commonwealth	32,266,000
New Zealand	13,545,000
Australasia	£45,811,000

CATTLE.

Except in Queensland, cattle-breeding in the Australasian colonies is secondary to that of sheep. Indeed, in New South Wales in 1899 the number of the herds was even less than in 1861, the decrease amounting to 304,842. The lowest point was reached by that colony in 1885, when the herds only numbered 1,317,315, the result partly of continuous bad

seasons, but principally of the more profitable character of sheep-farming, which had induced graziers on many runs to substitute sheep for cattle. From that period up till 1894, when the herds numbered 2,465,411, there was a gradual improvement, which seemed to indicate a disposition on the part of pastoralists in some parts of the colony to devote more attention to cattle-breeding. But the series of droughts experienced during the last five years has reduced the herds very materially. The progress of Victoria in the breeding of cattle was steady until 1894, the latest year for which information is available.

Queensland, in spite of large losses of late years, due to drought, and the effects of the tick-fever, still holds first place with 45·7 per cent. of the total cattle of the whole group. New Zealand, after having neglected the cattle industry for a long time, has during recent years largely increased its herds, the increase being the result of the special attention bestowed upon the dairy industry.

The following table shows the number of cattle in each colony at ten-year intervals since 1861, and in 1899. The figures for Victoria in the last column refer to 1894 :—

State.	Number of Cattle.				
	1861.	1871.	1881.	1891.	1899.
New South Wales	2,271,923	2,014,888	2,597,348	2,046,347	1,967,081
Victoria	628,092	799,509	1,286,677	1,812,104	1,833,900
Queensland	560,196	1,163,235	3,618,513	6,192,759	5,053,836
South Australia	265,434	143,463	314,918	676,933	526,524
Western Australia	33,795	49,593	63,009	133,690	297,081
Tasmania	87,114	101,540	130,526	167,666	160,204
Commonwealth ...	3,846,554	4,277,228	8,010,991	11,029,499	9,838,626
New Zealand	193,285	436,592	698,637	831,831	1,210,439
Australasia	4,039,839	4,713,820	8,709,628	11,861,330	11,049,065

The statement below shows the proportion of cattle in each colony to the total herds in Australasia, at the end of 1899 :—

State.	per cent.
New South Wales.....	17·8
Victoria	16·6
Queensland.....	45·7
South Australia.....	4·8
Western Australia	2·7
Tasmania.....	1·4
New Zealand.....	11·0
Australasia	100·0

The previous table shows the growth in the number of cattle during the period extending from 1861 to 1899. A more detailed comparison

for recent years is afforded by the next table, showing the number in each colony at the close of each year since 1885. As will be seen, returns were not collected in three of the provinces—Victoria, South Australia, and New Zealand—for several of the years under review :—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1885	1,317,315	1,290,790	4,162,653	*	70,408	138,642	853,358.
1886	1,367,844	1,303,265	4,071,563	*	88,254	148,665	*
1887	1,575,487	1,333,873	4,473,716	*	93,544	147,092	*
1888	1,622,007	1,370,660	4,654,932	*	96,822	142,019	853,358.
1889	1,741,592	1,394,230	4,872,418	531,296	119,571	150,004	895,461
1890	2,091,220	1,782,881	5,558,264	574,032	130,970	162,440	831,831
1891	2,128,838	1,812,104	6,192,759	676,933	133,690	167,788	
1892	2,221,459	1,824,704	6,591,416	631,522	162,886	170,085	851,801
1893	2,269,852	1,817,291	6,693,200	675,284	173,747	169,141	886,305
1894	2,465,411	1,833,900	7,012,997	*	187,214	177,038	964,034
1895	2,150,057	*	6,822,401	*	200,091	162,801	1,047,991
1896	2,226,163	*	6,507,377	638,501	199,793	157,736	1,138,572
1897	2,085,096	*	6,080,013	540,149	244,971	157,486	1,209,165
1898	2,029,516	*	5,571,292	613,894	269,947	149,754	1,203,024
1899	1,967,081	*	5,053,836	528,524	297,081	160,204	1,210,439

* Returns not collected.

The number of cattle (including calves) slaughtered during each of the five years ended 1899 is shown in the following table for all the colonies except South Australia and New Zealand, which make no returns. The Tasmanian figures are the numbers killed in Hobart and Launceston only :—

Year.	New South Wales.	Victoria.	Queensland.	Western Australia.	Tasmania. (Hobart and Launceston.)
1895	388,097	236,317	.....	.....	11,245
1896	351,246	245,477	474,946	30,664	9,393
1897	365,898	240,958	498,583	41,665	10,615
1898	364,042	244,319	572,735	33,203	10,029
1899	383,948	.....	640,898	.....	10,276

The value of the cattle in Australasia, on the basis of the average prices ruling in 1899, was £52,400,000, thus divided amongst the various provinces :—

	£
New South Wales	10,006,000
Victoria	11,518,000
Queensland	15,372,000
South Australia	3,324,000
Western Australia	1,750,000
Tasmania	1,015,000
Commonwealth	42,985,000
New Zealand	9,415,000
Australasia	£52,400,000

HORSES.

Australasia is eminently fitted for the breeding of most descriptions of horses, and attention has long been directed to this industry. At an early period the stock of colonial-bred horses was enriched by the importation of some excellent thoroughbred Arabians from India, and to this cause the high name which was acquired by the horses of Australia was largely due. The abundance of good pasture everywhere obtainable also contributed to this result. The native kangaroo-grass, especially when in seed, is full of saccharine matter, and young stock thrive excellently upon it. This abundance of natural provender permitted a large increase in the stock of the settlers, which would have been of great advantage had it not been that the general cheapness of horses led to a neglect of the canons of breeding. In consequence of the discovery of gold, horses became very high priced. Under ordinary conditions this circumstance would have been favourable to breeding, and such was actually the case in Victoria. In New South Wales, however, it was far otherwise. The best of its stock, including a large proportion of the most valuable breeding mares, was taken by Victoria, with the result that for twenty years after the gold rush the horses of the mother colony greatly deteriorated. One class of stock only escaped—the thoroughbred racer, which was probably improved both by the importation of fresh stock from England, and by the judicious selection of mares.

The colonies are specially adapted to the breeding of saddle and light-harness horses, and it is doubtful whether these particular breeds of Australasian horses are anywhere surpassed. The bush horse is hardy and swift, and capable of making very long and rapid journeys when fed only on the ordinary herbage of the country; and in times of drought, when the grass and water have become scanty, these animals often perform astonishing feats of endurance. Generally speaking, the breed is improving, owing to the introduction of superior stud horses and the breeding from good mares. Where there has been a deterioration in the stock, it has been due to breeding from weedy mares for racing purposes and to the effects of drought.

Although the demand in India is fair, and Australia is a natural market from which supplies may be derived, the speculation of sending horses there is one open to many risks, as, apart from the dangers of the voyage, there is always an uncertainty as to the stock being accepted. Owing, therefore, to the limited foreign demand, it has not been found advantageous to breed horses except for local requirements.

The following table shows the number of horses in each colony at ten-year intervals since 1861, and at the end of 1899. The Victorian figures in the last column refer to 1894, the last year for which returns were collected. In 1899, New South Wales and Queensland possessed nearly equal numbers of horses, with 25 per cent. and 24·8 per cent.

respectively of the total number in Australasia; while Victoria approached them very closely with 22·3 per cent. Of the other colonies, New Zealand possessed 13·6 per cent.; South Australia, 9·3 per cent.; Western Australia, 3·4 per cent.; and Tasmania, 1·6 per cent. :—

State.	Number of Horses.				
	1861.	1871.	1881.	1901.	1899.
New South Wales.....	233,220	304,100	398,577	459,755	482,200
Victoria	84,057	181,643	278,195	440,696	431,547
Queensland	28,983	91,910	194,217	399,364	479,127
South Australia	52,597	78,125	159,678	202,906	180,335
Western Australia ..	10,720	22,698	31,755	40,812	65,918
Tasmania	22,118	23,054	25,607	31,262	31,189
Commonwealth ...	431,695	701,530	1,088,029	1,574,795	1,670,316
New Zealand	28,275	81,028	161,736	211,040	261,931
Australasia.....	459,970	782,558	1,249,765	1,785,835	1,932,247

The value of horses in 1899, in the various colonies, is estimated as follows :—

	£
New South Wales	3,856,000
Victoria	5,184,000
Queensland	2,295,000
South Australia	1,260,000
Western Australia	775,000
Tasmania	330,000
Commonwealth	13,800,000
New Zealand	3,406,000
Australasia.....	£17,206,000

STOCK-CARRYING CAPACITY OF AUSTRALASIA.

None of the colonies is stocked to its full capacity; indeed, in the large territory of Western Australia and in the Northern Territory of South Australia the process has only begun. A clear idea of the comparative extent to which each colony is stocked cannot be given unless the different kinds of animals are reduced to a common value. Assuming, therefore, that one head of large stock is equivalent to ten

sheep, and expressing cattle and horses in terms of sheep, it will be found that the number of acres to a sheep in each colony is as follows :—

State.	No. of acres per sheep.
New South Wales	3·3
Victoria.....	1·6
Queensland	6·1
South Australia	45·2
Western Australia	105·6
Tasmania	4·7
New Zealand	2·0
Australasia	8·8

The most closely-stocked colony is Victoria, with 1·6 acres per sheep, but this is by no means the limit to the carrying-capacity of that province; on the contrary, there is still a considerable tract to be brought under the sway of the pastoralist. Neither New Zealand nor New South Wales, with 2·0 and 3·3 acres per sheep respectively, can be said to have reached its full carrying-capacity. If the present average of New South Wales be taken as the possible limit to which Australasia may be stocked, then there is room in these colonies for nearly 500 million sheep or 50 million cattle more than are now depastured. That Australasia could carry 1 sheep to 3 acres, however, is an improbable supposition; in almost every colony the best land is under occupation, and the demands of the farmer must diminish the area at present at the disposal of the grazier. This will more especially prove true of Victoria, New Zealand, and Tasmania. On the other hand, by resisting the temptation to overstock inferior country, and by increasing the natural carrying-capacity by water conservation and irrigation and by the artificial cultivation of grasses, the colonies in which agriculture has made most progress will be able to carry stock in even larger numbers than they have hitherto attempted. Taking all circumstances into consideration, it may be fairly estimated that under the present system the colonies are capable of maintaining, in ordinary seasons, stock equivalent to 390,000,000 sheep—that is, about 167,000,000 sheep, or their equivalent in cattle, more than are now depastured.

The number of stock in Australasia, expressed in terms of sheep, the number of acres per sheep, and the number of sheep per head of population, at various dates since 1861, were as given below :—

Year.	Sheep.	Cattle, in terms of Sheep.	Horses, in terms of Sheep.	Total.	Acres per Sheep.	Sheep per head of Population.
1861	23,741,706	40,398,390	4,599,700	68,739,796	28·7	54·3
1871	49,773,584	47,138,200	7,825,580	104,737,364	18·8	53·2
1881	78,063,426	87,096,280	12,497,650	177,657,356	11·1	62·9
1891	124,547,937	118,613,300	17,858,350	261,019,587	7·5	67·4
1899	93,645,309	110,490,650	19,322,470	223,458,429	8·8	52·1

VALUE OF PASTORAL PROPERTY AND PRODUCTION.

The total value of pastoral property in Australasia—that is, of improvements, plant, and stock—was estimated in 1899 at £241,554,000. In this amount the value of stock alone (excluding swine) comes to about £115,417,000. No account is taken of the value of land devoted to pastoral purposes, for though much purchased land is used for depasturing stock, the larger area comprises lands leased from the State, so that a statement which omitted to take into account the value of the State lands would be misleading. The annual return from pastoral pursuits in 1899 was £40,795,000, the share of each colony in the total production being as follows:—

New South Wales	£14,527,000
Victoria	7,219,000
Queensland	7,283,000
South Australia.....	2,503,000
Western Australia	869,000
Tasmania	687,000
Commonwealth.....	33,088,000
New Zealand	7,707,000
Australasia	£40,795,000

The products of dairy cattle and swine are not included in the foregoing statement, the figures being given in another place. It should be understood that the values quoted are those at the place of production. The value of the return from each class of stock may be approximately reckoned as follows:—

Sheep.....	£30,182,000
Cattle	7,748,000
Horses	2,865,000
Total	£40,795,000

WOOL.

As might be supposed, the greater part of the value of production from sheep is due to wool. Thus, out of the £30,182,000 shown above, £22,960,000 is the value of wool, viz.:—£22,685,500 for wool exported, and £274,500 for wool used locally. The value of the wool exported, according to the Customs returns, was £23,488,500—that is to say, £803,000 more than the figures shown above. The excess represents the charges for freight, handling, &c., between the sheep-walks and the port of shipment.

In consequence of the decreased production, the value of wool, which had been a diminishing quantity for many years, underwent a complete revolution in 1899, and prices advanced in some cases as much as 60 per cent. above those ruling in 1898, and were higher than for twenty years past, so that, although the clip was still further reduced in consequence of the drought, which had been prolonged for five consecutive seasons, the total return received from wool was nearly

as great as in 1891, the highest year on record. Nearly all the wool produced in Australasia is exported, the home consumption being small, amounting in 1899 to only 1·78 lb., greasy, per head of population; while in Europe and America the quantity of wool available for consumption by the industry amounted to 5·01 lb. per head. During the last two quinquennial periods the consumption of wool in Europe and America has averaged as follows:—

1891-94	5·12 lb. per head of population
1895-99	5·19 lb. " "

The quantity, in the grease, of wool produced by each colony at decennial periods since 1861 and in 1899 was as follows:—

State.	1861.	1871.	1881.	1891.	1899.
	lb.	lb.	lb.	lb.	lb.
New South Wales...	19,254,800	74,401,300	161,022,900	321,416,000	252,907,700
Victoria	27,168,900	63,641,100	67,794,300	69,205,600	64,853,700
Queensland	12,356,100	36,553,200	34,275,300	83,118,100	92,898,000
South Australia.....	13,756,500	28,242,100	46,013,900	50,151,500	37,327,900
Western Australia..	820,500	1,888,000	4,654,600	9,501,700	10,795,300
Tasmania	5,129,100	6,687,800	10,525,100	10,102,900	9,114,800
Commonwealth	78,485,900	211,413,500	324,286,100	543,495,800	467,897,400
New Zealand	9,601,700	46,192,300	69,055,600	117,733,500	164,122,700
Australasia.....	88,087,600	257,605,800	393,341,700	661,229,300	632,020,100

The great fall in the production is seen from the above table, which shows that the only colonies where an increase has taken place since 1891 are Queensland, Western Australia, and New Zealand, all the others showing a large decline. The increase in New Zealand has taken place in spite of the heavy demands upon the resources of the colony for the supply of sheep to meet the requirements of the London market in frozen mutton.

The weight of wool per sheep has been increasing regularly in almost every colony, as will be seen from the following table, which shows the weight of clip per sheep at each decennial interval since 1861. It is manifest that the Victorian figures are unreliable, because there is no reason to suppose that there was a decline in the weight of the fleece in 1891; on the contrary, it is known to have been steadily improving; and, again, the 1899 figures are open to doubt. The Western Australian and Tasmanian results also show irregularities, and are omitted from the table. The values for New South Wales and Queensland best represent the increase in the weight of the fleece on the mainland, and the New Zealand figures are also believed to be

correct. In South Australia the weight of wool per sheep is higher than in the other colonies, but the results are derived from the official statistics, and it seems as if the number of sheep in that colony has been under-estimated.

State.	1861.	1871.	1881.	1891.	1899.
	lb.	lb.	lb.	lb.	lb.
New South Wales.....	3·28	4·57	4·47	5·74	6·53
Victoria	4·52	6·17	6·87	5·68	.....
Queensland	3·40	4·73	4·50	4·73	5·67
South Australia.....	4·69	6·41	6·93	6·85	6·99
New Zealand.....	3·48	4·76	5·32	6·42	8·48

The values of the excess of exports over imports in each colony for the same periods were as follows. A careful examination of the figures proves rather conclusively that less care than might have been expected has been taken in stating the values, except in New South Wales and New Zealand, but they are taken from the official records, and are given for what they are worth:—

State.	Excess of Exports over Imports.				
	1861.	1871.	1881.	1891.	1899.
	£	£	£	£	£
New South Wales ...	1,537,536	4,705,820	7,173,166	10,650,525	10,149,563
Victoria	2,001,681	4,482,461	2,562,769	3,792,938	3,350,351
Queensland	613,074	1,158,833	1,331,869	3,453,548	3,379,179
South Australia	572,720	1,113,825	1,573,313	1,540,079	1,504,901
Western Australia ...	54,297	122,637	256,690	329,365	423,296
Tasmania	326,413	298,160	498,400	418,460	357,065
Commonwealth ...	5,105,721	11,882,736	13,396,207	20,184,915	19,164,355
New Zealand	523,728	1,606,144	2,914,046	4,129,686	4,324,171
Australasia	5,629,449	13,488,880	16,310,253	24,314,601	23,488,526

Western Australia and New Zealand were the only colonies to show an increase in the value during the year over that obtained in 1891.

According to returns prepared in London, the number of bales of Australasian wool imported into Europe and America during the year 1899 was 1,641,000, which were valued at £14 10s. per bale, giving a total of £23,794,500. The average price per bale in Sydney during the season 1898-9 was £11 12s. 6d. In comparing these prices, it must be remembered that not only have freight and charges to be added to the Australian value, but some allowance must be made for the difference in the quality and condition of the wool dealt with in the Australian

markets and in London. Large quantities of the inferior portions of the clip intended for sale in the London market are scoured prior to shipment, and the London price is therefore raised to an average considerably higher than the Sydney or Melbourne price with freight and charges added. In 1898, 1,703,000 bales were imported into Europe and America. These were valued at £12 5s. per bale, making the total value £20,861,750, so that, notwithstanding the greatly-diminished import, the total value received was nearly £3,000,000 greater in 1899.

The price per lb. obtained for wool in grease in London at the end of each year from 1890 was as follows :—

Year.	New South Wales. (Average Merino).	Victoria. (Good Average Merino.)	New Zealand. (Average Cross-bred.)
	d.	d.	d.
1890	8½	10	10
1891	7½	9	9½
1892	7	8½	9½
1893	7	8½	9½
1894	6	7¾	8½
1895	7½	9½	9½
1896	7	9	8½
1897	7¼	9	8¼
1898	7¾	9½	7
1899	13	15½	10½

Taking the last fourteen years, the highest prices were realised for New South Wales and Victorian wools during 1899, namely, 13d. per lb. and 15½d. per lb. respectively. The maximum price for New Zealand wool, 11½d. per lb., was obtained in 1889. The lowest prices—6d. for New South Wales, 7½d. for Victoria, and 8d. for New Zealand—were experienced in 1895. The average prices realised during the whole period were 9½d. per lb. for New South Wales average merino, 11½d. for good average Victorian merino, and 9½d. for average New Zealand cross-bred. From these figures it will be seen that Victorian wool averages about 2d. per lb. higher than New South Wales wool. The figures must be taken with qualification. Much of the New South Wales wool, the product of the Riverina districts, is exported *via* Melbourne and sold as Port Phillip wool, and brings a price considerably in excess of the average given in the table for the colony of which it is the produce. The quantity of wool sold at the local sales in the Australasian colonies is increasing. Particulars of these sales will be found in the chapter on "Commerce."

THE FROZEN-MEAT TRADE.

In view of the large increase in the live stock of Australasia, the question of the disposal of the surplus cast has become a matter of

serious consequence. In New South Wales especially, and in the Riverina district in particular, it was found necessary to have recourse to the old method of boiling down, which a fortunate rise in the price of tallow made it possible to carry on with a margin of profit; but with such prices as have ruled for tallow during the past few years it cannot be said that boiling-down offers any inducement to the pastoralist, although in 1899 the production of tallow in the colony reached the large quantity of 389,838 cwt.

In New Zealand a much better solution of the question of disposal of the surplus cast was found, and a trade in frozen mutton with the United Kingdom has been established on a thoroughly payable basis—an example which some of the other colonies are endeavouring to follow, although considerably handicapped by the want of cross-bred sheep and the prejudice of the English consumer against merino mutton.

The first successful attempt at shipping frozen mutton to England was made in New Zealand in 1882, and since then the trade has attained great proportions, to the immediate benefit of the Colonial producer as well as the English consumer. The trade initiated by the New Zealand Land Company has been extended by the formation of numerous joint stock companies, which now own twenty-one meat-freezing works in the two islands, having an aggregate capacity for freezing about 4,000,000 sheep per year. The sheep are generally killed up country, and transported by rail to the freezing works. Several fleets of steamers are engaged in the trade, and the freight rates charged enable the companies to realise satisfactory profits. The growth of the frozen and preserved meat industries of New Zealand since 1881 is shown in the following table. The shipments are almost exclusively made to the United Kingdom:—

Year.	Frozen or Chilled Meat.						Preserved Meat.	
	Beef.	Mutton.	Lamb.	Mutton and Lamb.	Total Weight.	Total Value.	Weight.	Value.
1881	cwt.	carcases.	carcases.	cwt.	cwt.	£	lb.	£
1882	.....	.....	.....	.....	.....	.....	1,074,640	22,391
1883	.....	.....	.....	.....	15,244	10,339	2,913,904	54,397
1884	937	.....	.....	86,905	87,932	118,261	3,868,480	72,778
1885	1,644	.....	.....	252,422	254,066	345,081	3,103,744	59,224
1886	9,170	.....	.....	286,961	296,131	373,326	4,047,904	81,401
1887	9,391	.....	.....	396,405	345,796	420,556	2,592,464	47,420
1888	6,630	656,823	110,816	421,405	428,035	454,942	4,706,016	79,246
1889	44,613	835,843	94,681	507,306	551,919	629,110	4,912,544	80,128
1890	63,298	990,486	118,794	588,624	656,822	783,374	5,325,152	106,772
1891	98,234	1,330,176	279,741	798,625	896,869	1,084,992	6,702,752	136,182
1892	103,007	1,447,583	338,344	889,012	992,019	1,185,122	5,447,904	111,133
1893	55,020	1,316,768	290,996	806,304	861,324	1,021,338	3,939,712	69,420
1894	11,059	1,355,247	475,365	888,455	899,514	1,078,427	2,656,416	46,601
1895	912	1,633,213	459,948	1,001,342	1,002,254	1,162,770	3,368,736	57,325
1896	12,090	1,632,590	735,254	1,078,640	1,090,730	1,214,778	4,124,400	66,137
1897	25,905	1,505,969	792,037	1,065,292	1,091,197	1,239,969	5,006,848	75,661
1898	50,044	1,653,170	1,038,316	1,291,682	1,341,626	1,512,286	5,046,216	78,235
1899	95,218	1,719,282	1,168,883	1,338,175	1,433,393	1,696,543	6,245,792	97,197
1899	172,345	2,102,533	1,272,525	1,557,439	1,729,784	1,965,564	5,382,272	90,019

Amongst the continental colonies the export of meat has reached the largest dimensions in Queensland, although of course it consists chiefly of beef, the trade in mutton only forming one-eighteenth of the whole. So far as they can be given, the figures showing the growth of the Queensland frozen-meat trade, as well as the exports of preserved meat, will be found below :—

Year.	Frozen or Chilled Meat.				Preserved Meat.	
	Beef.	Mutton.	Total Weight.	Total Value.	Weight.	Value.
1881	cwt.	cwt.	cwt.	£	lb.	£
1881	.....	.....	.....	.....	2,276,409	39,956
1882	.....	.....	.....	.....	5,689,189	119,343
1883	.....	.....	1,951	2,151	6,729,721	151,001
1884	.....	.....	8,082	11,240	2,298,696	57,101
1885	.....	.....	3,926	5,003	8,306,432	171,432
1886	.....	.....	9,280	12,103	130,658	1,586
1887	.....	.....	.....	.....	5,272,170	99,653
1888	.....	.....	.....	.....	3,964,419	77,887
1889	8,745	15,542	24,287	62,240	853,621	16,743
1890	30,253	23,799	54,052	75,908	2,769,881	44,040
1891	52,609	53,698	106,307	161,345	3,333,317	59,032
1892	123,196	51,595	174,791	276,113	6,035,035	96,828
1893	204,349	21,898	226,247	377,039	8,001,788	143,146
1894	301,837	32,187	334,024	498,652	15,544,826	250,646
1895	461,733	28,221	489,954	580,489	25,941,400	393,492
1896	434,683	31,874	466,557	501,498	21,583,658	330,728
1897	529,162	31,162	560,324	659,260	15,699,098	241,189
1898	511,629	10,935	522,564	672,970	13,188,836	217,684
1899	651,029	32,529	683,558	833,733	25,148,815	383,899

Next to New Zealand, the largest exporter of frozen mutton is New South Wales. During the last few years greater efforts have been made in this colony to expand the trade, and the exports show a considerable increase, although a temporary check was experienced in 1897 in consequence of the unfavourable season. But New South Wales has laboured under the disadvantage of possessing no cross-bred sheep for export, and the food qualities of the merino are scarcely appreciated in the English market, where New Zealand mutton is favourably known, and brings on an average 1¼d. per lb. more than Australian. Large tracts of the mother colony, however, are suited to the breeding of large-

carcase sheep, and the pastoralists have become alive to the importance of securing a share of the meat trade of the United Kingdom. Attention is being directed to the introduction of British rams into the colony, and a large increase in the cross-bred flocks has already taken place. Up to the present, however, the cross-bred carcasses sent by New South Wales to England have not been kept apart from the merino, and have therefore failed to return the higher prices which might have been expected. The attention of the freezing companies has been directed to this point, but so far without effect. The following table shows the growth of the frozen-meat trade of New South Wales; the exports of preserved meat consist almost wholly of tinned mutton :—

Year.	Frozen or Chilled Meat.				Preserved Meat.	
	Beef.	Mutton.	Total Weight.	Total Value.	Weight.	Value.
	quarters.	carcases.	cwt.	£	lb.	£
1881	.....	.....	9,980	8,554	.....	°176,721
1882	.....	.....	13,782	22,910	.....	*143,601
1883	.....	.....	34,911	43,100	.....	°221,912
1884	.....	.....	13,309	12,321	.....	*161,477
1885	.....	.....	6,271	6,064	.....	*166,561
1886	.....	.....	4,852	4,671	.....	°77,756
1887	.....	.....	21,831	19,310	9,761,154	150,714
1888	.....	.....	52,262	44,537	4,528,269	69,481
1889	.....	.....	37,868	33,426	2,877,303	52,321
1890	.....	.....	72,304	71,534	4,655,523	74,329
1891	.....	.....	105,013	101,828	6,581,713	87,632
1892	.....	.....	223,074	169,425	8,620,747	105,922
1893	4,773	364,958	220,584	141,640	13,092,942	164,592
1894	9,538	533,995	339,404	193,760	16,382,597	206,054
1895	88,719	1,021,006	607,818	380,107	22,384,285	302,828
1896	16,286	1,372,373	642,188	343,397	16,351,936	218,292
1897	28,529	1,065,990	503,925	275,118	10,903,611	147,165
1898	39,593	1,095,568	539,495	330,325	13,930,801	227,288
1899	32,855	956,222	459,553	331,904	11,453,332	185,804

* Including Extract of Meat.

The total capacity of the boiling-down works in New South Wales is stated at 633,900 head of cattle or 16,965,000 sheep; of chilling works, 488,500 head of cattle or 5,422,800 sheep; of freezing works, 76,500 head of cattle or 3,150,000 sheep; and of meat-preserving works, 183,000 head of cattle or 5,445,000 sheep.

The only other colony in which the meat-export trade has reached dimensions of any importance is Victoria, although its exports fall far below those of the three colonies already dealt with. A statement of the Victorian trade from 1881 to 1899 will be found below:—

Year.	Frozen or Chilled Meat.				Preserved Meat.	
	Beef.	Mutton.	Total Weight.	Total Value.	Weight.	Value.
1881	cwt.	cwt.	cwt.	£	lb	£
1882	.....	.....	.....	.....	4,026,072	102,306
1883	.....	.....	18,522	18,969	1,274,066	30,705
1884	.....	.....	9,944	12,220	3,225,657	76,015
1885	.....	.....	41,373	53,196	2,667,866	63,707
1886	.....	.....	39,107	61,617	1,486,849	38,244
1887	.....	.....	39,384	70,319	616,652	17,868
1888	.....	.....	15,245	27,270	629,054	14,291
1889	.....	.....	.....	.....	714,856	16,115
1890	.....	.....	.....	.....	805,580	16,156
1891	.....	.....	.....	.....	893,114	20,197
1892	.....	.....	.....	.....	1,052,887	19,230
1893	.....	.....	.....	.....	1,982,151	51,624
1894	.....	.....	1,307	1,838	777,953	14,349
1895	53	27,182	27,235	25,370	2,267,791	40,082
1896	268	24,563	24,831	31,673	2,917,730	43,408
1897	127	23,634	23,761	25,827	4,335,511	71,576
1898	62	21,416	21,478	20,248	5,498,315	84,914
1899	233	7,556	7,789	9,101	2,852,191	38,516
1899	1,458	74,960	76,418	86,087	4,760,047	50,174

There are at present depastured in Australasia 93,645,000 sheep and 11,049,000 cattle, of which 19,348,000 sheep and 1,210,000 cattle are in New Zealand. In that colony the industry of sheep and cattle raising has now reached such a stage that practically the whole of the stock available for market is used up every year either locally or for export, and as a consequence the numbers of both kinds of stock are stationary, and have been so for some years past. In the continental colonies a different state of things prevails. In New South Wales there is a large surplus of sheep beyond the colony's food requirements; while the cast of cattle is below the local demand, and is supplemented by the importation of stock from Queensland, the net import from that colony for the past three years being 482,428 head. The other four colonies have each a deficiency of cattle and sheep.

It is estimated that in an average year the "cast" of cattle is 10·25 per cent.—that is to say, that that percentage of all the cattle depastured would be of marketable age, could they be made fit for slaughtering. Excluding New Zealand, the annual cast would be 1,150,000 head. The present food requirements of the colonies may be set down at 750,000 head, leaving a balance of 400,000 as the surplus available, or which might be made available, for export. At the present time, however, some of the surplus is exported either as chilled beef or

preserved meat, and it is estimated that 130,000 to 150,000 head are annually so disposed of, leaving about 250,000 head, of age fit for market, which it is unprofitable to keep beyond their present age. These comprise the real "surplus" difficulty of the colonies, and it is a question for experts to determine how many of the 250,000 could be fattened for export, but there seems to be abundant evidence that from 60,000 to 100,000 head of cattle could be exported in any ordinary year without trenching upon local requirements, while if the trade could be expanded without touching ruinous prices the export might be made much larger. The surplus of sheep cannot be less than 4,500,000. These figures refer to an ordinary year; in 1899, which was a year of drought, the available cast was doubtless much below the numbers quoted.

Looking at the question from all points of view, it cannot be said that the frozen-meat trade is without strong elements of hope for the future. The great difficulty in the way of an expansion of the trade is the serious fall in prices; but there is no reason why better results should not be obtained if shippers are careful not to export anything of unsatisfactory quality, and so tend to enhance the value of Australian meat in the eyes of the British consumer. Signs are not wanting that the prejudice which existed against frozen mutton in the United Kingdom is fast dying out, and the adoption of the defrosting process, by which the meat may be placed on the market with a much more attractive appearance at an extra cost of $\frac{1}{4}$ d. per lb., will hasten its extinction. That it is largely prejudice is made clear by the fact that a great deal of Australian mutton which is sent to London is sold to the consumer as Welsh or English.

During the years 1894 and 1895 several attempts, more or less successful, were made to place live cattle and sheep in the English market. A great difficulty in the way of establishing such a trade was the wildness of the cattle, the mortality in some of the shipments being sufficiently high to provoke strong criticism in England as to the cruelty to which the cattle were subjected by being shipped on such a long voyage. It is to be feared, however, that these expressions of opinion were prompted, not altogether by the alleged sufferings of the cattle, but to a large extent by the interests of the English producer and the American exporter. At the same time, it is clear that a permanent and profitable trade cannot be established until the cattle have been handled sufficiently to bring them into a tractable condition, for the present system of depasturing followed in Australia renders the stock too wild to endure a long stay on shipboard. Probably, however, the great strides made by the Argentine Republic in supplying the English market will make it difficult for Australian shippers to realise a satisfactory margin of profit, the near proximity of that country to Great Britain giving it an immense advantage over these colonies in the matter of freights. In view of the vast population of the United States, any increase in the export of live cattle from that country cannot be anticipated.

DAIRY-FARMING.

Dairy-farming has of late years made fair progress in Australasia, especially in the colonies of New South Wales, Victoria, New Zealand, and, more recently, in Queensland. The introduction of the factory system at convenient centres and the use of the cream-separator have done much to cause the extension of the industry. The number of dairy cows at the end of 1899, and the estimated quantity of milk produced in each colony during that year, were as follow :—

State.	Dairy Cows.	Quantity of Milk produced (estimated).
	No.	gallons.
New South Wales	399,327	138,564,000
Victoria	464,469	193,044,000
Queensland	131,000*	39,300,000
South Australia	84,498	28,351,000
Western Australia	22,500 ^c	6,535,000
Tasmania	41,482	16,669,000
Commonwealth	1,143,276	422,463,000
New Zealand	343,556	138,784,000
Australasia	1,486,832	561,247,000

* Estimated.

The estimated value of the milk and its products, butter and cheese, and of the return obtained from swine, together with the total value of dairy produce for each colony in 1899, will be found below :—

State.	Value of Milk, Butter, and Cheese.	Value of Return from Swine.	Total Value of Dairy and Swine Produce.
	£	£	£
New South Wales	1,743,000	256,000	1,999,000
Victoria	2,491,000	420,000	2,911,000
Queensland	516,000	158,000	674,000
South Australia	365,000	102,000	467,000
Western Australia	69,000	49,000	118,000
Tasmania	157,000	57,000	214,000
Commonwealth	5,341,000	1,042,000	6,383,000
New Zealand	1,770,000	241,000	2,011,000
Australasia	7,111,000	1,283,000	8,394,000

The production of butter and cheese in each colony during 1899 is estimated to have been as follows :—

State.	Butter.	Cheese.
	lb.	lb.
New South Wales	33,034,000	2,386,000
Victoria	53,327,000	4,513,000
Queensland	8,463,000	1,910,000
South Australia	5,581,000	947,000
Western Australia	275,000	850
Tasmania	2,094,000	628,000
Commonwealth	102,774,000	10,384,850
New Zealand	30,940,000	13,430,000
Australasia	133,714,000	23,814,850

The colonies having a surplus of butter and cheese available for exportation during 1899 are shown in the following table :—

State.	Butter.	Cheese.
	lb.	lb.
New South Wales	4,549,722	.....
Victoria	36,226,948	638,274
Queensland	1,132,775	.....
South Australia	1,330,714	16,575
New Zealand	15,234,912	7,758,240
Total	58,475,071	8,413,089

New South Wales was formerly both an importer and an exporter of butter, for only during the spring and early summer months was the production larger than the local requirements, while during the remainder of the year butter had to be imported to meet the local demand. Now the colony has become an exporter of butter to the United Kingdom on a fair scale ; but a large quantity of New Zealand butter is still sent to the New South Wales markets on account of the more satisfactory price realised there. There is also an importation from South Australia and Victoria for the supply of the districts adjacent to those colonies. Queensland has only lately become an exporter of butter, 1897 being the first year when the export exceeded the import. The net export in that year was 179,490 lb., which in 1899 had increased to 1,132,775 lb.

The colonies which, on the other hand, were obliged to import butter and cheese during 1899 are shown below :—

State.	Butter.	Cheese.
	lb.	lb.
New South Wales .....	.....	2,454,260
Queensland .....	.....	57,974
Western Australia	4,419,448	928,964
Tasmania	598,023	90,590
Total	5,017,471	3,531,788

From the foregoing figures it will be seen that those colonies which produce a surplus of butter and cheese have, after providing for the deficiency of the other provinces, a balance available for exportation to outside countries, this balance in 1899 amounting to 53,457,600 lb. of butter and 4,881,301 lb. of cheese. An export trade in butter and cheese has long been maintained by New Zealand, while in recent years Victorian, New South Wales, and South Australian butters and, more recently still, Queensland butters have been sent to the London market, and their very favourable reception has given a fresh stimulus to the dairying industry in those colonies. The rapidity with which this trade is growing may be gauged from the following table, which shows the quantity of butter exported to the United Kingdom during the eleven years ended 1899 :—

Year.	Exporting State.				
	New South Wales.	Victoria.	Queensland.	South Australia.	New Zealand.
	lb.	lb.	lb.	lb.	lb.
1889	284,251	505,478	.....	.....	2,363,088
1890	589,160	1,286,583	.....	10,850	2,976,848
1891	391,180	3,778,775	.....	23,864	3,246,768
1892	1,532,782	6,446,900	.....	.....	4,648,980
1893	2,846,989	13,141,423	1,064	357,087	5,864,656
1894	4,333,927	22,139,521	.....	1,233,539	6,590,640
1895	1,852,360	21,127,025	31,420	1,017,629	6,181,728
1896	1,741,272	16,452,649	.....	242,872	6,730,304
1897	5,431,109	15,450,857	407,199	16,240	8,943,088
1898	5,309,811	13,548,293	628,296	389,836	9,051,168
1899	7,006,701	26,045,210	741,308	894,992	13,608,224

From latest advices it would appear that the price obtained for Australian butter in London was higher than the rates ruling in the local market ; and as there can hardly be a limit placed to the capacity of Australasia to produce butter and cheese, it is probable that these high prices will have the effect of greatly stimulating the dairy industry throughout all these colonies. In connection with this subject, it may be mentioned that the value of the butter, cheese, and eggs imported

into the United Kingdom during 1899 was £17,213,516, £5,503,004, and £5,044,402 respectively. The supply is chiefly drawn from the Continent of Europe and from America, and of the total amounts mentioned, the only imports from Australasia were butter to the value of £1,853,892, cheese to the value of £72,318, and eggs to the value of £2,078.

It may not be out of place to remark that in one or two of the colonies the export of butter has helped to maintain prices in the local markets, and tended to restrict home consumption. If a season of great prosperity visits Australia there will be a very large increase in the local demand, with a consequent limitation in the supply available for export, so that it may be concluded that under any circumstances the prospects of the industry are encouraging.

SWINE.

The breeding of swine is usually carried on in conjunction with dairy-farming, and the following table shows the number of swine in each colony at ten-year intervals since 1861, and in 1899. The Victorian figures in the last column refer to the year 1894, the last in which live-stock returns were collected in that colony :—

State.	Number of Swine.				
	1861.	1871.	1881.	1891.	1899.
New South Wales ...	146,091	213,193	213,916	253,189	239,773
Victoria	43,480	177,447	239,926	286,780	337,588
Queensland	7,465	32,707	56,438	122,672	139,118
South Australia	69,286	95,542	120,718	83,797	84,262
Western Australia.....	11,984	14,265	22,530	25,930	55,953
Tasmania.....	40,841	52,863	49,660	73,520	74,451
Commonwealth ..	319,147	586,017	703,188	845,888	931,145
New Zealand.....	43,270	151,460	200,083	308,812	249,751
Australasia.....	362,417	737,477	903,271	1,154,700	1,180,896

The production of swine should be a large factor in dairy-farming, but the increase in the number of pigs has not been as large as might have been expected. In New South Wales and New Zealand the number of swine is actually less now than in 1891, while South Australia and Tasmania show very slight increases. Victoria possesses the largest stock, with 28.6 per cent. of the total number in Australasia; then come New Zealand and New South Wales with 21.2 per cent. and 20.3 per cent. respectively; Queensland has 11.8 per cent. of the total; South Australia, 7.7 per cent.; Tasmania, 6.3 per cent.; and Western Australia, 4.7 per cent.

The products of the swine—bacon, ham, lard, and salt pork—are now exported by all the colonies with the exception of New South Wales, Western Australia, and Tasmania, as is shown by the following table, which relates to the year 1899 :—

State.	Bacon and Ham.	Salt Pork.	Lard.	Net Value exported.
	£	£	£	£
New South Wales.....	°10,502	°12	*4,179	*14,693
Victoria	37,406	514	1,454	39,374
Queensland	30,470	208	3,190	33,868
South Australia	3,547	*48	.....	3,499
Western Australia.....	°83,854	*136	°1,146	*85,136
Tasmania	°2,587	°43	°370	*3,000
Commonwealth.....	°25,520	483	°1,051	°26,088
New Zealand	14,207	122	330	14,659
Australasia	*11,313	605	°721	*11,429

* Excess of imports.

In the case of Victoria and Queensland small quantities of fresh and frozen pork are included with salt pork. There seems to be considerable scope for an extension of this particular branch of farming in some of the colonies.

POULTRY AND MINOR INDUSTRIES.

An estimate is given below of the value of the production of poultry and eggs, together with that arising from bee-farming, in each colony during the year 1899 :—

State.	Poultry and Eggs.	Honey and Beeswax.
	£	£
New South Wales	515,000	29,000
Victoria	466,000	7,000
Queensland	205,000	10,000
South Australia	197,000	7,000
Western Australia.....	131,000	2,000
Tasmania	68,000	3,000
Commonwealth	1,582,000	58,000
New Zealand	321,000	22,000
Australasia	1,903,000	80,000

The most remarkable feature is the trade in eggs between South Australia as supplier and New South Wales, Victoria, and Western Australia as buyers. The returns for 1899 show that during that year

South Australia exported eggs to the value of £62,493, viz., £531 to Victoria, £12,573 to New South Wales, and £49,374 to Western Australia. The bulk of the trade with New South Wales is transacted with the Barrier district, which is commercially a dependency of South Australia.

PASTORAL AND DAIRY PRODUCTION.

The total value of pastoral and dairy production during the year 1899, in each colony and in the whole of Australasia, together with the value per inhabitant, is shown in the following table:—

State.	Total Value of Pastoral and Dairy Production.	Value per Inhabitant.
	£	£ s. d.
New South Wales	17,070,000	12 13 10
Victoria	10,603,000	9 2 6
Queensland	8,172,000	17 2 9
South Australia	3,174,000	8 12 7
Western Australia	1,120,000	6 12 1
Tasmania	972,000	5 8 1
Commonwealth	41,111,000	11 2 2
New Zealand	10,061,000	13 8 3
Australasia	51,172,000	11 9 10

The following table gives similar information for the years 1871, 1881, and 1891, and shows that in point of total value of production New South Wales, Queensland, Western Australia, and New Zealand have made most satisfactory progress; while in Victoria, South Australia, and Tasmania the pastoral industry has advanced much more slowly:—

State.	1871.	1881.	1891.
	£	£	£
New South Wales	8,709,000	13,151,000	17,460,000
Victoria	7,260,000	7,499,000	9,321,000
Queensland	1,959,000	4,186,000	7,561,400
South Australia	1,800,000	3,178,000	3,148,525
Western Australia	274,000	431,000	647,350
Tasmania	734,000	1,093,000	1,117,550
Commonwealth	20,736,000	29,538,000	39,255,825
New Zealand	3,210,000	7,096,000	9,153,225
Australasia { Total.....	23,946,000	36,634,000	48,409,050
Australasia { Per head.	£ s. d. 12 7 7	£ s. d. 13 3 11	£ s. d. 12 12 0

Comparing the two preceding tables, it will be seen that although the total production has more than doubled since 1871 the value per head has slightly decreased. In 1899 the value of pastoral and dairy production was nearly £3,000,000 higher than in 1891; but to a great extent this was due to the high prices obtained last year for the principal articles of pastoral produce; for owing to the continued dry seasons the production of wool was very much less, and the cast of both sheep and cattle was reduced as compared with 1891. On the other hand, the production of butter was larger, and also the export of meat, as will be seen below:—

Produce.	1891.	1899.
Wool, as in grease	Lb. 661,229,000	632,020,000
Cast of sheep	No. 17,000,000	11,611,000
Cast of cattle	No. 1,216,000	1,196,000
Butter produced	Lb. 70,628,000	133,714,000
Meat export.....	Cwt. 1,454,000	3,390,000

The movement in prices will be seen from the following tabulation, which is based chiefly on an analysis of the New South Wales trade. The prices of 1899 are represented by 1,000:—

Year,	Price Levels of—				
	Wool.	Butter.	Cattle.	Tallow.	Hides.
1891	714	971	1,019	894	827
1892	701	979	1,003	912	706
1893	628	905	826	1,010	626
1894	581	750	634	938	578
1895	646	651	624	868	751
1896	690	915	1,040	781	631
1897	666	908	815	737	829
1898	717	964	1,074	836	881
1899	1,000	1,000	1,000	1,000	1,000

The prices obtained for all these articles, with the exception of cattle, show a large increase for the year 1899. Tallow was only exceeded once during the preceding eight years, and wool, butter, and hides not at all. The increase in wool is very marked, and bears out what has been said previously.