

SECTION IX.

FARMYARD AND DAIRY PRODUCTION.

§ 1. Introductory.

1. **General.**—Amongst the live stock brought out by Captain Phillip in 1788 were included one bull, four cows, one calf, and twelve pigs, these being established at Farm Cove when Port Jackson was settled. Of the early importations of cattle the greater part was slaughtered to relieve the necessity of the colonists in the famines which several times threatened the existence of the young community. It may be noted that the existing herds have sprung not only from the original stock, but have been improved by the introduction of stud cattle and pigs, especially during late years. Stock-raising, with regard to the special requirements of dairying, etc., has in fact been scientifically considered only in comparatively recent times. The technical advances made in the manufacture of butter and cheese in Europe and elsewhere, and the necessity for keeping pace with them in connection with the export trade, of Australia, demanded in Australian stock-raising a judicious crossing of strains with a view to improving the quantity and quality of the milk supply. Further, the pasturage was improved by the eradication of grasses and herbage of little or no use, and the planting of suitable grasses and other fodder plants. Much of the indigenous herbage forms, however, excellent food for stock. Although some of the State Governments have made considerable importations for stud purposes, the importation of British and other cattle for breeding is ordinarily under private enterprise, but is safeguarded by Government supervision in order to prevent the introduction of diseases and pests, with the result that Australia is comparatively free from stock diseases. Permanent structures for the shelter of dairy herds are required only to a very small extent in the Commonwealth, the mildness of the climate rendering it possible for stock to thrive in the open throughout the year. Practical experience has, however, demonstrated the wisdom of rugging or otherwise protecting dairy cattle during the colder months, while the provision of shelters in the form of plantations of trees is attended by beneficial results. Where winter fodder must be grown it is given to the cattle in the fields, and consists of lucerne, oats, maize, barley, rye, and mangolds. Ensilage is highly recommended by dairy experts, and increasing use is being made thereof. Continued expansion of the dairying industry, and particularly its extension into non-coastal districts, will involve a more general use of the silo.

Some of the indigenous Australian grasses are particularly suitable for dairy cattle, since they possess milk-producing as well as fattening properties, but many of the holdings are sown with English and other imported grasses, varieties being chosen to suit particular localities. The area of land devoted to green food and permanent artificially-sown grasses is constantly increasing, its produce being, for the most part, devoted to the depasturing of dairy herds. The opinion, long held, that only heavily-grassed country with good rainfall was profitable for dairying has been controverted by experience, it having been shown that with proper care more lightly clad regions can be made to yield good milk results.

2. **State Supervision of Industry.**—Each of the State Agricultural Departments exercises considerable supervision in regard to the industry. Dairy experts are employed to give instruction in approved methods of production, to examine animals, to inspect

the buildings used for milking, separating and butter-making, and to examine the marketable produce. A high standard of dairy hygiene, cleanliness of *personnel* and *matériel*, and purity of produce have also been insisted upon under State laws. Financial assistance has been given to facilitate the economic handling of dairy products, and much benefit has resulted, the advances having generally been promptly repaid.

For the maintenance of the purity and quality of Australian butter, the Commonwealth regulations under the Commerce Act 1905 enact that butter intended for shipment overseas must be covered with a true trade description, and that at least the following matter should appear in the brand:—The word "Australia," the name of the State in which it was produced, net weight, manufacturer's or exporter's name or registered brand, and the words, "pure creamery butter," "pastry butter," "milled butter" (that is, butter which is a mixture or blend of two or more butters ordinarily packed alone and under separate names or brands), or "re-packed butter," as the case may require. Other matter may be added, but it must be true, and not liable to mislead. *Margarine* must be so stamped or marked. All butter, etc., intended for export must be sent for inspection to appointed places. The inspecting officer issues a certificate on the authorised form.

The regulations now in force contain important provisions in regard to the standard for export dairy products. By means of these provisions purity and quality are guaranteed. Trade is also facilitated, since quantities of butter, etc., are purchased solely on the certificate issued, without inspection. The standards are as follow:—

Butter.—Butter which contains only—No fat other than butter fat; not more than 15 per cent. of water, 3 per cent. of casein, 0.5 per cent. of boric acid, 4 per cent. of salt; not less than 82 per cent. of butter fat; any colouring matter deemed by the Minister to be harmless.

Cheese.—Cheese which does not contain any foreign matter, other than rennet, salt, or colouring matter deemed by the Minister to be harmless.

Concentrated Milk.—Pasteurised milk which is concentrated by any process whatever, and not subsequently sterilised, and which contains not less than 9 per cent. of butter fat and 24 per cent. of milk solids not fat, and no foreign substance other than 0.5 per cent. of boric acid.

Condensed Milk.—Milk which is condensed or concentrated by any process whatever, with or without the addition of cane sugar, and which, when containing such sugar, also contains not less than 9 per cent. of butter fat, and 22 per cent. of milk solids not fat, or which, when not containing such sugar, contains not less than 8 per cent. of butter fat and 20 per cent. of milk solids not fat.

Dried Milk.—Milk from which the water has been removed by a process of heating, without the addition of any extraneous matter, and which, when dissolved in or treated with water, according to any directions supplied by the maker or vendor thereof, produces milk as defined in this Schedule.

Honey.—The ripened, unfermented honey of bees, which does not contain any foreign matter.

Milk.—The milk of cows, whether mixed or not, and containing not less than 3 per cent. of butter fat, nor less than 8.5 per cent. solids not butter fat.

The trade description prescribed must be permanently affixed on the goods or on the containing packages. In the case of butter the trade description must, with additional particulars, be indelibly impressed on the outer covering.

Butter and cheese are to be graded by the examining officer as follows:—

BUTTER.—

- Superfine—Pure creamery butter, graded at 95 to 100 points.
- First grade—Pure creamery butter, graded at 90 to 94 points.
- Second grade—Pure butter, graded at 83 to 89 points.
- Third grade—Pure butter, graded at 75 to 82 points.
- Pastry butter—Pure butter, graded at less than 75 points.

CHEESE.—

- Superfine—Pure cheese, graded at 95 to 100 points.
- First grade—Pure cheese, graded at 90 to 94 points.
- Second grade—Pure cheese, graded at 83 to 89 points.
- Third grade—Pure cheese, graded at 75 to 82 points.

In grading butter and cheese, the maximum points to be awarded are: Flavour and aroma, 50 points; texture, including body, grain, and moisture, 30 points; condition, including colour, salting, packing, and covering, 20 points. An official grade mark is to be applied to all export butter and cheese graded at over 89 or under 75 points, as follows:—

- Butter and cheese graded at 95 to 100 points—Superfine.
- Butter and cheese graded at 90 to 94 points—First grade.
- Butter graded at under 75 points—Pastry.
- Cheese graded at under 75 points—Below standard.

Impure butter and cheese are not graded at all. The exportation of unsound, inferior, or abnormal dairy products is prohibited, unless the trade description applied to the goods includes the words, "Below Standard."

3. Mixed Farming.—Dairying is not now, as formerly, wholly confined to farmers, since many graziers in a large way of business have lately given it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established.

4. Factory System.—Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories, supplied by numerous separating establishments or "creameries," has resulted in a considerable reduction in the cost of manufacture, since improved appliances, such as refrigerators, may be profitably worked at the larger establishments. The product is also of a more uniform quality. The number of farmers who adhere to hand processes is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires only about 2.6 gallons.

5. Butter and Cheese Factories.—The establishments in the Commonwealth where the manufacture of butter, cheese, and condensed milk was carried on, numbered 548 in 1910. These were distributed as regards the various States as follows:—New South Wales, 181; Victoria, 203; Queensland, 82; South Australia, 53; Western Australia, 3; Tasmania, 26.

§ 2. Milk, Butter, and Cheese.

1. **Dairy Herds.**—Since the drought year 1902 there has been in each State a general yearly increase in the number of dairy cows. In New South Wales, Victoria, South Australia proper, and Tasmania—as will be seen from the table of cattle and dairy cattle given below—the proportion of dairy cattle to all cattle is high. In Queensland, the Northern Territory, and Western Australia there is a greatly preponderating number of other cattle, dairying not being firmly established in the tropical regions of the Continent. In the tables which follow in this section the return for Northern Territory is, unless shewn separately, included in South Australia, the dairy products from the newly-acquired Commonwealth territory being very small:—

CATTLE AND DAIRY CATTLE, COMMONWEALTH, 1906 to 1910.

State.			1906.	1907.	1908.	1909.	1910.
New South Wales	...	All Cattle	2,549,944	2,751,193	2,955,934	3,027,727	3,140,307
	...	Dairy Cows	667,708	713,223	736,683	755,879	826,443
Victoria	...	All Cattle	1,804,323	1,842,807	1,574,162	1,549,640	1,547,569
	...	Dairy Cows	701,309	709,279	609,166	625,063	668,777
Queensland	...	All Cattle	3,413,919	3,692,232	4,321,600	4,711,782	5,131,699
	...	Dairy Cows	215,000†	232,583	304,281	333,839	365,444
South Australia	...	All Cattle	325,724	334,671	340,376	344,034	384,862
	...	Dairy Cows	97,843	100,743	106,269	110,757	119,628
Western Australia	...	All Cattle	690,011	717,377	741,788	783,217	825,040
	...	Dairy Cows	34,822	31,489	31,522	29,176	30,785
Tasmania	...	All Cattle	211,117	215,523	205,827	199,945	201,854
	...	Dairy Cows	49,132	54,245	50,831	50,996	52,966
Northern Territory	...	All Cattle	354,371	374,683	407,992	414,046	513,383
	...	Dairy Cows	680	489	546	464	556
Commonwealth	...	All Cattle	9,349,409	10,128,486	10,547,679	11,040,391	11,744,714
	...	Dairy Cows	1,766,494	1,892,351	1,839,398	1,906,174	2,064,599

† Statistics not collected: figures estimated.

2. **Milk.**—The annual quantity of milk produced per dairy cow varies greatly with locality and season, probably reaching as high as 500 gallons, but averaging for the whole of Australia, for all dairy cows and for all seasons, something under 300 gallons per annum. The best yields over a series of years appear to be in South Australia, New South Wales, Victoria, and Tasmania, while Western Australia is below Queensland. In the following table the average yields per cow for 1908, 1909 and 1910 are taken from the number of dairy cows which were, during any part of the year, milking. The average given is considerably below that for cows which were yielding during the greater part of the year.

PRODUCTION OF MILK, COMMONWEALTH, 1908, 1909 and 1910.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
1908—							
Dairy cows	No. 736,683	609,166	304,281	106,815	31,522	50,931	1,839,398
Production of milk	gals. 188,518,562	148,122,200	63,934,402	28,883,000	4,531,212	13,520,000*	447,509,376
Aver. yield per cow	gals. 257	243	210	270	144	265	243
1909—							
Dairy cows	No. 755,879	625,063	333,839	111,221	29,176	50,996	1,906,174
Production of milk	gals. 201,183,337	162,994,658	70,642,868	29,778,032	4,593,446	11,600,000*	481,092,361
Aver. yield per cow	gals. 266	261	212	268	168	227	252
1910—							
Dairy Cows	826,443	668,777	365,444	120,184	30,785	52,966	2,064,599
Production of milk	gals. 235,577,702	196,674,373	37,648,322	34,672,756	5,125,124	13,300,000*	572,998,277
Aver. yield per cow	gals. 285	294	240	288	166	251	278

* Estimated.

3. Butter and Cheese.—The butter output shews, in general, a tolerably steady increase since the drought year 1902, the most marked development being in Queensland. The production of butter reached its highest figures in 1910, the highest previous yield being in 1906. The same year marks the highest cheese production, the return being somewhat better than that for 1909. In both butter and cheese a falling-off is shewn in some of the States in 1907 and 1908, due to the dryness of the season. There was a recovery in 1909. For the five years from 1906 to 1910 the figures are:—

PRODUCTION OF BUTTER AND CHEESE, COMMONWEALTH, 1906 to 1910.

State.	1906.	1907.	1908.	1909.	1910.
BUTTER.					
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ...	58,941,137	60,041,429	61,380,876	62,865,608	76,624,890
Victoria ...	68,088,168	63,746,354	48,461,398	55,166,555	70,603,787
Queensland ...	22,746,593	22,789,158	23,836,357	24,592,711	31,258,333
South Australia ...	8,873,632	8,519,340	8,130,560	8,482,168	10,717,486
Western Australia ...	380,157	436,529	365,593	414,453	855,188
Tasmania* ...	904,930	847,860	3,140,573	2,751,757	3,365,982
Commonwealth† ...	159,934,617	156,380,670	145,317,357	154,273,252	193,425,606
CHEESE.					
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ...	5,458,645	4,586,857	4,763,360	4,775,268	5,191,089
Victoria ...	4,877,593	4,397,909	4,328,644	5,025,834	4,530,893
Queensland ...	2,921,140	2,684,588	3,199,510	3,662,497	4,146,661
South Australia ...	1,398,785	1,385,790	1,556,894	1,578,378	1,796,281
Western Australia ...	1,314	580	980	1,570	3,306
Tasmania* ...	190,481	327,839	910,400	731,390	868,781
Commonwealth† ...	14,847,958	13,383,563	14,759,788	15,774,837	16,537,011

* Prior to 1908 Tasmanian statistics relate only to the quantities made in factories. † The totals for the Commonwealth here given prior to 1908 are exclusive of Tasmanian butter and cheese made elsewhere than in factories.

4. Concentrated Milk.—"Condensed" or "concentrated" milk denotes milk the bulk of which is reduced by evaporation, no sweetening agent being added. When a sweetening agent is added it is called "preserved" milk. Small quantities of such milk have been made, but the industry is at present by no means a large one. No condensed or concentrated milk is made in South Australia, Western Australia, or Tasmania. In New South Wales, Victoria, and Queensland the following quantities are returned for 1908, 1909 and 1910:—

CONDENSED AND CONCENTRATED MILK MADE, 1908, 1909 and 1910.

Year.	N.S.W.	Victoria.	Queensland.	Commonwealth.
	lbs.	lbs.	lbs.	lbs.
1908 ...	2,399,673	3,308,854	3,935,024	9,643,551
1909 ...	2,400,687	3,487,312	7,038,202	12,926,201
1910 ...	1,940,481	2,707,110	7,843,670	12,491,261

5. Oversea Trade in Milk, Butter, and Cheese.—The tables following give the imports, exports, and net exports or imports of butter, cheese, and milk. In each of the five years exports of butter exceeded imports; in three the cheese import was heavier than the export, and this was the case each year with milk.

IMPORTS, EXPORTS, AND NET IMPORTS OF BUTTER, CHEESE AND MILK, COMMONWEALTH, 1906 to 1910.

IMPORTS.

Products.		1906.	1907.	1908.	1909.	1910.
Butter lbs.		70,143	20,885	40,874	80,111	71,695
" £		3,133	910	2,368	4,078	3,570
Cheese lbs.		304,951	299,711	566,808	367,504	303,155
" £		11,533	12,371	20,433	14,720	13,772
Milk—concentrated and preserved ¹ lbs.		10,672,265	9,279,091	9,145,306	7,459,232	8,543,158
" " " " £		189,316	170,478	180,194	145,736	135,297

EXPORTS.

Butter lbs.	75,802,856	66,076,915	51,206,359	55,700,987	87,928,151
" £	3,240,063	2,890,261	2,387,450	2,402,619	3,952,808
Cheese lbs.	252,115	495,530	153,589	203,477	921,583
" £	6,832	12,896	5,237	5,771	22,178
Milk—concentrated and preserved ¹ lbs.	31,540	322,119	309,789	360,821	517,634
" " " " £	6,375	6,305	7,013	7,852	10,289

NET EXPORTS.²

Butter lbs.	75,732,713	66,056,030	51,165,485	55,620,876	87,856,456
" £	3,236,930	2,889,351	2,385,082	2,398,541	3,949,238
Cheese lbs.	52,836	195,819	413,219	164,027	618,428
" £	4,701	525	15,196	8,949	8,406
Milk—concentrated and preserved ¹ lbs.	10,360,725	8,956,972	8,835,517	7,078,411	8,025,524
" " " " £	182,941	164,173	173,181	137,884	125,008

1. See definition on page 442.

2. — signifies net imports.

The large quantities of concentrated and preserved milk imported for local use indicate room for development in this industry.

6. Local Consumption of Butter and Cheese.—The total production of butter and cheese, with the net export or import subtracted or added, gives approximately the consumption in the Commonwealth. In the period considered hereunder, 1907 and 1910 were the only years in which the local supply of cheese was adequate:—

BUTTER AND CHEESE LOCALLY CONSUMED, 1906 to 1910.

Product.	1906.	1907.	1908.	1909.	1910.
	lbs.	lbs.	lbs.	lbs.	lbs.
Butter ... Total	84,201,904	90,324,640	94,151,872	98,652,376	105,569,150
" ... Per head of mean population ...	20.7	21.9	22.4	23.1	24.2
Cheese ... Total	14,900,794	13,579,382	15,173,007	15,938,864	15,918,583
" ... Per head of mean population ...	3.7	3.3	3.6	3.8	3.7

The consumption in 1910 averaged 24.2 lbs. of butter and 3.7 lbs. of cheese per head of mean population, an amount probably unsurpassed anywhere. The consumption of butter and cheese in the United Kingdom is given as 19 lbs. per head, and is therefore only equal to about three-fourths of that of the Commonwealth.

§ 3. Pigs, Bacon, etc.

1. **Pigs.**—The pigs in Australasia numbered 43 in 1792; 4017 in 1800; 8992 in 1810; 33,906 in 1821; 66,086 in 1842; and 121,035 in 1851. The figures for each State in subsequent census years, and in the last five years, were as follows:—

NUMBER OF PIGS, COMMONWEALTH. 1861 to 1910.

State.	1861.	1871.	1881.	1891.	1901.	1906.	1907.	1908.	1909.	1910.
New South Wales ...	146,091	213,193	213,916	253,189	265,730	243,370	216,145	215,822	237,849	321,632
Victoria ...	43,490	177,447	239,926	286,780	334,295	220,452	211,002	179,358	217,921	333,281
Queensland ...	7,465	32,707	56,438	122,672	121,641	138,232	133,246	124,749	124,803	152,212
South Australia ...	69,286	95,542	120,718	83,797	88,886	111,240	90,741	78,454	80,410	96,386
Western Australia ...	11,984	14,265	22,530	25,930	61,052	56,293	53,399	46,652	47,062	57,628
Tasmania ...	40,841	52,863	49,660	73,520	58,716	42,985	46,704	47,945	55,705	63,715
Northern Territory					989	1,037	2,864	2,711	1,337	996
Commonwealth	319,147	586,017	703,188	845,888	931,309	813,569	754,101	695,691	765,137	1,025,850

* Included in South Australia.

The number of pigs was highest in 1904, when for the first time it was over a million; prior to 1899 it had never reached 900,000. That year, the two immediately following, and 1904, 1905 and 1910 mark the highest totals. An examination of the returns shews remarkable fluctuations. In none of the States was the number as high in 1906 as in the preceding year, and in Tasmania alone was the figure for 1907 higher than that for 1906. A similar experience was met in 1908. In several States the falling-off over the three years is very marked. In 1909 a considerable recovery in the figures is shewn, increases over 1908 being large in New South Wales, Victoria, and Tasmania. The increase in 1910 in all the States is still more remarkable, being thirty-four per cent. in the whole Commonwealth. The number of pigs per head of population, and the number per square mile, will be found in the tables of live stock, pages 334 and 335.

2. **Bacon and Ham.**—From 1905 to 1908 the production of bacon and ham in the Commonwealth shewed little annual variation. In 1909 there was a considerable falling-off, and a large increase in 1910. It will be noticed from the table above that the number of pigs in Australia in 1908 was much below the average.

PRODUCTION OF BACON AND HAM, COMMONWEALTH, 1906 to 1910.

State.	1906.	1907.	1908.	1909.	1910.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ...	11,843,595	10,358,526	9,488,299	9,931,377	12,620,067
Victoria ...	18,051,166	17,545,720	14,411,401	13,620,485	16,438,837
Queensland ...	10,846,959	10,015,008	11,324,323	9,228,317	10,758,963
South Australia ...	†	2,311,004	3,392,162	3,348,050	3,741,942
Western Australia ...	272,494	209,419	152,896	120,623	121,154
Tasmania* ...	151,700	279,504	1,333,856	1,526,115	1,468,789
Commonwealth†	41,165,914	40,719,181	40,102,937	37,774,967	45,149,752

* Prior to 1908 Tasmanian statistics relate only to quantities made in factories. † The totals for the Commonwealth here given are exclusive of Tasmanian bacon and ham made elsewhere than in factories prior to 1908, and of South Australian bacon and ham in 1906. ‡ Information not available.

3. **Oversea Trade in Pig Products.**—The oversea trade in pigs and pig products is shewn in the following tables:—

**IMPORTS, EXPORTS, AND NET EXPORTS OF BACON AND HAM, FROZEN PORK,
PIGS, AND LARD, COMMONWEALTH, 1906 to 1910.**

Particulars.				1906.	1907.	1908.	1909.	1910.
BACON AND HAM.								
Imports ...	...	...	lbs.	194,059	237,644	273,922	244,903	204,488
" ...	...	...	£	7,171	9,625	10,013	9,384	8,687
Exports ...	...	...	lbs.	532,851	420,819	391,820	403,801	1,605,699
" ...	...	...	£	18,467	17,579	18,360	18,979	57,060
Net Exports	...	...	lbs.	338,792	183,175	117,898	158,898	1,401,211
"	...	...	£	11,296	7,954	8,347	9,595	48,373
FROZEN PORK.								
Imports ...	...	...	lbs.	139,363	187,479	110,647	109,620	106,757
" ...	...	...	£	3,717	5,312	3,329	3,301	3,227
Exports ...	...	...	lbs.	3,472,224	1,446,758	826,102	394,559	741,410
" ...	...	...	£	60,936	28,406	20,446	9,318	17,087
Net Exports	...	...	lbs.	3,332,861	1,259,279	715,455	284,939	634,653
"	...	...	£	57,219	23,094	17,117	6,017	13,860
PIGS.								
Imports ...	...	...	No.	24	7	39	31	50
" ...	...	...	£	1,269	69	968	1,177	799
Exports ...	...	...	No.	220	185	117	229	303
" ...	...	...	£	263	383	297	460	477
Net Exports ¹	...	...	No.	196	178	78	198	253
"	...	...	£	— 1,006	314	— 671	— 717	— 322
LARD.								
Imports ...	...	...	lbs.	64,561	36,625	313,060	358,213	198,897
" ...	...	...	£	1,294	980	7,681	9,148	5,573
Exports ...	...	...	lbs.	551,268	458,327	511,774	1,618,995	3,112,190
" ...	...	...	£	8,373	8,554	10,906	28,948	62,664
Net Exports	...	...	lbs.	486,707	421,702	198,714	1,260,782	2,913,293
"	...	...	£	7,079	7,574	3,225	19,800	57,091

1. — signifies net imports.

From 1901 to 1903 there was a considerable net import of bacon and ham, but for the following years there was a large net export. The local production of frozen pork and lard was for each of the years shewn more than sufficient for the local demand. The net export of pig products was considerably greater in 1910 than in previous years.

4. **Local Consumption of Bacon and Ham.**—From 1904 to 1910 the production of bacon and ham was sufficient to meet the local demand, and there was a surplus for export, but in 1901, 1902, and 1903 this was otherwise, and considerable quantities were imported.

BACON AND HAM LOCALLY CONSUMED, 1906 to 1910.

Consumption. ¹		1906.	1907.	1908.	1909.	1910.
		lbs.	lbs.	lbs.	lbs.	lbs.
Total ...	...	40,827,122	40,536,006	39,985,039	37,616,069	43,748,541
Per head of mean population	...	10.5	9.8	9.5	8.8	10.0

1. This excludes South Australia in 1906, for which no figures of production were available.

5. **Total Dairy Production.**—The total dairy production of the Commonwealth in 1910 is shewn below :—

TOTAL DAIRY PRODUCTION, COMMONWEALTH, 1910.

Where Produced.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
MILK.							
On Dairy & other Farms	gallons. 235,577,702	gallons. 196,674,373	gallons. 87,648,322	gallons. 34,672,756	gallons. 5,125,124	gallons. 13,300,000*	gallons. 572,998,277
BUTTER.							
In Factories ...	lbs. 71,390,099	lbs. 65,063,516	lbs. 29,058,740	lbs. 6,720,630	lbs. 213,697	lbs. 1,789,982	lbs. 174,227,684
On Dairy & other Farms	5,234,731	5,540,271	2,199,593	3,996,836	641,491	1,585,000*	19,197,922
Total ...	76,624,830	70,603,787	31,258,333	10,717,466	855,188	3,365,982*	193,425,606
CHEESE.							
In Factories ...	lbs. 3,080,885	lbs. 2,707,630	lbs. 4,018,898	lbs. 1,788,280	lbs. ...	lbs. 464,781	lbs. 12,060,474
On Dairy & other Farms	2,110,204	1,823,263	127,763	8,001	3,306	404,000*	4,476,537
Total ...	5,191,089	4,530,893	4,146,661	1,796,281	3,306	868,781*	16,537,011
CONDENSED OR CONCENTRATED MILK.							
In Factories ...	lbs. 1,940,481	lbs. 2,707,110	lbs. 7,843,670	...	...	...	lbs. 12,491,261
BACON AND HAM.							
In Factories ...	lbs. 10,183,441	lbs. 13,455,397	lbs. 9,916,051	lbs. 2,656,147	lbs. ...	lbs. 613,789	lbs. 36,824,825
On Dairy & other Farms	2,436,626	2,983,410	842,912	1,085,795	121,154	855,000*	8,324,927
Total ...	12,620,067	16,438,837	10,758,963	3,741,942	121,154	1,468,789*	45,149,752

* Estimated.

§ 4. Poultry Farming.

1. **Development of the Industry.**—Until recently, poultry farming as a well organised industry could scarcely be said to exist, although both in metropolitan and country districts poultry has of course long been kept for the table and egg supplies. The aggregate output, though considerable, represented relatively little value beyond the cost of production, owing to imperfect management. Many farmers however, both wheat-growers and dairymen, have maintained a large poultry stock, erecting poultry yards constructed on modern principles, and feeding from the stubble fields and waste grain with a minimum expenditure in tending. This brought about a considerable addition to the net agricultural or dairying return. The poultry industry during recent years has assumed an independent position among rural industries, notwithstanding that large numbers of poultry runs on wheat and dairy farms are still maintained; poultry farming is also carried on in conjunction with pig farming. In special poultry farms, breeding on scientific principles and a proper arrangement of the runs is secured, feeding and reproduction are technically attended to, and proper shelter is provided either by means of trees or sheds. Poultry experts are engaged by the State Governments to instruct in matters that will amplify the returns. Poultry for consumption is extensively reared, and the egg-producing qualities of the birds have also been greatly improved by careful breeding. Egg collecting circles have been formed in some country districts, to develop, under Government supervision and with Government aid until the organisation is self-supporting, the industry on co-operative lines. A member of the circle is elected to act as secretary, and he receives all the eggs from the members, tests, packs, and forwards them

to the metropolitan depôt for shipment. Only clean and fresh eggs are to be delivered to the secretary under penalty of fine and expulsion from the circle. Another method of collecting and marketing the eggs is through the local butter factories, where eggs are delivered by the suppliers of milk and cream a number of times each week.

2. **Production of Poultry.**—Figures for the yield of poultry products are difficult to obtain. The following values are returned :—

**ESTIMATED VALUE OF POULTRY AND EGGS, COMMONWEALTH,
1908-9, 1909-10 and 1910-11.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust	Tasmania.	C'wealth.
	£	£	£	£	£	£	£
1908-9 ...	1,202,000	1,547,000	*	399,349	133,544	*	3,281,893†
1909-10 ...	1,309,000	1,570,000	185,000	431,575	160,562	*	3,656,137‡
1910-11 ...	1,170,000	1,592,000	204,000	496,311	168,251	227,000	3,857,562

* Not available. † Excluding Queensland and Tasmania. ‡ Excluding Tasmania.

3. **Oversea Trade in Poultry Products.**—The imports and exports of eggs shew a considerable balance on the side of imports in each of the years 1901 to 1906 and in 1909 and 1910. In 1907 the export greatly exceeded the import, and in 1908 the imports were greater in quantity, but less in value, than the exports. In 1909 and 1910, the balance, both in number and value, was on the side of imports. The figures for frozen poultry indicate that a considerable oversea trade is carried on.

**IMPORTS, EXPORTS, AND NET EXPORTS OF EGGS AND LIVE AND FROZEN POULTRY,
COMMONWEALTH, 1906 to 1910.**

Particulars.	1906.	1907.	1908.	1909.	1910.
EGGS.					
Imports ... doz.	83,925	60,114	31,247	38,931	39,330
" ... £	2,184	1,791	856	1,007	1,111
Exports ... doz.	38,090	88,684	17,261	10,527	3,853
" ... £	1,718	3,421	1,082	713	326
Net exports ¹ ... doz.	—45,835	28,570	13,986	—28,404	—35,477
" " ... £	—466	1,630	226	—294	—785
LIVE POULTRY.					
Imports ... No.	3,220	2,883	2,372	1,862	1,274
" ... £	1,747	957	633	944	663
Exports ... No.	2,806	3,280	2,290	4,708	3,251
" ... £	1,767	1,248	1,043	1,475	1,057
Net exports ¹ ... No.	—414	397	—82	2,846	1,977
" " ... £	20	291	410	531	394
FROZEN POULTRY.					
Imports ... lbs.	8,949	1,452	2,242	3,565	4,811
" ... £	331	43	75	100	131
Exports ... pair	34,655	31,261	22,444	5,828	7,680
" ... £	9,506	8,556	7,335	3,127	4,171
Net exports ...	—	—	—	—	—
" " ... £	9,175	8,513	7,260	3,027	4,040

1. — signifies net imports.

2. Quantity not available.

§ 5. Bee Farming.

1. **The Bee-farming Industry.**—Bee farming, like poultry farming, has ordinarily been an adjunct to agricultural or dairying industries, and can hardly yet be said to have been organised as a distinct industry. The returns collected shew that, while production

varies greatly, there is on the whole a fair improvement, to which the large increase in the Western Australian product since 1902 has considerably contributed. The annual average returns of honey from the hives range between 20 lbs. and 600 lbs. per hive.

The value of the export of honey from Australia was only £1541 in 1907, £3361 in 1908, £2675 in 1909, and £2435 in 1910. It is believed that this export could be considerably increased. Australian honey exhibited in the Franco-British Exhibition in London in 1908, obtained the highest award. It has been proved that there is no eucalyptus flavour in Australian honey, and the prejudice against it on that account is ill-founded.

2. **Production of Honey and Beeswax.**—The particulars of honey production are as given below :—

NUMBER OF HIVES AND PRODUCTION OF HONEY AND BEESWAX, 1908 to 1911.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Productive	Un-productive.	Total.	Quantity.	Value.	Quantity.	Value.
1908.	No.	No.	No.	lbs	£	lbs.	£
New South Wales	53,240	15,148	68,388	2,660,363	27,700	48,427	2,700
Victoria ...	27,505	15,707	43,212	1,138,992	13,050	24,521	1,330
Queensland ...	10,366	3,956	14,322	442,827	3,993	8,554	402
South Australia ...	18,529	5,101	23,630	953,305	8,938	12,854	696
Western Australia	9,881	2,140	12,021	255,489	3,726	6,454	565
Commonwealth*	119,521	42,052	161,573	5,451,066	57,407	100,810	5,693
1909.							
New South Wales	53,602	16,344	69,946	3,064,526	31,920	58,697	3,420
Victoria ...	†	†	40,595	2,373,628	26,544	38,674	1,934
Queensland ...	10,999	3,283	14,282	445,432	4,119	9,707	492
South Australia ...	19,549	4,471	24,020	1,007,717	10,497	12,063	603
Western Australia	13,928	2,631	16,559	309,109	3,122	6,217	466
Commonwealth*	†	†	165,402	7,200,412	76,202	125,358	6,915
1910.							
New South Wales	46,813	17,986	64,799	2,066,330	25,800	53,006	3,100
Victoria ...	32,914	9,718	42,632	1,611,284	18,463	22,369	1,305
Queensland ...	11,322	3,135	14,457	548,171	5,224	11,849	605
South Australia ...	17,551	6,450	24,001	812,487	8,463	10,059	503
Western Australia	10,902	2,837	13,739	409,345	4,264	9,841	574
Commonwealth*	119,502	40,126	159,628	5,447,617	62,214	107,124	6,087
1911.							
New South Wales	55,958	14,308	70,266	2,765,618	37,700	72,617	3,700
Victoria ...	37,541	15,221	52,762	2,308,405	24,046	34,695	1,880
Queensland ...	11,271	4,104	15,375	517,565	5,100	11,798	595
South Australia ...	22,786	5,204	27,990	996,376	10,379	10,608	552
Western Australia	8,686	1,934	10,620	338,507	4,231	7,215	541
Commonwealth*	136,242	40,771	177,013	6,926,471	81,456	136,933	7,268

* Exclusive of Tasmania.

† Not available.

3. **Oversea Trade in Bee Products.**—Both honey and beeswax are produced in the Commonwealth in sufficient quantities to supply all local requirements, and a considerable quantity of each is sent oversea.

**IMPORTS, EXPORTS, AND NET EXPORTS OF HONEY AND BEESWAX,
COMMONWEALTH, 1906 to 1910.**

Particulars.				1906.	1907.	1908.	1909.	1910.
HONEY.								
Imports	...	...	... lbs.	2,618	2,716	9,315	9,842	872
"	...	...	... £	27	35	98	249	23
Exports	...	...	... lbs.	58,297	102,047	226,465	168,953	182,083
"	...	...	... £	1,001	1,541	3,361	2,675	2,439
Net Exports	...	...	... lbs.	55,679	99,331	217,150	159,111	181,211
" "	...	...	... £	974	1,506	3,263	2,426	2,416
BEESWAX.								
Imports	...	...	... lbs.	13,725	14,070	7,527	19,041	7,821
"	...	...	... £	787	978	460	1,112	505
Exports	...	...	... lbs.	30,570	27,086	41,177	35,540	26,408
"	...	...	... £	1,768	1,618	2,479	2,064	1,587
Net Exports	...	...	... lbs.	16,845	13,016	33,650	16,499	18,587
" "	...	...	... £	981	640	2,019	952	1,082

§ 6. Summary of Australian Farmyard and Dairy Products.

The value of the principal farmyard and dairy products raised in the Commonwealth in 1910 was:—

**VALUE OF THE PRINCIPAL FARMYARD AND DAIRY PRODUCTS IN THE SEVERAL
STATES OF THE COMMONWEALTH DURING THE YEAR 1910.**

Produce.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
	£	£	£	£	£	£	£
Milk, consumed as							
subh ...	564,606	548,876	134,162	125,000	58,529	66,889	1,498,062
Butter ...	3,391,255	3,108,960	1,333,858	494,934	42,908	147,897	8,519,812
Cheese...	126,390	113,790	93,001	38,532	96	17,530	389,339
Condensed & concentrated milk	26,676	45,000	136,379	...	...	...	208,055
Bacon and ham ...	382,266	550,351	329,710	118,301	4,291	50,669	1,435,588
Poultry and eggs	1,170,000	1,592,000	204,000	496,311	168,251	227,000	3,857,562
Honey and wax ...	41,200	25,926	5,695	10,931	4,772	3,640	92,164

§ 7. Summary of Australian Farmyard and Dairy Products Exported, 1906 to 1910.

The quantities and values of Australian farmyard and dairy products exported from the Commonwealth during each of the years 1906 to 1910 are shewn below :—

QUANTITIES OF AUSTRALIAN FARMYARD AND DAIRY PRODUCTS EXPORTED FROM THE COMMONWEALTH DURING EACH OF THE YEARS 1906 to 1910.

Products.	1906.	1907.	1908.	1909.	1910.
Beeswax lbs.	30,471	27,058	41,177	35,540	26,408
Butter "	75,765,536	66,076,915	51,193,311	55,644,925	87,894,943
Cheese "	246,631	491,209	131,001	193,204	911,760
Eggs, albumen and yolk	*	*	*	*	*
Eggs doz.	37,900	88,615	17,113	10,359	3,753
Feathers, undressed	*	*	*	*	*
Honey lbs.	58,297	102,047	226,465	168,953	182,023
Lard "	550,021	458,059	511,016	1,617,442	3,105,307
Meats—					
Bacon and ham	530,459	415,251	389,718	396,342	1,604,362
Frozen poultry pair	33,833	31,261	22,444	5,828	7,650
" pork lbs.	3,472,224	1,446,758	826,102	394,559	741,410
Milk, concentrated and preserved	171,639	162,367	139,165	169,310	266,904
Pigs, living No.	220	185	117	229	303
Poultry, living "	2,806	3,280	2,290	4,708	3,251

* Quantity not available.

VALUE OF AUSTRALIAN FARMYARD AND DAIRY PRODUCTS EXPORTED FROM THE COMMONWEALTH DURING EACH OF THE YEARS 1906 to 1910.

Products.	1906.	1907.	1908.	1909.	1910.
	£	£	£	£	£
Beeswax	1,761	1,617	2,479	2,064	1,587
Butter	3,238,304	2,890,261	2,386,548	2,399,693	3,951,131
Cheese	6,662	12,733	4,305	5,337	21,730
Eggs, albumen and yolk ... ..	...	...	535	4	724
Eggs	1,710	3,419	1,074	706	320
Feathers, undressed	1,002	2,610	2,636	2,244	2,021
Honey	1,001	1,541	5,361	2,675	2,435
Lard	8,346	8,547	10,884	28,876	62,474
Meats—					
Bacon and ham	18,374	17,348	18,258	18,682	56,995
Frozen poultry	9,291	8,556	7,335	3,127	4,171
" pork	60,936	28,406	20,446	9,518	17,087
Milk, concentrated and preserved	3,386	2,924	3,139	3,319	4,866
Pigs, living	263	383	297	460	477
Poultry, living	1,767	1,248	1,043	1,475	1,057
Total	3,352,803	2,979,593	2,462,340	2,477,980	4,127,074

§ 8. British Imports of Dairy Products.

1. Value of Britain's Imports of Dairy Products.—Great Britain has paid annually since 1901 considerably more than £20,000,000 for imported butter, the value of the import in 1908, 1909, and 1910 being £24,081,000, £22,425,000, and £24,493,000 respectively; for imported cheese the amounts in the years named were respectively

£7,183,000, £7,234,000, and £7,296,000; for bacon and ham, £17,565,000, £16,914,000, and £15,918,000 respectively; and for pork, £1,660,000, £1,336,000, and £1,500,000 respectively.

2. **Butter.**—Australia in 1910 stood second in the value of butter imported into the United Kingdom, but the import of other Australian dairy products was inconsiderable.

IMPORTS OF BUTTER INTO THE UNITED KINGDOM, 1910.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	Cwt.	£		Cwt.	£
Denmark ...	1,726,091	10,208,192	Argentine Republic	65,944	374,285
Australia ...	667,966	3,566,952	Norway... ..	22,081	127,003
Russia ...	584,040	3,045,722	Canada ...	16,805	90,797
New Zealand ...	362,674	2,001,393	Other Countries ...	18,468	97,318
France ...	361,249	2,116,072			
Sweden ...	345,684	2,022,398			
Netherlands ...	154,537	843,318	Total ...	4,325,539	24,493,450

In October, 1907, a falling-off of imports of Australian butter into Great Britain was noticed, with the result that, three months later, there was a heavy shortage, and a "butter boom" ensued in London, prices rising rapidly, until a limit was reached with 156s. per cwt., the highest recorded for Australasian butter. After a short period of high values in February, 1908, prices steadied at 116s., and then gradually fell to 104s. in the middle of May, when European grass-fed butter was ready for the British market. Prices in London in 1909 and 1910 were of higher average than in any previous year since the Australian export trade was instituted twenty years ago.

3. **Cheese.**—The value of the British cheese import in 1910 was £6,800,000, of which four and a half million pounds' worth was received from Canada. The import from Australia was practically *nil*. Small experimental shipments were, however, made in 1908, 1909 and 1910, and a fair price was realised.

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1910 at £15,918,000, Great Britain received goods to the value of £6,783,000 from the United States; £6,360,000 from Denmark; and £1,588,000 from Canada. The British import from Australia was small, but experimental shipments have been made during recent years.

5. **Pork.**—The total value of British imports of pork (including refrigerated, frozen and salted) was £1,500,000 in 1910. Of this the value of Australian produce was *nil*, whilst from the Netherlands pork valued at £900,000 was imported.

6. **Other Products.**—There is practically no British import from Australia of honey, beeswax, poultry, game, lard, or eggs, but rabbits to the value of £568,000 were received from the Commonwealth in 1910.

§ 8. Graphical Representation of Dairy Production.

Two graphs shewing respectively the increase in dairy production and in the exports of butter will be found on page 358.