

## 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 not sprung from the original stock only, 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 generally having 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 oversea 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 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. On the request of exporters, butter and cheese are graded and marked as to their quality, and in such cases the inspecting officer issues a certificate on the authorised form. Trade is thereby facilitated, since quantities of butter, etc., can be 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 16 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.

When, upon request by exporters, butter and cheese are graded by the examining officer, the points awarded are 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  $2\frac{1}{2}$  gallons.

**5. Butter and Cheese Factories.**—The establishments in the Commonwealth where the manufacture of butter, cheese, and condensed milk was carried on, numbered 540 in 1911. These were distributed as regards the various States as follows:—New South Wales, 180; Victoria, 199; Queensland, 83; South Australia, 46; Western Australia, 3; Tasmania, 29.

## § 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 southern Queensland, however, the industry has developed remarkably during the last decade. In the tables which follow in this section the returns for the Northern Territory and the Federal Capital Territory are, unless shewn separately, included in South Australia and New South Wales respectively, the dairy products from the newly-acquired Commonwealth territories being small:—

## CATTLE AND DAIRY CATTLE, COMMONWEALTH, 1907 to 1911.

State.		1907.	1908.	1909.	1910.	1911.
New South Wales	All Cattle	2,751,193	2,955,994	3,027,727	3,140,307	3,185,824
	Dairy Cows	713,223	736,683	755,879	826,443	855,926
Victoria	All Cattle	1,842,807	1,574,162	1,549,640	1,547,569	1,647,127
	Dairy Cows	709,279	609,166	625,063	668,777	699,555
Queensland	All Cattle	3,892,232	4,321,600	4,711,782	5,131,699	5,073,201
	Dairy Cows	282,883	304,281	333,839	365,444	357,095
South Australia	All Cattle	334,671	340,376	344,034	384,862	393,566
	Dairy Cows	100,743	106,269	110,757	119,628	121,803
Western Australia	All Cattle	717,377	741,788	793,217	825,040	843,638
	Dairy Cows	31,489	31,522	29,176	30,785	27,740
Tasmania	All Cattle	215,523	205,827	199,945	201,854	217,406
	Dairy Cows	54,245	50,931	50,996	52,966	56,858
Northern Territory	All Cattle	374,683	407,992	414,046	513,383	459,780
	Dairy Cows	489	546	464	556	490
Fed. Capital Territory	All Cattle	*	*	*	*	8,412
	Dairy Cows	*	†	*	*	1,192
Commonwealth	All Cattle	10,128,486	10,547,679	11,040,391	11,744,714	11,828,954
	Dairy Cows	1,892,351	1,839,398	1,906,174	2,064,599	2,120,659

\* Included under New South Wales.

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 Victoria, South Australia, New South Wales, and Tasmania, while Western Australia is below Queensland. In the following table the average yields per cow for 1908, 1909, 1910 and 1911 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. It will be seen that the highest averages obtain in those States which have adopted more scientific methods of dairying, such as systematic breeding, culling of herds, milk testing, etc

## PRODUCTION OF MILK, COMMONWEALTH, 1908, 1909, 1910 and 1911.

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	1,830,398
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	70,642,888	29,778,032	4,893,446	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	2,064,590
Production of milk gals.	235,577,702	196,674,373	87,648,322	34,672,756	5,125,124	13,300,000†	572,993,277
Aver. yield per cow gals.	285	294	240	288	166	251	278
1911—							
Dairy Cows ...	857,118	699,555	357,095	121,803	28,230	56,858	2,120,659
Production of milk gals.	237,623,000	238,149,700	71,770,148	27,952,612	5,017,004	14,214,500	594,726,964
Aver. yield per cow gals.	277	340	200	230	178	250	280

\* Including figures for Federal Capital Territory, which in 1911 were 1192 dairy cows; 153,090 gallons of milk, averaging 128 gallons per cow. † 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 1911, the highest previous yields being in 1910 and 1906. The year 1910 marks the highest cheese production, the return being somewhat better than those for 1911 and 1909. In both butter and cheese a decrease took place 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 1907 to 1911 the figures are:—

## PRODUCTION OF BUTTER AND CHEESE, COMMONWEALTH, 1907 to 1911.

State.	1907.	1908.	1909.	1910.	1911.
BUTTER.					
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales* ...	60,041,429	61,380,876	62,865,608	76,624,830	83,208,568
Victoria ...	63,746,354	48,461,398	55,166,555	70,603,787	86,500,474
Queensland ...	22,789,158	23,838,357	24,592,711	31,258,333	27,858,535
South Australia ...	8,519,340	8,130,560	8,482,168	10,717,486	9,694,666
Western Australia ...	436,529	365,593	414,453	641,491	498,047
Tasmania† ...	847,860	3,140,573	2,751,757	3,365,982	3,817,455
Commonwealth: ...	156,380,670	145,317,357	154,273,252	193,211,909	211,577,745
CHEESE.					
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ...	4,586,857	4,763,360	4,775,268	5,191,089	5,460,652
Victoria ...	4,397,909	4,323,644	5,025,834	4,530,893	4,549,843
Queensland ...	2,684,588	3,199,510	3,662,497	4,146,661	3,718,257
South Australia ...	1,335,790	1,556,894	1,578,378	1,796,281	1,526,930
Western Australia ...	580	980	1,570	3,306	900
Tasmania† ...	327,839	910,400	731,290	868,781	630,130
Commonwealth: ...	13,383,563	14,759,788	15,774,837	16,537,011	15,886,712

\* Including Federal Capital Territory, where, in 1911, 31,630 lbs. of butter were produced.

† Prior to 1908 Tasmanian statistics relate only to the quantities made in factories. ‡ The totals for the Commonwealth here given for 1907 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 were

made prior to 1911, in which year the output for the Commonwealth was nearly doubled, Victoria showing a marked increase. There is still a large import of milk, as will be seen from the tables hereunder. 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, 1910, and 1911:—

### CONDENSED AND CONCENTRATED MILK MADE, 1908, 1909, 1910 and 1911.

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
1911 ... ..	3,058,497	13,697,691	6,227,519	22,983,707

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 two 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, 1907 to 1911.

#### IMPORTS.

Products.	1907.	1908.	1909.	1910.	1911.
Butter ... .. lbs.	20,885	40,874	80,111	71,695	22,607
" " " " " £	910	2,368	4,078	3,570	1,081
Cheese ... .. lbs.	299,711	566,808	367,504	303,155	318,891
" " " " " £	12,371	20,433	14,720	13,772	14,461
Milk—concentrated and preserved <sup>1</sup> lbs.	9,279,091	9,145,306	7,439,232	8,543,158	4,166,117
" " " " " £	170,478	180,194	145,736	135,297	74,278

#### EXPORTS.

Butter ... .. lbs.	66,076,915	51,206,359	55,700,987	87,928,151	101,722,136
" " " " " £	2,890,261	2,387,450	2,402,619	3,952,808	4,637,362
Cheese ... .. lbs.	495,530	153,589	203,477	921,583	1,159,363
" " " " " £	12,896	5,237	5,771	22,178	27,243
Milk—concentrated and preserved <sup>1</sup> lbs.	322,119	309,789	360,821	517,634	1,260,323
" " " " " £	6,305	7,013	7,852	10,289	21,990

#### NET EXPORTS.<sup>2</sup>

Butter ... .. lbs.	66,056,030	51,165,485	55,620,876	87,856,456	101,699,529
" " " " " £	2,889,351	2,385,082	2,398,541	3,949,238	4,636,281
Cheese ... .. lbs.	195,819	413,219	164,027	618,428	840,472
" " " " " £	525	15,196	8,949	8,406	12,782
Milk—concentrated and preserved <sup>1</sup> lbs.	8,956,972	8,835,517	7,078,411	8,025,524	2,905,794
" " " " " £	164,173	173,181	137,884	125,008	52,288

1. See definition on page 434.

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, 1910 and 1911 were the years in which the local supply of cheese was adequate:—

## BUTTER AND CHEESE LOCALLY CONSUMED, 1907 to 1911.

Product.		1907.	1908.	1909.	1910	1911.
		lbs.	lbs.	lbs.	lbs.	lbs.
Butter	Total	90,324,640	94,151,873	98,652,376	105,569,150	109,878,216
"	Per head of mean population	21.9	22.4	23.1	24.2	24.5
Cheese	Total	13,579,382	15,173,007	15,938,864	15,918,853	15,046,240
"	Per head of mean population	3.3	3.6	3.8	3.7	3.4

The consumption in 1911 averaged 24.5 lbs. of butter and 3.4 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 about 19 lbs. per head.

## § 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 1911.

State.	1861.	1871.	1881.	1891.	1901.	1907.	1908.	1909.	1910.	1911.
New South Wales ...	146,091	213,193	213,916	253,189	265,730	216,145	215,822	237,849	321,632	370,700
Victoria ...	43,480	177,447	239,926	286,780	334,225	211,002	179,358	217,921	333,281	348,069
Queensland ...	7,465	32,707	56,438	122,672	121,641	133,246	124,749	124,303	152,212	173,902
South Australia ...	69,286	95,542	120,718	83,797	88,886	90,741	78,454	80,410	96,386	93,130
Western Australia ...	11,984	14,285	22,330	25,930	61,052	53,399	46,632	47,062	57,628	55,635
Tasmania ...	40,841	52,863	49,660	73,520	58,716	46,704	47,945	55,705	63,715	67,392
Northern Territory	*	*	*	*	989	2,864	2,711	1,337	996	1,500
Federal Capital Territory ...	†	†	†	†	†	†	†	†	†	393
Commonwealth ...	319,147	586,017	703,188	845,888	931,309	754,101	695,691	765,137	1,025,850	1,110,721

\* Included in South Australia. † Included in New South Wales.

Prior to 1911 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, 1910 and 1911 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. In 1911 there was a further increase. The number of pigs per head of population, and the number per square mile, will be found in the tables of live stock, pages 331 and 332.

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 large increases in 1910 and 1911. 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, 1907 to 1911.

State.	1907.	1908.	1909.	1910.	1911.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales* ...	10,358,526	9,488,299	9,931,377	12,620,067	16,102,827
Victoria ...	17,545,720	14,411,401	13,620,485	16,438,837	19,546,772
Queensland ...	10,015,008	11,324,323	9,228,317	10,758,963	11,667,654
South Australia ...	2,311,004	3,392,162	3,348,050	3,741,942	4,311,497
Western Australia ...	209,419	152,896	120,623	121,154	97,136
Tasmania† ...	279,504	1,333,856	1,526,115	1,468,789	1,538,766
Commonwealth‡ ...	40,719,181	40,102,937	37,774,967	45,149,752	53,264,652

\* Including Federal Capital Territory where in 1911 22,670 lbs. of bacon and ham were produced. † Prior to 1908 Tasmanian statistics relate only to quantities made in factories. ‡ The totals for the Commonwealth here given for 1907 are exclusive of Tasmanian bacon and ham made elsewhere than in factories.

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, 1907 to 1911.

Particulars.	1907.	1908.	1909.	1910.	1911.
BACON AND HAM.					
Imports ...	lbs. 287,644	273,922	244,903	204,488	201,309
" ...	£ 9,625	10,013	9,384	8,687	8,566
Exports ...	lbs. 420,819	391,820	403,801	1,605,699	2,340,612
" ...	£ 17,579	18,360	18,979	57,060	74,178
Net Exports	lbs. 183,175	117,898	158,898	1,401,211	2,139,303
"	£ 7,954	8,347	9,595	48,373	65,612
FROZEN PORK.					
Imports ...	lbs. 187,479	110,647	109,620	106,757	...
" ...	£ 5,312	3,329	3,301	3,227	...
Exports ...	lbs. 1,446,758	826,102	394,559	741,410	1,640,013
" ...	£ 28,406	20,446	9,318	17,087	33,639
Net Exports	lbs. 1,259,279	715,455	284,939	634,653	1,640,013
"	£ 23,094	17,117	6,017	13,860	33,639
PIGS.					
Imports ...	No. 7	39	31	50	95
" ...	£ 69	968	1,177	799	539
Exports ...	No. 185	117	229	303	385
" ...	£ 383	297	460	477	748
Net Exports <sup>1</sup>	No. 178	78	198	253	350
"	£ 314	— 671	— 717	— 322	209
LARD.					
Imports ...	lbs. 36,625	313,060	358,213	198,897	387,626
" ...	£ 980	7,681	9,148	5,573	9,870
Exports ...	lbs. 458,327	511,774	1,618,995	3,112,190	3,399,386
" ...	£ 8,554	10,906	28,948	62,664	57,861
Net Exports	lbs. 421,702	198,714	1,260,782	2,913,293	3,011,760
"	£ 7,574	3,225	19,800	57,091	47,991

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, and in 1911 considerably greater than in 1910.

4. **Local Consumption of Bacon and Ham.**—From 1904 to 1911 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, 1907 to 1911.**

Consumption.	1907.	1908.	1909.	1910.	1911.
	lbs.	lbs.	lbs.	lbs.	lbs.
Total ... ..	40,536,006	39,985,039	37,616,069	43,748,541	51,125,349
Per head of mean population ...	9.8	9.5	8.8	10.0	11.4

5. **Total Dairy Production.**—The total dairy production of the Commonwealth in 1911 is shewn below:—

**TOTAL DAIRY PRODUCTION, COMMONWEALTH, 1911.**

Where Produced.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
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**MILK.**

	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
On Dairy & other Farms	237,623,000	238,149,700	71,770,148	27,952,612	5,017,004	14,214,500†	594,726,964

**BUTTER.**

	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
In Factories ... ..	78,425,512*	81,267,119	26,017,397	6,023,017	181,756	3,317,455	195,232,256
On Dairy & other Farms	4,783,056°	5,233,355	1,841,138	3,671,649	316,291	500,000†	16,345,489
Total ... ..	83,208,568*	86,500,474	27,858,535	9,694,666	498,047	3,817,455†	211,577,745

**CHEESE.**

	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
In Factories ... ..	3,485,919	3,047,261	3,633,886	1,520,537	...	480,130	12,167,733
On Dairy & other Farms	1,974,733	1,502,582	84,371	6,393	900	150,000†	3,718,979
Total ... ..	5,460,652	4,549,843	3,718,257	1,526,930	900	630,130†	15,886,712

**CONDENSED OR CONCENTRATED MILK.**

	lbs.	lbs.	lbs.	...	...	...	lbs.
In Factories ... ..	3,058,497	13,697,691	6,227,519	...	...	...	22,983,707

**BACON AND HAM.**

	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
In Factories ... ..	13,393,536*	15,190,449	10,726,070	3,071,669	...	838,766	43,220,490
On Dairy & other Farms	2,709,291*	4,356,323	941,584	1,239,823	97,136	700,000†	10,044,162
Total ... ..	16,102,827*	19,546,772	11,667,654	4,311,497	97,136	1,538,766†	53,264,652

\* Including Federal Capital Territory, where there was produced 27,630 lbs. of butter on farms and 4000 lbs. of butter in factories; also 22,670 lbs. of bacon and hams (on farms). † 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 States Government 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 were formed in some districts to develop the industry on co-operative lines.

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, 1910-11, and 1911-12.

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
1911-12 ...	1,200,000§	1,618,500	195,000	533,941	175,890	230,000	3,953,331

\* Not available. † Excluding Queensland and Tasmania. ‡ Excluding Tasmania.  
§ Including Federal Capital Territory, where the estimated value was £1800.

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, 1910 and 1911. 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, 1910 and 1911, 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, 1907 to 1911.**

Particulars.	1907.	1908.	1909.	1910.	1911.
<b>EGGS.</b>					
Imports ... .. doz.	60,114	31,247	38,931	39,330	40,969
" ... .. £	1,791	856	1,007	1,111	1,209
Exports ... .. doz.	88,684	17,261	10,527	3,853	5,734
" ... .. £	3,421	1,082	713	326	1,124
Net exports <sup>1</sup> ... .. doz.	28,570	13,986	28,404	35,477	35,235
" " ... .. £	1,630	226	294	785	85
<b>LIVE POULTRY.</b>					
Imports ... .. No.	2,883	2,372	1,862	1,274	2,398
" ... .. £	957	633	944	663	964
Exports ... .. No.	3,280	2,290	4,708	3,251	2,218
" ... .. £	1,248	1,043	1,475	1,057	1,068
Net exports <sup>1</sup> ... .. No.	997	82	2,846	1,977	180
" " ... .. £	291	410	531	394	104
<b>FROZEN POULTRY.</b>					
Imports ... .. lbs.	1,452	2,242	3,565	4,811	5,653
" ... .. £	43	75	100	131	257
Exports ... .. pair	31,261	22,444	5,828	7,680	16,869
" ... .. £	8,556	7,335	3,127	4,171	7,470
Net exports ... .. £	8,513	7,260	3,027	4,040	7,218

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 60 lbs. per hive.

The value of the export of honey from Australia was only £1541 in 1907, £3361 in 1908, £2675 in 1909, £2439 in 1910, and £4414 in 1911. 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 1912.

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	953,395	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
1912.							
New South Wales †	62,254	11,801	74,055	3,363,253	35,000	67,358	4,000
Victoria ...	37,052	16,659	53,711	1,635,260	20,441	28,405	1,420
Queensland ...	11,857	3,088	14,945	574,973	5,750	11,419	570
South Australia ...	18,015	10,029	28,044	760,094	8,709	9,745	528
Western Australia	8,686	2,032	10,718	416,823	5,210	13,730	1,030
Tasmania ...	†	†	†	†	3,000	†	300
Commonwealth*	137,864*	43,609*	181,473*	6,750,403*	78,110	130,657*	7,848

\* Exclusive of Tasmania.

† Not available.

† Including Federal Capital Territory, where the hives numbered 552, of which 524 were productive; 38,764 lbs. of honey, valued at £400, and 672 lbs. of beeswax, valued at £38, were produced.

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, 1907 to 1911.**

Particulars.				1907	1908.	1909.	1910.	1911.
<b>HONEY.</b>								
Imports	...	...	... lbs.	2,716	9,315	9,842	872	2,477
"	...	...	... £	35	98	249	23	93
Exports	...	...	... lbs.	102,047	226,465	168,953	182,083	353,367
"	...	...	... £	1,541	3,361	2,675	2,439	4,414
Net Exports	...	...	... lbs.	99,331	217,150	159,111	181,211	350,890
"	...	...	... £	1,506	3,263	2,426	2,416	4,321
<b>BEESWAX.</b>								
Imports	...	...	... lbs.	14,070	7,527	19,041	7,821	8,335
"	...	...	... £	978	460	1,112	505	564
Exports	...	...	... lbs.	27,086	41,177	35,540	26,408	12,691
"	...	...	... £	1,618	2,479	2,064	1,587	751
Net Exports	...	...	... lbs.	13,016	33,650	16,499	18,587	4,356
"	...	...	... £	640	2,019	952	1,082	187

**§ 6. Summary of Australian Farmyard and Dairy Products.**

The value of the principal farmyard and dairy products raised in the Commonwealth in 1911 was:—

**VALUE OF THE PRINCIPAL FARMYARD AND DAIRY PRODUCTS IN THE  
COMMONWEALTH DURING THE YEAR 1911.**

Produce	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aus.	Tas.	N. T.	F. Cp. Terr.	C'wealth.
	£	£	£	£	£	£	£	£	£
Milk, cons'm'd as such ...	702,300	700,100	158,300	154,200	79,100	79,300	2,500	1,100	1,876,900
Butter ...	3,639,000	3,982,000	1,242,500	463,000	26,500	169,500	(a)	1,400	9,523,900
Cheese ...	132,500	117,000	89,000	41,000	30	15,000	(a)	...	394,530
C'condens'd & con- cen'ted milk	41,488	228,295	115,671	...	...	...	...	...	385,454
Bacon & ham	410,000	570,000	368,000	128,000	3,000	41,000	...	600	1,520,600
Poultry & eggs	1,198,200	1,618,500	195,000	533,941	175,890	230,000	...	1,800	3,953,331
Honey & wax	38,562	21,861	6,320	9,237	6,240	3,300	...	438	85,958

(a) Information not available.

## § 7. Summary of Australian Farmyard and Dairy Products Exported, 1907 to 1911.

The quantities and values of Australian farmyard and dairy products exported from the Commonwealth during each of the years 1907 to 1911 are shewn below:—

### QUANTITIES OF AUSTRALIAN FARMYARD AND DAIRY PRODUCTS EXPORTED FROM THE COMMONWEALTH DURING EACH OF THE YEARS 1907 to 1911.

Products.	1907.	1908.	1909.	1910.	1911.
Beeswax ... .. lbs.	27,058	41,177	35,540	26,408	12,671
Butter ... .. "	66,076,915	51,193,311	55,644,925	57,894,943	101,722,136
Cheese ... .. "	491,209	131,001	193,204	911,760	1,149,134
Eggs, albumen and yolk ... .. doz.	88,615	17,113	10,359	3,753	5,542
Feathers, undressed ... .. "					
Honey ... .. lbs.	102,047	226,465	168,953	182,023	353,367
Lard ... .. "	458,059	511,016	1,617,442	3,105,307	3,599,209
Meats—					
Bacon and ham ... .. "	415,251	389,718	396,342	1,604,362	2,338,299
Frozen poultry ... .. pair	31,261	22,444	5,828	7,680	16,869
" pork ... .. lbs.	1,446,758	826,102	394,559	741,410	1,641,013
Milk, concentrated and preserved ... .. "	162,367	139,165	169,310	266,904	1,017,072
Pigs, living ... .. No.	185	117	229	333	385
Poultry, living ... .. "	3,280	2,290	4,708	3,251	2,198

\* Quantity not available.

### VALUE OF AUSTRALIAN FARMYARD AND DAIRY PRODUCTS EXPORTED FROM THE COMMONWEALTH DURING THE YEARS 1907 to 1911.

Products.	1907.	1908.	1909.	1910.	1911.
	£	£	£	£	£
Beeswax ... .. "	1,617	2,479	2,064	1,587	749
Butter ... .. "	2,890,261	2,386,548	2,399,693	3,951,131	4,637,362
Cheese ... .. "	12,733	4,305	5,337	21,730	26,754
Eggs, albumen and yolk ... .. "		535	4	724	651
Eggs ... .. "	3,419	1,074	706	320	437
Feathers, undressed ... .. "	2,610	2,636	2,244	2,021	2,971
Honey ... .. "	1,541	3,361	2,675	2,435	4,414
Lard ... .. "	8,547	10,884	28,876	62,474	57,854
Meats—					
Bacon and ham ... .. "	17,348	18,258	18,682	56,995	74,065
Frozen poultry ... .. "	8,556	7,335	3,127	4,171	7,470
" pork ... .. "	28,406	20,446	9,318	17,087	33,639
Milk, concentrated and preserved ... .. "	2,924	3,139	3,319	4,885	16,875
Pigs, living ... .. "	383	297	460	477	748
Poultry, living ... .. "	1,248	1,043	1,475	1,057	1,038
Total ... .. "	2,979,593	2,462,340	2,477,980	4,127,074	4,864,827

## § 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, 1910 and 1911 being £24,081,000, £22,425,000, £24,493,000, and £24,600,000 respectively; for imported cheese the amounts in the years named were.

respectively £6,684,000, £6,830,000, £6,810,000 and £7,140,000; for bacon and ham, £17,565,000, £16,914,000, £15,918,000, and £17,391,000 respectively; and for pork, £1,660,000, £1,336,000, £1,500,000, and £1,413,000 respectively.

2. **Butter.**—Australia in 1911 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, 1911.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	Cwt.	£		Cwt.	£
Denmark ...	1,707,178	10,509,137	Canada ...	61,936	355,063
Australia ...	896,085	4,604,284	Norway ...	29,813	173,939
Russia ...	638,284	3,312,569	Argentine Republic	24,209	145,154
Sweden ...	360,357	2,183,770	United States ...	23,052	119,172
New Zealand ...	276,446	1,495,242	Other Countries ...	9,597	49,108
France ...	171,080	1,066,702			
Netherlands ...	104,655	586,479	Total ...	4,302,692	24,600,619

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. In January, 1910, the average price was 111s. After a fall in 1911, 134s. was reached in the middle of January, 1912. Prices in London during the last five years have been considerably higher than the average of any previous year since the Australian export trade was instituted twenty years ago. A marked approach to Danish values has been made in the prices of Australian butter in the 1911-12 season.

3. **Cheese.**—The value of the British cheese import in 1911 was £7,140,000, of which over four and a half million pounds' worth was received from Canada. Small experimental shipments from Australia were made in 1908 and following years, a fair price being realised. In 1911, the value of the import from Australia was £37,000.

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1911 at £17,391,000, Great Britain received goods to the value of £7,780,000 from the United States; £6,696,000 from Denmark; and £1,991,000 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 £1,413,000 in 1911. Of this the value of Australian produce was *nil*, whilst from the Netherlands pork valued at £1,126,000 was imported into Great Britain.

6. **Other Products.**—There is practically no British import from Australia of honey, beeswax, poultry, game, lard, or eggs, but frozen rabbits to the value of £463,000 were received from the Commonwealth in 1911.

### § 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 360.