

SECTION IX.

FARMYARD AND DAIRY PRODUCTION.

§ 1. Introductory.

1. **General.**—The live stock which accompanied Captain Phillip in 1788 included one bull, four cows, one calf, and seven pigs, these being established at Farm Cove when Port Jackson was settled. The greater part of the early shipments of cattle was slaughtered to relieve the necessity of early colonists in the famines which several times threatened the existence of the young community. The existing herds have sprung not only from the original stud, but have been steadily improved by the introduction of stud cattle and pigs, continually increasing attention being paid thereto, especially during late years. Stock-raising with regard to the special requirements of dairying, etc., has in fact been properly considered only in comparatively recent times. The technical advances made in the manufacture of butter, cheese, etc., in Europe, and the necessity of having regard thereto in connection with the export trade of Australia, demanded in Australian stock-raising a judicious crossing of strains with a view to increasing the essential contents in the milk for the production of butter or cheese, the eradication of grasses of little or no use, and the planting in lieu thereof of leguminosæ, grasses, and other plants, so as to amplify the nutrient qualities of the natural herbage, which, however, it may be said, is very often excellent. The importation of British and other cattle for breeding purposes is ordinarily under private enterprise. Government supervision has at times been found necessary in order to prevent the introduction of diseases and pests, with the result that there is but little disease among Australian herds. Recently some of the State Governments have made considerable importations for stud purposes. Permanent structures for the shelter of dairy herds, etc., as a rule are not required anywhere in the Commonwealth. State nurseries, however, supply to settlers, gratis, trees for making shelter belts, and these are found to be sufficient. Owing to the mildness of the Australian climate heavy expenses for housing, stall-feeding, etc., are unnecessary. Where winter fodder must be grown it is given to the cattle in the fields, and consists mostly of lucerne, oats, maize, barley, and rye. Ensilage is highly recommended by dairy experts, and, when necessary, increasing use is 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.

Australian grasses are particularly suitable for dairy cattle, since they possess milk-producing, as well as fattening, properties. 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 being shown that more lightly clad regions 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 and separating, and to examine the marketable produce.

A high standard of dairy hygiene, cleanliness of *personnel* and *materiel*, and purity of the article and freedom from adulteration 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 oversea has to 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," or "re-packed butter," as the case may require. Other matter may be added, but it must be true, and not liable to mislead.

Butter may be shipped at the exporter's discretion in one of three different ways:—

- (i.) On his certifying that the butter contains 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 coloring matter deemed harmless by the Minister. The inspector checks the contents to see that they are in conformity with the brands on package and the exporter's declaration, and an export permit is then issued.
- (ii.) The exporter may apply in writing to have his butter classified prior to export, and thus dispense with the written statement regarding its composition. The inspector then examines for quality in addition to checking the trade description, and grades as follows:—95 to 100 points, "superfine"; 90 to 94 points, "first grade"; 83 to 89, "second grade"; 75 to 82, "third grade"; under 75, "pastry" (branded as such). Certificates are issued according to the grade awarded, and the issue necessitates the branding of each box in the consignment with the Commonwealth stamp "approved for export" and the certificate number. In order to facilitate branding, all certificates for a specific grade issued on one day bear the same number, the registered brand on the packages forming the leading feature of each certificate.
- (iii.) A separate written application from the exporter is necessary before a grade stamp is placed on the boxes by the examining officer prior to shipment. This grade stamping, as well as the classification itself, is purely optional with the exporter. Where such an application is received, the grade is stamped on the packages in addition to the Commonwealth stamp and certificate number.

By these means, purity and quality are guaranteed, and trade is also facilitated, since quantities of butter are purchased solely on the certificate issued, without ever being seen.

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 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

steadily 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, butterine, margarine, and cheese was carried on, numbered 565 in 1908. These were distributed as regards the various States as follows:—New South Wales, 187; Victoria, 216; Queensland, 82; South Australia, 54; Western Australia, 2; Tasmania, 24.

§ 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 of South Australia, and Western Australia, there is a greatly preponderating number of other cattle, dairying not having been established in the tropical regions of the Continent:—

CATTLE AND DAIRY CATTLE, AUSTRALIAN COMMONWEALTH, 1904 to 1908.

State.		1904.	1905.	1906.	1907.	1908.
New South Wales	All Cattle	2,149,129	2,337,973	2,549,944	2,751,193	2,955,884
	Dairy Cows	556,531	597,605	667,708	713,223	736,633
Victoria	All Cattle	1,685,976	1,737,690	1,804,323	1,842,807	1,874,162
	Dairy Cows	632,493	649,100	701,309	709,279	609,166
Queensland	All Cattle	2,722,340	2,963,695	3,413,919	3,892,232	4,321,600
	Dairy Cows	144,000†	172,000†	215,000†	282,883	304,281
South Australia	All Cattle	272,459	300,721	325,724	335,155	340,376
Northern Territory	All Cattle	247,920	346,910	354,371	374,199	407,992
South Australia	Dairy Cows	88,156	93,069	97,843	100,743	106,269
Northern Territory	Dairy Cows	670	756	680	489	546
Western Australia	All Cattle	561,490	631,825	690,011	717,377	741,768
	Dairy Cows	27,724	35,011	34,822	31,489	31,522
Tasmania	All Cattle	201,206	206,211	211,117	215,523	205,827
	Dairy Cows	50,230	49,618	49,132	54,245	50,931
Commonwealth	All Cattle	7,840,520	8,525,025	9,343,409	10,128,486	10,547,629
	Dairy Cows	1,499,804	1,597,159	1,766,494	1,892,351	1,839,348

† 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 250 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 yield per cow for 1908 is taken from the number of dairy cows who 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, 1908.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
Dairy cows... No.	736,633	609,166	304,281	106,815	31,522	50,931	1,839,348
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

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 and cheese reached their highest figures in 1906. In both these products a falling-off is shewn in some of the States in 1907 and 1908, due to the dryness of the season. For the five years from 1904 to 1908 the figures are:—

**PRODUCTION OF BUTTER AND CHEESE, COMMONWEALTH,
1904 TO 1908.**

State.	1904.	1905.	1906.	1907.	1908.
BUTTER.					
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales	53,591,243	53,040,250	58,941,137	60,041,449	61,380,876
Victoria	61,002,841	57,606,821	68,088,168	63,746,354	45,461,398
Queensland	17,538,473	20,319,976	22,746,593	22,789,158	23,838,357
South Australia	6,836,170	8,226,805	8,873,632	8,519,340	8,130,560
Western Australia	441,103	423,270	380,157	436,529	365,593
Tasmania*	845,378	1,281,604	904,930	847,860	3,140,573
Commonwealth†	140,255,208	140,896,726	159,934,617	156,380,690	145,317,357
CHEESE.					
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales	4,223,621	4,625,980	5,389,345	4,586,857	4,838,360
Victoria	4,747,851	4,297,350	4,877,593	4,397,909	4,328,644
Queensland	2,607,475	2,682,089	2,921,140	2,684,588	3,199,510
South Australia	851,800	1,174,867	1,398,785	1,385,790	1,556,894
Western Australia	350	4,831	1,314	590	980
Tasmania*	204,160	369,913	190,481	327,839	910,400
Commonwealth†	12,635,257	13,155,030	14,778,658	13,383,563	14,834,788

* 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:—

CONDENSED AND CONCENTRATED MILK MADE, 1908.

Year.	New South Wales.	Victoria.	Queensland.
1908	lbs. 2,399,673	lbs. 3,308,854	lbs. 3,935,024

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, 1904 TO 1908.**

IMPORTS.

Products.	1904.	1905.	1906.	1907.	1908.
Butter lbs.	43,873	592,201	70,143	20,885	40,874
" " " " " £	1,636	25,509	3,133	910	2,368
Cheese lbs.	375,642	384,718	304,951	299,711	566,808
" " " " " £	12,349	12,494	11,533	12,371	20,433
Milk—concentrated and preserved ¹ lbs.	11,196,926	10,943,788	10,672,265	9,279,091	9,145,306
" " " " " £	197,254	196,471	189,316	170,478	180,194

EXPORTS.

Butter lbs.	64,807,962	56,477,536	75,802,856	66,076,915	51,206,359
" " " " " £	2,461,450	2,354,399	3,240,063	2,890,261	2,387,450
Cheese lbs.	514,576	193,608	252,115	495,530	153,589
" " " " " £	11,216	5,291	6,832	12,896	5,237
Milk—concentrated and preserved ¹ lbs.	659,937	495,089	311,540	322,119	309,769
" " " " " £	11,887	9,319	6,375	6,305	7,013

NET EXPORTS.²

Butter lbs.	64,764,089	55,885,335	75,732,713	66,056,030	51,165,485
" " " " " £	2,459,814	2,325,990	3,236,960	2,889,351	2,385,062
Cheese lbs.	138,934	191,110	52,836	195,819	413,219
" " " " " £	1,133	7,203	4,701	525	15,196
Milk—concentrated and preserved ¹ lbs.	-10,536,989	-10,448,699	-10,360,725	-8,956,972	-8,855,517
" " " " " £	-185,397	-187,152	-182,941	-164,173	-173,181

1. See definition on page 444.

2. — signifies net imports.

The large quantities of milk imported for local use indicate room for development in the preserving industry.

6. Interstate Trade in Milk, Butter, and Cheese.—The extent of interstate trade in dairy products, naturally of considerable magnitude, is worthy of statistical presentation. That for butter, cheese, and milk is as follows:—

INTERSTATE TRADE IN BUTTER AND CHEESE, 1908.

State.	Imports from other States of the C'wealth.		Exports to other States of the Commonwealth.		Net Interstate Exports. ¹	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
BUTTER.						
	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	3,136,389	155,009	6,645,840	353,001	3,509,451	197,992
Victoria ...	6,027,668	304,892	5,983,303	316,439	44,365	11,547
Queensland ...	197,596	9,087	4,119,344	201,285	3,921,748	192,198
South Australia ...	1,244,651	63,585	1,510,045	74,723	265,394	11,138
Western Australia ...	6,955,295	366,049	212	12	-6,955,083	-366,037
Tasmania ...	1,350,709	74,404	653,564	27,566	697,145	46,838
CHEESE.						
	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	851,437	26,642	247,241	9,043	604,196	17,599
Victoria ...	441,196	14,013	1,050,564	33,415	609,368	19,402
Queensland ...	22,238	893	727,233	22,592	704,995	21,699
South Australia ...	72,519	2,576	288,733	9,355	216,214	6,779
Western Australia ...	1,097,662	35,154	7,140	213	-1,090,522	-34,941
Tasmania ...	79,133	2,505	243,274	7,165	164,141	4,660

1. — signifies net imports.

With the reduced production in Victoria, considerable quantities of butter were received by that State from New South Wales.

INTERSTATE TRADE IN MILK AND CREAM, 1908.

State	Imports from other States of the Commonwealth.		Exports to other States of the Commonwealth.		Net Interstate Exports. ¹	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.

MILK AND CREAM—CONCENTRATED.²

	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	13,160	273	422,634	7,693	409,468	7,420
Victoria ...	443,140	8,455	494,145	8,977	51,005	522
Queensland ...	1,738	59	147,978	2,942	146,240	2,883
South Australia ...	12,380	349	8,716	173	3,664	176
Western Australia ...	343,337	5,792	27,936	581	315,401	5,211
Tasmania ...	300,723	5,740	13,075	302	287,648	5,438

MILK AND CREAM—PRESERVED.²

	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	2,001,589	41,564	395,134	8,462	1,606,455	33,102
Victoria ...	428,527	8,905	1,665,852	35,416	1,237,325	26,511.
Queensland ...	130,487	2,712	1,757,813	35,494	1,627,326	32,782
South Australia ...	401,280	8,604	728,080	15,531	326,800	6,927
Western Australia ...	1,318,576	27,439	23,272	500	1,295,304	26,939
Tasmania ...	239,692	6,179	...	...	289,692	6,179

1. — signifies net imports.

2. See definition on page 444.

New South Wales is a large importer of preserved milk from other States of the Commonwealth. There was practically no interstate trade in fresh milk and cream in 1908.

7. 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, 1904 and 1907 were the only years in which the local supply of cheese was adequate:—

BUTTER AND CHEESE LOCALLY CONSUMED, 1904 to 1908.

Product		1904.	1905	1906.	1907.	1908.
Butter	... Total ...	75,491,119	85,201,904	84,137,949	90,324,660	94,151,872
	... Per head of mean population ...	19.1	21.2	20.6	21.7	22.2
Cheese	... Total ...	12,496,323	13,346,140	14,831,494	13,187,744	15,248,007
	... Per head of mean population ...	3.2	3.3	3.6	3.2	3.6

The consumption in 1908 was, therefore, equal to 22.2 lbs. of butter and 3.6 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 the States in subsequent census years, and in the last five years, were as follows:—

NUMBER OF PIGS, COMMONWEALTH, 1861 to 1908.

State.	1861.	1871.	1881.	1891.	1904.	1905.	1906.	1907.	1908.
New South Wales ...	146,091	213,193	213,916	253,189	337,666	310,702	243,370	216,145	215,822
Victoria ...	43,480	177,447	239,926	286,780	286,070	273,682	220,452	211,002	179,358
Queensland ...	7,465	32,707	56,438	122,672	183,141	164,087	138,282	133,246	124,749
South Australia ...	69,286	95,542	120,718	83,797	112,584	119,005	112,277	93,605	81,165
Western Australia ...	11,984	14,265	22,530	25,230	70,299	74,567	56,203	53,399	46,652
Tasmania ...	40,841	52,863	49,660	73,520	77,943	72,810	42,385	46,704	47,943
Commonwealth ...	319,147	586,017	703,188	845,888	1,062,703	1,014,853	813,569	754,101	695,689

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 and 1905 mark the highest totals. An examination of the States' returns shews remarkable fluctuations. It will be noticed that in no State 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. The same experience was met in 1908. In several States the falling-off over the three years is very marked. The number of pigs per head of population, and the number per square mile, will be found in the tables of live stock, pages 339 and 340.

2. **Bacon and Ham.**—With the exception of Tasmania, the production of bacon and ham increased in the years 1904 to 1906. In 1907 and 1908 there was a general falling-off.

PRODUCTION OF BACON AND HAM, COMMONWEALTH, 1904 to 1908.

State.	1904.	1905.	1906.	1907.	1908.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ...	10,680,532	11,652,440	11,843,595	10,358,526	9,486,522
Victoria ...	14,851,944	16,433,665	18,051,166	17,545,720	14,411,401
Queensland ...	6,514,852	10,500,335	10,846,959	10,015,008	11,324,323
South Australia ...	†	†	†	2,311,004	3,392,162
Western Australia ...	250,264	401,447	272,494	209,419	152,896
Tasmania* ...	574,781	446,714	151,700	279,504	1,333,856
Commonwealth† ...	32,872,373	39,434,601	41,165,914	40,719,181	40,101,160

* 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 all South Australian bacon and ham prior to 1907. ‡ 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, 1904 to 1908.**

Particulars.				1904.	1905.	1906.	1907.	1908.
BACON AND HAM.								
Imports ...	...	...	lbs.	371,354	162,715	194,059	237,644	273,922
" ...	...	...	£	13,425	5,807	7,171	9,625	10,013
Exports ...	...	...	lbs.	382,580	492,076	532,851	420,819	391,820
" ...	...	...	£	12,596	15,262	18,467	17,579	18,360
Net Exports ¹	...	...	lbs.	11,226	329,361	338,792	183,175	117,898
"	...	...	£	829	9,455	11,296	7,954	8,347

FROZEN PORK.								
Imports ...	...	...	lbs.	211,803	154,052	139,363	187,479	110,647
" ...	...	...	£	4,287	4,039	3,717	5,312	3,329
Exports ...	...	...	lbs.	521,331	2,824,016	3,472,224	1,446,758	826,102
" ...	...	...	£	9,346	47,596	60,936	23,406	20,446
Net Exports ¹	...	...	lbs.	309,528	2,669,964	3,332,861	1,259,279	715,455
"	...	...	£	5,059	43,557	57,219	23,094	17,117

PIGS.								
Imports ...	...	...	No.	73	64	24	7	39
" ...	...	...	£	832	814	1,269	69	968
Exports ...	...	...	No.	247	322	220	185	117
" ...	...	...	£	276	399	263	383	297
Net Exports ¹	...	...	No.	174	258	196	178	78
"	...	...	£	556	415	1,006	314	671

LARD.								
Imports ...	...	...	lbs.	89,652	45,702	64,561	36,625	313,060
" ...	...	...	£	1,736	924	1,294	980	7,681
Exports ...	...	...	lbs.	952,088	1,064,562	551,268	458,327	511,774
" ...	...	...	£	15,311	16,163	8,373	8,554	10,906
Net Exports ¹	...	...	lbs.	862,436	1,018,860	486,707	421,702	198,714
"	...	...	£	13,575	15,239	7,079	7,574	3,225

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.

4. **Interstate Trade in Pig Products.**—The interstate trade in pigs, bacon and hams, frozen pork, lard, etc., in 1908 was as follows:—

INTERSTATE TRADE IN PIG PRODUCTS, 1908.

State.	Imports from other States of the C ^o wealth.		Exports to other States of the Commonwealth.		Net Interstate Exports. ¹	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
PIGS.						
	No.	£	No.	£	No.	£
New South Wales ...	198	375	2,731	4,201	2,533	3,826
Victoria ...	3,277	5,277	103	277	3,174	5,000
Queensland ...	22	54	...	...	22	54
South Australia ...	4	35	670	1,298	666	1,263
Western Australia ...	...	...	...	...	...	...
Tasmania ...	3	35	...	...	3	35

BACON AND HAMS.

	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	2,925,514	99,878	676,327	22,113	2,249,187	77,765
Victoria ...	490,021	15,834	2,871,318	114,887	2,381,297	99,053
Queensland ...	142,803	5,265	2,542,996	83,993	2,400,193	78,728
South Australia ...	84,165	3,460	781,641	25,573	697,476	22,113
Western Australia ...	2,844,630	109,178	8,135	328	2,836,495	108,850
Tasmania ...	438,504	15,130	45,220	1,851	393,284	13,279

FROZEN PORK.

	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	269,652	6,270	88,491	2,243	181,161	4,027
Victoria ...	16,771	592	261,428	6,163	244,657	5,571
Queensland ...	...	...	61,794	1,495	61,794	1,495
South Australia ...	...	...	21,577	636	21,577	636
Western Australia ...	147,287	3,684	...	...	147,287	3,684
Tasmania ...	...	...	420	9	420	9

LARD AND REFINED ANIMAL FATS.

	lbs.	£	lbs.	£	lbs.	£
New South Wales ...	843,464	21,227	190,649	4,258	652,815	16,969
Victoria ...	235,894	4,981	430,550	10,631	194,716	5,650
Queensland ...	45,493	938	908,488	22,048	862,995	21,110
South Australia ...	21,922	637	349,648	7,454	327,726	6,817
Western Australia ...	563,359	13,032	9,046	267	554,313	12,765
Tasmania ...	180,176	3,897	1,867	54	178,309	3,843

1. — signifies net imports.

5. **Local Consumption of Bacon and Ham.**—From 1904 to 1908 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, 1904 to 1908.

Consumption. ¹	1904.	1905.	1906.	1907.	1908.
	lbs.	lbs.	lbs.	lbs.	lbs.
Total ...	32,861,147	39,105,240	40,827,122	40,536,006	39,983,262
Per head of mean population ...	9.2	10.7	11.0	9.8	9.4

1. This excludes South Australia from 1904 to 1906, for which no figures of production were available.

The total dairy production of the Commonwealth in 1908 is shewn below :—

TOTAL DAIRY PRODUCTION, COMMONWEALTH, 1908.

Where Produced.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
MILK.							
On Dairy & other Farms	gallons. 188,518,562	gallons. 148,122,200	gallons. 63,934,402	gallons. 28,883,000	gallons. 4,531,212	gallons. 13,520,000*	gallons. 447,509,376
BUTTER.							
In Factories ...	lbs. 57,051,595	lbs. 44,333,168	lbs. 21,948,886	lbs. 4,462,929	lbs. †	lbs. 1,310,573	lbs. 129,157,151‡
On Dairy & other Farms	4,329,281	4,078,230	1,889,471	3,667,631	365,593†	1,830,000*	16,160,206
Total ...	61,380,876	48,461,398	23,838,357	8,130,560	365,593	3,140,573*	145,317,357
CHEESE.							
In Factories ...	lbs. 3,260,389	lbs. 2,473,682	lbs. 2,939,418	lbs. 1,553,758	lbs. ...	lbs. 832,900	lbs. 11,120,147
On Dairy & other Farms	1,577,971	1,854,962	200,092	3,136	980	77,500*	3,714,641
Total ...	4,838,360	4,328,644	3,139,510	1,556,894	980	910,400*	14,834,788
CONDENSED OR CONCENTRATED MILK.							
In Factories ...	lbs. 2,399,673	lbs. 3,308,854	lbs. 3,935,024	lbs. ...	lbs. ...	lbs. ...	lbs. 9,643,551
BACON AND HAM.							
In Factories ...	lbs. 7,296,532	lbs. 11,712,732||	lbs. 9,194,107	lbs. 2,381,469	lbs. ...	lbs. 433,856	lbs. 31,018,696
On Dairy & other Farms	2,189,990	2,696,669	2,130,216	1,010,693	152,896	900,000*	9,082,464
Total ...	9,486,522	14,411,401	11,324,323	3,392,162	152,896	1,333,856*	40,101,160

* Estimated. † Not available for publication. ‡ Including factory butter. § Incomplete.
|| Including factories employing less than four hands.

§ 4. Poultry Farming.

1. **Development of the Industry.**—Until recently, poultry farming as a well organised industry could scarcely be said to exist, although in metropolitan and suburban 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 also, 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, and 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 are extensively reared, and the egg-producing qualities of the birds have also been greatly improved by careful breeding. In South Australia egg collecting circles have been formed in the country districts, to develop, under Government encouragement and supervision, 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. Until the organisation is self-supporting the Government makes advances free of interest, so that the producer can obtain immediate payment, and also lends egg boxes free. Only clean and fresh eggs are to be delivered to the secretary under penalty of fine and expulsion from the circle.

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, 1908-9.

Year.	N.S.W.	Victoria.	Queensland.	S. Australia.	W. Australia.	Tasmania.
1908-9 ...	£ 1,202,000	£ 1,547,000	£ *	£ 399,349	£ 133,544	£ *

* Not available.

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. In 1907 the export considerably exceeded the import, and in 1908 the imports were greater in quantity, but less in value, than the exports. The introduction of valuable poultry for breeding is evidenced by the fact that although the exports in 1903, 1904 and 1905 exceeded the imports in number, the imports were of greater value. The figures for frozen poultry shew that a considerable oversea trade is carried on:—

**IMPORTS, EXPORTS, AND NET EXPORTS OF EGGS AND LIVE AND FROZEN POULTRY
COMMONWEALTH, 1904 TO 1908.**

Particulars.			1904.	1905.	1906.	1907.	1908.
EGGS.							
Imports ...	...	... doz.	249,379	84,517	83,925	60,114	31,247
" ...	...	... £	4,437	1,943	2,184	1,791	856
Exports ...	...	... doz.	29,841	23,041	38,090	88,684	17,261
" ...	...	... £	1,245	1,199	1,718	3,421	1,082
Net exports ¹	...	... doz.	—219,538	—61,476	—45,835	28,570	—13,986
" "	...	... £	— 3,192	— 744	— 466	1,630	226
LIVE POULTRY.							
Imports ...	...	... No.	1,454	1,417	3,220	2,883	2,372
" ...	...	... £	2,079	1,984	1,747	957	633
Exports ...	...	... No.	2,062	4,000	2,806	3,280	2,290
" ...	...	... £	1,086	1,863	1,767	1,248	1,043
Net exports ¹	...	... No.	608	2,583	— 414	397	— 82
" "	...	... £	— 993	— 121	20	291	410
FROZEN POULTRY.							
Imports ...	...	... lbs.	15,833	22,628	8,949	1,452	2,242
" ...	...	... £	673	899	331	43	75
Exports ...	...	... pair	9,936	46,987	34,655	31,261	22,444
" ...	...	... £	3,509	11,765	9,506	8,556	7,335
Net exports ¹	...	... pair	—	—	—	—	—
" "	...	... £	2,836	10,866	9,175	8,513	7,260

1. — signifies net imports.

2. Quantity not available.

4. **Interstate Trade in Poultry Products.**—South Australia is the largest supplier to the other States of the Commonwealth of poultry products generally, but Victoria has the largest interstate market for frozen poultry.

INTERSTATE TRADE IN POULTRY AND POULTRY PRODUCTS, 1908.

State	Imports from other States of the Commonwealth.		Exports to other States of the Commonwealth.		Net Interstate Exports. ¹	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
LIVE POULTRY.						
	No.	£	No.	£	No.	£
New South Wales	47,956	4,839	632	260	47,324	4,579
Victoria ...	905	189	1,275	490	370	301
Queensland ...	248	180	219	83	29	97
South Australia ...	137	62	47,908	4,873	47,771	4,811
Western Australia	1,023	388	37	24	986	364
Tasmania ...	409	222	607	150	198	72
FROZEN POULTRY.						
	lbs.	£	lbs.	£	lbs.	£
New South Wales	37,125	1,473	5,636	178	31,489	1,295
Victoria ...	6,047	184	103,703	4,225	97,656	4,041
Queensland ...	...	...	5,418	190	5,418	190
South Australia ...	6,406	257	2,896	93	3,510	164
Western Australia	67,887	2,760	...	...	67,887	2,760
Tasmania ...	219	13	31	1	188	12
EGGS.						
	Dozen.	£	Dozen.	£	Dozen.	£
New South Wales	1,363,692	58,244	26,623	1,321	1,337,069	56,923
Victoria ...	631,991	25,890	36,511	1,762	595,480	24,128
Queensland ...	596	38	268,740	10,867	268,144	10,829
South Australia ...	200	8	2,827,435	127,245	2,827,235	127,237
Western Australia	1,120,892	55,065	287	12	1,120,605	55,053
Tasmania ...	45,186	2,094	2,961	132	42,225	1,952

1. — signifies net imports.

INTERSTATE TRADE IN MISCELLANEOUS FARMYARD PRODUCTS, 1908.

State.	Imports from other States of the Commonwealth.		Exports to other States of the Commonwealth.		Net Interstate Exports. ¹	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
POULTRY AND GAME—FRESH AND SMOKED.						
	lbs.	£	lbs.	£	lbs.	£
New South Wales	526,624	5,862	175,552	1,413	351,072	4,449
Victoria ...	178,787	1,506	72,799	1,123	105,988	383
Queensland ...	200	3	450	10	250	7
South Australia ...	...	...	503,183	5,469	503,183	5,469
Western Australia	61	1	...	...	61	1
Tasmania ...	54,187	808	7,875	165	46,312	643
POULTRY AND GAME—N.E.I.						
	cwt.	£	cwt.	£	cwt.	£
New South Wales	7,615	19,087	987	3,104	6,628	15,983
Victoria ...	428	630	13,437	38,903	13,009	38,273
Queensland ...	5,203	5,774	3,961	7,663	1,242	1,889
South Australia ...	96	140	1,942	5,010	1,846	4,870
Western Australia	6,994	28,927	...	...	6,994	28,927
Tasmania ...	200	330	209	205	9	122

1. — signifies net imports.

§ 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 steady improvement, to which the large increase in the Western Australian product since 1902 has largely 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, and £3361 in 1908. 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, available up to 1907 for only three States, are as given below :—

NUMBER OF HIVES AND PRODUCTION OF HONEY AND BEESWAX, 1904 to 1907.

Particulars.				1904.	1905.	1906.	1907.
New South Wales	...	...	Hives	No. 58,330	64,730	48,632	...
			Honey	lbs. 2,147,295	3,023,468	1,841,236	1,907,744
" "	...	...	Beeswax	lbs. 49,589	58,610	39,620	34,690
			Hives	No. 40,759	49,120	41,780	48,005
Victoria	...	...	Honey	lbs. 833,968	1,906,188	1,209,144	2,965,299
			Beeswax	lbs. 18,979	28,653	21,844	46,780
Western Australia	...	...	Hives	No. 8,705	12,837	12,825	...
			Honey	lbs. 179,271	287,498	555,079	382,584
" "	...	...	Beeswax	lbs. 4,533	6,211	9,303	8,302

The figures for 1908 and 1909 for all States except Tasmania, where the information was not collected, are :—

HIVES, etc., 1908 and 1909.

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.	No.	No.	No.	lbs.	£	lbs.	£
New South Wales	53,602	16,344	69,946	3,064,366	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	249,723	3,122	6,217	466
Commonwealth	†	†	165,402	7,140,866	76,202	125,358	6,915

* 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, 1904 TO 1908.**

Particulars.	1904.	1905.	1906.	1907.	1908.
HONEY.					
Imports lbs.	1,233	12,036	2,618	2,716	9,315
" £	10	138	27	35	98
Exports lbs.	77,452	112,039	58,297	102,047	226,465
" £	875	1,333	1,001	1,541	3,361
Net exports lbs.	76,219	100,003	55,679	99,331	217,150
" " £	865	1,195	974	1,506	3,263
BEESWAX.					
Imports lbs.	12,520	9,767	13,725	14,070	7,527
" £	694	593	787	978	460
Exports lbs.	39,795	86,720	30,570	27,086	41,177
" £	2,144	4,863	1,768	1,618	2,479
Net exports lbs.	27,275	76,953	16,845	13,016	33,650
" " £	1,450	4,270	981	640	2,019

4. **Interstate Trade in Bee Products.**—The interstate trade in honey and beeswax in 1908 is given below:—

INTERSTATE TRADE IN BEE PRODUCTS, 1908.

State.	Imports from other States of the C ^w wealth.		Exports to other States of the Commonwealth.		Net Interstate Exports. ¹	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
HONEY.						
	lbs.	£	lbs.	£	lbs.	£
New South Wales	131,582	1,692	242,484	2,865	110,902	1,173
Victoria	288,794	3,462	218,216	4,221	— 70,578	759
Queensland	154,362	2,161	2,902	38	— 151,460	— 2,123
South Australia	3,825	56	334,168	4,259	330,343	4,203
Western Australia	114,944	2,288	800	8	— 114,144	— 2,280
Tasmania	105,395	1,736	332	4	— 105,063	— 1,732
BEESWAX.						
	lbs.	£	lbs.	£	lbs.	£
New South Wales	3,600	208	8,018	359	4,418	151
Victoria	3,394	200	3,188	195	— 206	5
Queensland	4,818	180	1,235	65	— 3,533	— 115
South Australia ... ..	...	...	3,609	216	3,609	216
Western Australia	4,852	283	...	...	— 4,852	— 283
Tasmania	516	27	1,130	63	614	36

1. — signifies net imports.

6. Summary of Australian Farmyard and Dairy Products Exported, 1904 to 1908.

The quantities and values of Australian farmyard and dairy products exported from the Commonwealth during each of the years 1904 to 1908 are shown below:—

QUANTITIES OF AUSTRALIAN FARMYARD AND DAIRY PRODUCTS EXPORTED FROM THE COMMONWEALTH DURING EACH OF THE YEARS 1904 to 1908.

Products.	1904.	1905.	1906.	1907.	1908.
Beeswax lbs.	39,744	85,541	30,471	27,058	41,177
Butter "	64,788,542	55,904,151	75,765,536	66,076,915	51,193,311
Cheese "	507,343	172,896	246,631	491,209	131,001
Eggs, albumen and yolk "					
Eggs doz.	21,194	21,293	37,900	86,615	17,113
Feathers, undressed "					
Honey lbs.	77,452	112,039	58,297	102,047	226,465
Lard "	862,828	1,062,966	550,021	458,059	511,016
Meats—					
Bacon and ham "	369,083	484,616	530,459	415,251	389,718
Frozen game "	1,150	11,049	2,723	6,534	45,527
" Poultry pair	9,936	45,787	33,853	31,261	22,444
" Pork lbs.	420,783	2,824,016	3,472,224	1,446,758	826,102
Milk, concentrated and preserved "	474,777	310,797	171,639	162,367	139,165
Pigs, living No.	247	322		185	117
Poultry, living "	2,060	3,993	2,806	3,280	2,290

* Quantity not available.

VALUE OF AUSTRALIAN FARMYARD AND DAIRY PRODUCTS EXPORTED FROM THE COMMONWEALTH DURING EACH OF THE YEARS 1904 to 1908.

Products.	1904.	1905.	1906.	1907.	1908.
	£	£	£	£	£
Beeswax "	2,141	4,791	1,761	1,617	2,479
Butter "	2,460,664	2,331,595	3,238,304	2,890,261	2,386,548
Cheese "	11,018	4,703	6,662	12,733	4,305
Eggs, albumen and yolk "					535
Eggs "	1,025	1,138	1,710	3,419	1,074
Feathers, undressed "	1,426	3,332	1,002	2,610	2,636
Honey "	875	1,333	1,001	1,541	3,361
Lard "	13,747	16,120	8,346	8,547	10,884
Meats—					
Bacon and ham "	12,068	14,943	18,374	17,348	18,258
Frozen game "	58	410	79	216	1,177
" poultry "	3,509	11,515	9,291	8,556	7,335
" pork "	7,875	47,596	60,936	28,406	20,446
Milk, concentrated and preserved "	7,839	5,296	3,386	2,924	3,139
Pigs, living "	276	399	263	383	297
Poultry, living "	1,077	1,851	1,767	1,248	1,043
Total "	2,523,598	2,445,022	3,352,882	2,979,809	2,463,517

§ 7. British Imports of Dairy Products.

1. **Butter.**—Australia stands third in the value of butter imported into the United Kingdom, but the import of other Australian dairy products is inconsiderable.

IMPORTS OF BUTTER INTO THE UNITED KINGDOM, 1908.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	Cwt.	£		Cwt.	£
Denmark	1,857,103	10,984,721	Argentine Republic	61,181	348,708
Russia	639,118	3,401,637	Canada	47,877	266,867
Australia	409,106	2,298,849	Norway	27,384	155,170
France	394,612	2,265,494	Belgium	22,893	130,186
Sweden	238,929	1,430,769	Other Countries	46,867	248,946
Netherlands	244,356	1,299,354			
New Zealand	221,395	1,250,211	Total	4,210,821	24,080,912

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, 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.

2. **Cheese.**—The value of the British cheese import in 1908 was £6,700,000, of which four and a-half million pounds worth was received from Canada. The import from Australia was practically *nil*. New South Wales and Victoria, however, made small experimental shipments, which realised as high as 66s. per cwt.

3. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1908 at £17,560,000, Great Britain received goods to the value of £8,280,000 from the United States; £5,680,000 from Denmark; and £3,350,000 from Canada. The British import from Australia was *nil*.

4. **Pork.**—The total value of British imports of fresh pork (including refrigerated and frozen) was £1,331,000 in 1908. Of this the value of Australian products was only £418, whilst from the Netherlands pork valued at nearly £1,000,000 was imported.

5. **Other Products.**—There is practically no British import from Australia of honey, beeswax, poultry, game, lard, or eggs, but rabbits to the value of £411,000 were received from the Commonwealth in 1908.

§ 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 364.