

CHAPTER XXI.

FARMYARD, DAIRY AND BEE PRODUCTS.

§ 1. Introductory.

1. **General.**—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this work (see Official Year Book No. 6, p. 430). It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossings of strains have resulted in an increased and improved milk supply. In Australia, dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. An investigation into the problems of the dairying industry was instituted by the Commonwealth Government in 1929, and the first report, which relates to farm production, was completed in 1930. It was proposed to issue additional reports, but the investigation was discontinued. Investigation by the British Medical Research Council into the vitamin content of Australian, New Zealand and British butter respectively showed high and uniform results for the Australian product, the figures being on a par with those for the United Kingdom and other European countries. It was demonstrated also that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.

2. **Official Supervision of Industry.**—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of *personnel* and *material*, prevails. Financial assistance of a temporary nature is also given.

The export trade is regulated by the terms of the Commonwealth Commerce Act 1905 and regulations thereunder. The provisions of this Act are set out in detail in Official Year Book No. 6, pp. 431-2. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

3. **Stabilization Scheme.**—(i) *Voluntary Plan.* During the period from January, 1926 to May, 1934, a voluntary scheme known as the "Paterson Plan" was in operation, and had the effect of stabilizing the price of butter in Australia. The scheme provided for the payment of a levy on all butter produced in Australia sufficient to pay a bounty on export which ranged from 3d. to 4½d. per lb. The local price was raised by the amount of the bounty per unit while the return to the producer on all butter produced was increased by approximately the difference between the rate of bounty paid and the rate of levy charged.

The scheme, however, did not receive the full support of all manufacturers of butter and was superseded by a system of compulsory control of sales.

(ii) *Compulsory Plan.* Legislation known as the Dairy Produce Act was passed by the Commonwealth Parliament towards the end of 1933, and at the same time complementary legislation was passed by the States of New South Wales, Victoria, Queensland and Tasmania. As a result of a referendum among producers held in 1936, Tasmania withdrew from the plan and the State Act expired. In the Commonwealth Act power was given to regulate interstate trade whilst the State Acts were designed to regulate trade within the respective States. The authority set up by each State Act fixed the proportion of the State's production to be sold within the State, whilst the Commonwealth Act protected this allocation by regulating the movement of butter and cheese from one State to another and so ensured the removal from the Australian market of the surplus production.

The compulsory plan was invalidated by the decision of the Privy Council which declared in the James (Dried Fruits) Case that no power existed in the Commonwealth Constitution to regulate trade between the States; the marketing of dairy produce is now being continued on a voluntary basis.

4. *Mixed Farming.*—Dairying is not now, as formerly, wholly confined to agriculturists, 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. The extent to which dairy cows and pigs are run in conjunction with the growing of wheat is referred to in Chapter XX., "Agriculture".

5. *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, etc., may be profitably worked at the larger establishments. The product is also of a more uniform quality and the number of farmers who prefer to convert the cream rather than send it to the factory is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires less than $2\frac{1}{2}$ gallons.

6. *Butter and Cheese Factories.*—The factories in Australia for the manufacture of butter, cheese and condensed milk numbered 517 in 1936-37 as compared with 563 in 1927-28. The factories were distributed among the States as follows:—New South Wales, 130; Victoria, 175; Queensland, 102; South Australia, 44; Western Australia, 23; and Tasmania, 43. Fuller details regarding numbers of factories, output, etc., are given in Chapter XXIV.

7. *Ottawa Conference.*—The agreement reached at the Imperial Economic Conference at Ottawa in August, 1932, has materially assisted the dairying, bee and poultry industries. Under its terms free entry into the United Kingdom of eggs, poultry, butter, cheese and other milk products of Australian origin was allowed for the three years to 15th November, 1935, and thereafter pending further arrangements, while similar goods imported from foreign countries were subjected to customs duties. The rates imposed on the undermentioned items were as follows:—butter, 15s. per cwt.; cheese, 15 per cent. ad valorem; eggs in shell, 1s. od. to 1s. 9d. per great hundred; honey, 7s. per cwt.; milk powder, unsweetened, 6s. per cwt.; and condensed milk, 5s. and 6s. per cwt. The review of these preferences is reserved to the Government of the United Kingdom. The Agreement at the Ottawa Conference regarding the regulation of imports of bacon has been superseded by the introduction of a Bacon Marketing Scheme by the British Government. Under this scheme foreign supplies are adjusted according to the quantities furnished by British and Dominion producers. Details of imports into the United Kingdom are given in § 9 hereafter.

8. **Employment.**—The number of persons employed in the dairying industry is ascertained at the annual census of dairy production. The particulars collected are in respect of those persons who are permanently engaged in the actual work of the farm and include owner, occupier or manager, members of the family and other permanent employees. Casual hands are excluded; so are females whose duties are mainly domestic although they may assist in the outdoor work of the farm. In the earlier years, however, these females were in many cases included as farm workers.

EMPLOYMENT IN DAIRYING INDUSTRY.

Year and Sex.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
		No.	No.	No.	No.	No.	No.	No.
1916-17	Males	22,363	19,460	13,040	1,350	518	1,133	57,864
	Females	16,044	14,936	12,154	8,211	500	1,921	54,366
1926-27	Males	29,106	27,296	21,172	2,259	2,088	2,035	83,956
	Females	12,525	11,789	14,849	2,787	516	1,218	43,684
1932-33	Males	38,196	40,895	28,602	3,531	4,437	3,830	119,491
	Females	7,788	10,433	18,587	2,602	1,290	1,576	42,282
1933-34	Males	38,358	41,433	29,808	4,087	5,142	3,542	122,370
	Females	7,246	8,466	19,539	2,987	1,395	2,125	41,668
1934-35	Males	38,231	41,833	32,132	4,339	5,089	3,138	124,762
	Females	6,823	8,531	20,193	3,244	1,189	1,916	42,196
1935-36	Males	38,150	42,072	31,457	4,500	5,465	3,539	125,183
	Females	6,181	7,790	21,080	2,756	1,249	2,462	41,818
1936-37	Males	37,450	41,922	31,457	4,578	5,261	3,332	124,000
	Females	5,444	7,666	21,080	2,331	1,143	2,234	39,898

The employment of males shown in the above table gives some indication of the expansion of the dairying industry since 1916-17. This is further exemplified in the following table:—

DAIRYING INDUSTRY.—AUSTRALIA.

Year.	Number of Dairy Cows.	Production of Butter.	Value of Machinery employed on Dairy Farms.	Number of Males employed.
	No.	lb.	£	No.
1916-17	1,747,351	182,470,778	1,076,738	57,864
1926-27	2,434,745	253,250,173	2,526,000	83,956
1936-37	3,343,293	396,261,693	4,235,000	124,000

§ 2. Dairy Cattle and Dairy Products.

1. **Dairy Herds.**—The dairy herds of Australia were severely depleted during the drought of 1914-15, when the number was reduced to 1,684,393. Following that year there has been a steady expansion in the number of dairy cattle until in 1936 there were 3.3 million, the number having doubled in the course of two decades. In New South Wales, Victoria, South Australia and Tasmania 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, the main object in these areas being the production of beef. Dairying, however, has developed greatly in Southern Queensland since 1914-15, and the largest contribution to the Australian increase previously mentioned has been made by this State. The number of dairy cows shown in the following table includes heifers intended for milking and being within three months of calving. These heifers, however, are not collected in Tasmania, but in the other States they numbered 135,548.

CATTLE AND DAIRY CATTLE.—NUMBER.

State.		1932.	1933.	1934.	1935.	1936.
New South Wales	All Cattle	3,141,174	3,361,771	3,482,831	3,388,538	3,288,169
	Dairy Cows	1,068,605	1,097,842	1,112,861	1,091,562	1,069,888
Victoria	All Cattle	1,909,922	2,002,235	2,085,080	2,091,246	2,004,950
	Dairy Cows	887,996	910,187	951,849	987,676	967,755
Queensland	All Cattle	5,535,065	5,781,170	6,052,641	6,033,004	5,950,572
	Dairy Cows	792,943	877,409	939,254	955,746	914,815
South Australia	All Cattle	312,932	352,728	346,479	335,354	328,013
	Dairy Cows	149,172	163,875	170,250	173,706	169,761
Western Australia	All Cattle	857,473	885,669	911,940	882,761	792,508
	Dairy Cows	114,022	121,818	129,875	130,132	126,301
Tasmania	All Cattle	250,807	262,256	261,588	270,035	261,597
	Dairy Cows	87,854	94,375	91,223	97,350	93,657
Northern Territory	All Cattle	780,121	859,867	890,679	900,535	855,398
	Dairy Cows	(a)	(a)	(a)	(a)	(a)
Australian Capital Territory	All Cattle	4,643	6,790	8,133	10,186	9,856
	Dairy Cows	411	426	1,019	1,052	1,116
Australia	All Cattle	12,783,137	13,512,486	14,048,671	13,911,659	13,491,072
	Dairy Cows	3,101,003	3,265,932	3,396,331	3,437,224	3,343,293

(a) Not available.

2. Milk.—The annual quantity of milk produced per dairy cow varies greatly with breed, locality and season, reaching as high as 1,000 gallons, but averaging for the whole of Australia for all dairy cows and for all seasons prior to 1916 considerably under 300 gallons per annum. In recent years not only has there been an improvement in the quality of the cattle, but the application of scientific methods is being continually extended, and the 300 gallon average has been exceeded in each year since 1924, the yield of 392 gallons in 1931 constituting a record. The average annual yields per cow given in the following table for the last five years are based on the number of dairy cows which were in milk during any part of the year. The average given, is, therefore, below that for cows which were yielding during the greater part of the year. It should be noted that there are many difficulties attending the collection of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with any degree of accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend:—

MILK PRODUCTION.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus. Cap. Ter.	Australia. (b)
1932-33—								
Dairy Cows (a) .. No.	992,343	831,767	751,938	122,710	100,755	84,827	460	2,884,800
Production 1,000 gals.	320,659	396,716	237,130	58,499	33,634	33,847	255	1,080,740
Aver. per cow .. gal.	323	477	315	477	334	399	554	375
1933-34—								
Dairy Cows (a) .. No.	1,028,874	978,972	799,537	130,482	112,005	91,115	400	3,050,385
Production 1,000 gals.	368,691	368,806	289,065	54,400	34,904	29,160	277	1,145,303
Aver. per cow .. gal.	358	420	362	390	312	320	693	375
1934-35—								
Dairy Cows (a) .. No.	1,052,644	887,841	870,637	150,745	120,045	92,799	683	3,175,394
Production 1,000 gals.	357,459	403,039	302,173	53,359	36,758	31,840	297	1,184,025
Aver. per cow .. gal.	340	454	347	354	306	343	435	373
1935-36—								
Dairy Cows (a) .. No.	1,055,539	925,295	910,760	156,122	123,932	94,286	988	3,266,922
Production 1,000 gals.	345,346	399,742	261,266	59,042	38,138	33,737	272	1,137,543
Aver. per cow .. gal.	327	432	287	378	308	358	275	348
1936-37—								
Dairy Cows (a) .. No.	1,036,131	938,966	899,092	157,485	121,697	95,504	1,022	3,249,897
Production 1,000 gals.	317,617	423,305	206,315	63,699	36,771	31,156	365	1,079,228
Aver. per cow .. gal.	306	451	227	404	302	326	357	332

(a) Mean for the year.

(b) Exclusive of Northern Territory.

3. Butter and Cheese.—Although the quantity of dairy production is affected by the nature of the season, the large increase in the output of butter has been maintained in recent years despite the unfavourableness of some seasons. The average annual production rose from 260,000,000 lb. for the quinquennium 1923-1927 to 434,000,000 lb. for the latest five years. The largest production of butter in Australia was recorded

in 1934-35, when, as a result of a specially favourable season, 469,000,000 lb. were manufactured. In 1936-37 seasonal conditions reduced the yield to 396,300,000 lb. but the latest available figures indicate an increase to 431,000,000 lb. in 1937-38.

The total output of cheese is likewise dependent upon seasonal conditions. The production in 1936-37 was 44,700,000 lb., which exceeded the previous record in 1934-35 by nearly 5,000,000 lb.

The production of butter and cheese for the last five years was as follows:—

BUTTER AND CHEESE PRODUCTION.

State.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
BUTTER.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	128,210,092	147,963,411	145,277,595	125,169,296	109,830,751
Victoria	144,564,666	134,942,177	147,651,179	148,132,507	154,769,391
Queensland	103,032,474	127,343,160	133,624,597	115,920,415	87,474,757
South Australia	21,310,006	19,755,685	18,513,229	20,964,305	20,892,369
Western Australia	11,469,661	11,911,912	13,308,003	12,908,745	12,360,024
Tasmania	11,071,631	9,003,800	10,689,043	10,613,358	10,918,278
Australian Capital Territory	16,273	16,283	15,086	13,849	15,223
Australia	419,674,803	450,936,428	469,078,732	433,722,475	396,261,693
CHEESE.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	7,193,806	9,072,508	8,445,468	7,356,203	7,417,640
Victoria	9,189,018	8,363,233	10,095,139	10,973,804	13,350,124
Queensland	13,083,959	13,887,320	12,192,383	9,149,283	7,789,890
South Australia	6,093,170	5,316,971	6,649,661	8,103,663	12,164,819
Western Australia	138,051	285,461	643,571	865,482	1,012,139
Tasmania	1,235,302	1,551,000	1,918,963	2,150,281	2,994,227
Australia	36,933,306	38,476,493	39,975,185	38,598,716	44,728,839

4. **Condensed or Concentrated Milk.**—The manufacture of this product is of comparatively recent growth, the quantity of milk treated in 1901 being negligible, but production increased annually until in 1911 the output reached 23 million lb., nearly doubling that of the previous year. Thenceforward rapid progress was made, the greatest development taking place in Victoria. The output of condensed, concentrated and powdered milk in this State amounted in 1932-33 to 44,186,979 lb.; in 1933-34 to 41,899,267 lb.; in 1934-35 to 51,390,850 lb.; in 1935-36 to 38,598,154 lb. and in 1936-37 to 53,159,599 lb. Production in New South Wales during 1936-37 was 10,884,034 lb. No condensed or concentrated milk is made in Tasmania. Information regarding production in the remaining States is not available for publication, but the volume is not very large. Imports of milk into Australia consist almost entirely of malted or otherwise medicated milk.

5. **Oversea Trade in Butter, Cheese and Milk.**—The following tables give the imports, exports and net exports of butter, cheese and condensed milk. In each of the five years dealt with the exports of these commodities exceeded the imports:—

BUTTER, CHEESE, AND MILK, IMPORTS AND EXPORTS.—AUSTRALIA.

Australian Currency Values.

Products.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
IMPORTS.					
Butter	£ 2,471	2,096	3,826	2,678	1,691
.. .. .	199	113	309	167	133
Cheese	£ 58,453	74,791	88,511	130,864	126,066
.. .. .	5,283	8,949	7,052	10,225	9,909
Milk—concentrated and preserved	£ 260,311	60,289	12,861	129,039	79,737
.. .. .	9,408	2,342	942	3,876	2,515

BUTTER, CHEESE AND MILK, IMPORTS AND EXPORTS.—AUSTRALIA—*contd.*

Products.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
EXPORTS.					
Butter	lb. 244,299,732	262,518,906	212,646,177	171,309,396	197,345,647
	£ 8,194,220	9,586,776	9,028,243	8,801,643	10,781,124
Cheese	lb. 9,314,529	16,829,780	12,972,627	13,924,572	27,245,638
	£ 220,388	404,024	337,467	384,027	845,130
Milk—concentrated and preserved	lb. 10,773,041	16,593,664	16,961,023	22,169,680	24,717,435
.. .. .	£ 739,031	711,242	722,301	851,769	963,873
NET EXPORTS.					
Butter	lb. 244,297,261	262,516,810	212,642,351	174,306,718	197,343,956
	£ 8,194,021	9,586,663	9,027,934	8,801,476	10,780,991
Cheese	lb. 9,356,976	16,754,989	12,884,116	13,793,708	27,119,572
	£ 224,105	398,075	330,415	373,802	835,161
Milk—concentrated and preserved	lb. 19,512,730	16,533,375	16,948,162	22,040,641	24,637,698
.. .. .	£ 729,623	708,900	721,359	847,893	961,358

6. Local Consumption of Butter and Cheese.—The local production of butter and cheese, with the subtraction therefrom or the addition thereto of the net export or import for the corresponding period, represents approximately the quantity available for consumption in Australia. The figures for the five years ended 1936-37 are as follows:—

BUTTER AND CHEESE.—LOCAL CONSUMPTION.

Products.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	lb.	lb.	lb.	lb.	lb.
Butter .. Total .. .	193,347,828	206,639,167	206,561,922	221,080,124	221,964,975
.. Per head of population .. .	29.27	31.05	30.82	32.75	32.62
Cheese .. Total .. .	25,220,933	29,220,417	23,220,196	25,714,600	30,935,131
.. Per head of population .. .	3.82	4.39	3.46	3.81	4.55

Consumption in 1936-37 averaged 32.62 lb. of butter and 4.55 lb. of cheese per head of population. The consumption of butter in the United Kingdom, Canada and New Zealand is given at 24.8 lb., 31.4 lb., and 40.0 lb. per head per annum respectively, while that of cheese amounted to 8.8 lb., 3.4 lb., and 5.5 lb. respectively.

§ 3. Pigs and Pig Products.

1. Pigs.—The number of pigs in Australia has varied considerably since the commencement of the present century. In 1904, the total amounted to 1,062,703, but after a period of fluctuations it declined to 695,968 in 1919. In 1921 the number increased to 960,000 and from that year it remained fairly constant up to 1928. Since that year more than 1,000,000 pigs have been recorded annually in Australia with the maximum figure of 1,293,964 in 1935. The distribution of pigs among the States and Territories in 1936 was—New South Wales, 390,780; Victoria, 318,673; Queensland, 290,855; South Australia, 85,048; Western Australia, 76,451; Tasmania, 40,021; Northern Territory, 470; Australian Capital Territory, 454. Total, 1,202,752. The figures for New South Wales, Victoria and the Australian Capital Territory represent the number as on the 31st March, 1937.

A more accurate index of the development of pig raising in Australia is provided in the following table which combines the number of slaughtering with the numbers returned each year from 1926. The table discloses substantial increases in the number of pigs raised over the period under review:—

NUMBER OF PIGS AND NUMBER SLAUGHTERED.—AUSTRALIA.

Year.	Number of Pigs.	Number Slaughtered.	Year.	Number of Pigs.	Number Slaughtered.
1927	878,207	1,302,402	1932	1,162,407	1,585,133
1928	910,181	1,360,388	1933	1,046,867	1,636,974
1929	1,018,324	1,337,001	1934	1,158,274	1,703,332
1930	1,071,679	1,409,718	1935	1,293,964	1,983,745
1931	1,167,845	1,510,635	1936	1,202,752	2,073,909

2. **Bacon and Ham.**—The highest production of bacon and ham was reached in 1935-36 with an output of 77,655,178 compared with 72,000,000 lb., the average for the last five years. The production in the several States in 1936-37 was as follows:—New South Wales, 22,069,860 lb.; Victoria, 17,571,792 lb.; Queensland, 20,229,728 lb.; South Australia, 7,573,620 lb.; Western Australia, 4,098,448 lb.; Tasmania, 2,132,464 lb.; Australian Capital Territory, 1,151 lb.; Total, 73,677,063 lb. Practically the whole of the bacon and ham produced is consumed locally. On the experience of the last five years the local consumption was about 70,000,000 lb. per year, or 10.5 lb. per unit of population. The bacon and ham exported from Australia is consigned chiefly to the Pacific Islands and the East.

3. **Pork Consumption.**—Particulars available regarding the consumption of pork (excluding bacon and ham) give an average for Australia of 8.95 lb. per head of population. Including bacon and ham, the average consumption amounted to 20.25 lb. compared with 17 lb. in New Zealand, 67.75 lb. in Canada, and 68 lb. in the United States of America.

4. **Oversea Trade in Pig Products.**—The oversea trade in pigs and pig products for the last five years is shown in the following table:—

PIG PRODUCTS.—OVERSEA TRADE, AUSTRALIA.

Australian Currency Values.

Particulars.		1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
PIGS.						
Imports	No.	12	11	39	10	56
"	£	291	257	2,124	413	3,979
Exports	No.	201	239	131	164	152
"	£	809	799	708	607	979
Net Exports	No.	189	228	92	154	96
"	£	518	542	-1,416	194	-2,100
BACON AND HAM.						
Imports	lb.	11,014	11,712	5,168	2,760	7,212
"	£	803	774	313	209	605
Exports	lb.	1,664,501	1,562,498	1,701,575	1,752,518	1,675,969
"	£	96,579	98,825	109,760	112,680	117,654
Net Exports	lb.	1,653,487	1,550,786	1,696,407	1,749,758	1,668,757
"	£	95,776	98,051	109,447	112,471	117,049
LARD.						
Imports	lb.	17,973	25,718	6,963	29,644	28,244
"	£	481	493	301	941	1,127
Exports	lb.	1,483,680	2,523,749	2,792,008	4,051,472	3,852,835
"	£	25,969	41,758	53,603	69,374	60,249
Net Exports	lb.	1,465,707	2,498,031	2,785,045	4,021,828	3,824,591
"	£	25,488	41,265	53,302	68,433	59,122
FROZEN PORK.						
Imports	lb.	..	150,032	85,942	7,746	34
"	£	..	6,703	3,513	210	3
Exports	lb.	8,663,864	15,636,132	23,577,743	26,816,453	33,959,412
"	£	210,793	401,306	587,410	687,043	934,575
Net Exports	lb.	8,663,864	15,486,100	23,491,801	26,808,707	33,959,378
"	£	210,793	394,603	583,897	686,833	934,572

NOTE.—The minus sign (—) signifies net imports.

Hitherto the output of pig products in Australia was usually sufficient to meet local requirements and provide a small surplus for export. During the five years ended 1937-38, however, overseas exports of frozen pork showed a remarkable increase averaging

22,100,000 lb. as compared with an average of 373,000 lb. for the five years ended 1930-31. The chief pig product consumed in the United Kingdom is bacon and ham, the imports of which during 1937 amounted to 7.6 million cwt., valued at £32,448,000, the supplies being obtained chiefly from Denmark.

The agreement at the Ottawa Conference regarding the regulation of supplies from foreign countries and the Dominions has been superseded by the institution of a Bacon Marketing Scheme by the British Government. The scheme aims at creating a regular market for home producers of bacon pigs and necessitates adjustment of foreign supplies to conform with British bacon factories' requirements after estimated home and Dominion production is provided for. The estimated share of Australian production in this market was allocated at 8 million lb. in 1935, 14½ million lb. in 1936, 22 million lb. in 1937 and 23 million lb. in 1938; figures which indicate a steady expansion of this trade in bacon pigs.

§ 4. Total Dairy Production.

The total dairy production for each State in 1936-37 is shown below:—

PRINCIPAL DAIRY PRODUCTION.—1936-37.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus. Cap. Ter.	Total.
MILK.								
Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	239,745,329	335,598,292	181,062,127	42,761,112	25,703,305	22,462,360	55,664	847,388,189
Cheese ..	7,594,353	13,417,617	7,585,364	11,415,987	998,997	3,065,026	..	44,074,344
Condensing and concentrating	8,381,702	21,990,286	..	(a)	(a)	30,371,988
Other purposes ..	61,898,561	52,298,670	17,667,549	69,521,415	610,068,222	5,628,897	309,573	157,392,887
Total ..	317,616,945	423,304,865	206,315,040	63,698,514	36,770,524	31,156,283	365,237	1,079,227,408
BUTTER.								
In factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
On Dairy and other Farms ..	103,974,903	149,897,946	84,401,372	17,131,365	10,641,749	8,148,662	..	374,195,997
Total ..	5,855,848	4,871,445	3,073,385	3,761,004	1,719,175	2,769,616	15,223	22,065,696
Total ..	109,830,751	154,769,391	87,474,757	20,892,369	12,360,924	10,918,278	15,223	396,261,693
CHEESE.								
In Factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
On Dairy and other Farms ..	7,145,170	13,040,709	7,771,926	12,164,717	1,009,909	2,834,177	..	43,966,608
Total ..	272,470	309,415	17,964	102	2,230	160,050	..	762,231
Total ..	7,417,640	13,350,124	7,789,890	12,164,819	1,012,139	2,994,227	..	44,728,839
CONDENSED, CONCENTRATED, OR POWDERED MILK.								
In Factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
Total ..	10,884,034	53,159,599	(a)	(a)	(a)	(b)69,145,567

(a) Figures not available for publication.
milk used for condensing and concentrating.

(b) Including States marked (a). (c) Include

PRINCIPAL DAIRY PRODUCTION, 1936-37—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus. Cap. Ter.	Total.
BACON AND HAM.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories On Dairy and other Farms ..	21,255,483	16,652,906	20,002,189	7,140,112	3,984,716	1,661,160	..	70,696,566
	814,377	918,886	227,539	433,508	113,732	471,304	1,151	2,980,497
Total ..	22,069,860	17,571,792	20,229,728	7,573,620	4,098,448	2,132,464	1,151	73,677,063

Particulars in regard to the production of other milk products are not available for all the States, but casein amounting to 4,502,031 lb., valued at £93,001, was manufactured in Victoria during 1936-37.

§ 5. Value of Dairy Production.

The values of dairy production on a gross, local and net basis are shown in the following table. The presentation of these values has become possible by the adoption in the several States of uniform principles in determining production and marketing costs. Production values for this and other industries are dealt with more fully in Chapter XXVIII. "Miscellaneous".

GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION, 1936-1937.

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)	
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Production.		
	£	£	£	£	£	£	
New South Wales ..	12,302,000	1,457,000	10,845,000	1,708,000	9,000	9,128,000	
Victoria ..	13,018,154	521,071	12,497,083	1,618,897	100,000	10,778,186	
Queensland ..	6,321,000	214,000	6,107,000	1,000,000	150,000	4,957,000	
South Australia ..	2,154,957	76,059	2,078,898	412,924	78,178	1,587,796	
Western Australia ..	1,385,217	51,122	1,334,095	641,397	138,688	554,010	
Tasmania ..	916,100	39,630	876,470	308,400	26,000	542,070	
Total	1936-37	36,097,428	2,358,882	33,738,546	5,689,618	501,866	27,547,062
	1935-36	34,678,738	2,311,612	32,367,126	5,071,598	447,644	26,847,884
	1934-35	31,373,771	2,215,442	29,158,329	4,566,888	231,201	24,360,240
	1933-34	27,430,149	1,962,017	25,468,132	4,467,143	238,737	20,762,252

(a) No account has been taken of maintenance costs and depreciation.

§ 6. Poultry Farming.

1. **General.**—Poultry is kept in varying numbers by farmers, and production therefrom furnishes a considerable addition to the annual agricultural or dairying returns. For many years, however, poultry-keeping has been carried on as a separate industry, while it is also practised in conjunction with other rural industries. Special poultry farms have been instituted by the State Governments for scientific breeding, experts have been appointed to advise and instruct in the care and management of the various kinds of poultry, and exhibitions of leading breeds have been arranged, as well as egg-laying competitions. Co-operative egg-collecting circles have been formed in some districts; eggs are also delivered with milk and cream to the local butter factories, and thence forwarded to market.

2. **Number of Principal Kinds.**—The number of principal kinds of poultry is included in the annual census of live stock in all States except Victoria and Tasmania. The former State completed a census at 30th June, 1933, and the numbers at that date are shown in the table below. The details for Tasmania have been estimated. In 1913 a complete census was also taken and these data have been included for comparative purposes in the following table:—

POULTRY.—NUMBER OF PRINCIPAL KINDS—AUSTRALIA.

State.	Fowls.	Ducks.	Geese.	Turkeys.
1913.				
	No.	No.	No.	No.
New South Wales ..	3,351,629	261,075	23,948	216,274
Victoria ..	3,855,538	288,413	59,851	(a) 100,000
Queensland ..	841,630	35,337	7,457	27,192
South Australia ..	1,440,385	55,659	18,245	49,066
Western Australia ..	999,452	100,828	6,243	49,588
Tasmania (a) ..	350,000	35,000	12,000	8,000
Total ..	10,838,634	776,312	127,744	459,120
1936-37.				
	No.	No.	No.	No.
New South Wales ..	5,112,190	188,604	27,168	226,093
Victoria (b) ..	5,496,969	292,882	39,283	113,966
Queensland ..	1,170,000	38,000	4,000	10,000
South Australia ..	2,054,320	47,464	17,752	53,392
Western Australia ..	1,256,599	29,803	2,138	21,837
Tasmania (a) ..	450,000	35,000	10,000	10,000
Total ..	15,540,078	631,753	100,341	435,288

(a) Estimated.

(b) 30th June, 1933.

3. **Value of Poultry Products.**—Difficulty is experienced in obtaining complete figures for the production of poultry products. Arising from a series of Conferences of Australian Statisticians uniform procedure has been established for the valuation of these products. The following table sets out the values accruing to the poultry industry for Australia on a gross, local and net basis, and has been compiled from data actually collected or carefully estimated by the State Statistical Bureaux:—

GROSS, LOCAL AND NET VALUE OF POULTRY PRODUCTS, 1936-37.

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Feed and Other Costs.	Net Value of Production. (a)	
	£	£	£	£	£	
New South Wales ..	4,029,000	325,000	3,704,000	1,518,000	2,186,000	
Victoria ..	4,071,691	305,377	3,766,314	1,464,746	2,301,568	
Queensland ..	635,000	103,000	532,000	210,000	322,000	
South Australia ..	815,834	94,531	721,303	479,949	244,354	
Western Australia ..	679,750	125,813	553,937	265,313	288,624	
Tasmania ..	422,640	31,700	390,940	52,400	338,540	
Total	10,653,915	985,421	9,668,494	3,987,408	5,681,086	
	1935-36	9,575,755	856,936	8,718,819	3,050,257	5,668,562
	1934-35	8,955,815	857,091	8,098,724	2,837,065	5,261,659
	1933-34	8,542,275	801,683	7,740,592	2,561,232	5,179,360

(a) No account has been taken of maintenance costs and depreciation.

4. **Oversea Trade in Poultry Products.**—The Australian oversea export of poultry products is confined chiefly to eggs in shell and egg contents which are mainly consigned to the United Kingdom; New South Wales, Victoria and South Australia are the largest exporters. The total exports of eggs and egg contents in 1937-38 amounting to £703,639. The levying in accordance with the Ottawa Conference Agreement of a customs duty varying between 1s. and 1s. 9d. per 10 dozen by the Government of the United Kingdom on imported eggs of foreign origin has assisted Australia to obtain a larger share in this valuable market. Exports from Australia rose from less than 3 million dozen valued at £219,000 in 1928-29 to 21.7 million dozen valued at more than £1.1 million in 1934-35, but declined during the past three years to 11.3 million dozen in 1937-38. Exports of frozen poultry have declined quantitatively in the past two years, but values have been maintained. The oversea trade during the last five years was as follows:—

POULTRY PRODUCTS, TRADE.—AUSTRALIA.

Australian Currency Values.

Particulars.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
LIVE POULTRY.					
Imports No.	77	137	154	2,780	39
„ £	239	401	605	1,256	81
Exports No.	2,047	1,233	1,733	1,099	2,175
„ £	986	799	973	572	860
Net Exports No.	1,970	1,096	1,579	-1,681	2,136
„ £	747	398	368	-684	779
FROZEN POULTRY.					
Imports lb.	13,290	3,129	11,671	11,589	1,349
„ £	919	147	467	616	150
Exports pair	33,538	39,310	52,377	40,754	35,358
„ £	16,798	20,490	36,078	35,432	35,803
Net Exports (a)	(a)	(a)	(a)	(a)	(a)
„ £	15,879	20,343	35,611	34,816	36,653
Eggs.					
Imports doz.	6,003	7,002	7,311	7,625	8,388
„ £	333	408	397	361	458
Exports doz.	19,617,032	21,718,740	17,365,132	16,473,894	11,287,363
„ £	1,058,164	1,148,254	910,892	954,578	686,713
Net Exports doz.	19,611,029	21,711,738	17,357,821	16,466,269	11,278,975
„ £	1,057,831	1,147,846	910,495	954,217	686,255
EGG-CONTENTS.					
Imports lb.	24,173	31,257	46,917	32,634	31,954
„ £	3,491	3,388	3,957	3,953	3,547
Exports lb.	(a)	(a)	290,612	652,858	426,320
„ £	8,484	3,479	7,170	19,756	16,926
Net Exports lb.	(a)	(a)	243,695	620,224	394,366
„ £	4,993	91	3,213	15,803	13,379

(a) Quantity not available.

§ 7. Bee Farming.

1. **General.**—Although practised to some extent as a separate industry, bee-farming is frequently carried on in conjunction with agriculture or dairying. The returns of honey from productive hives during 1936-37 gave an average of 51.3 lb. per hive, while the average quantity of wax was 0.74 lb. per hive.

2. **Production of Honey and Beeswax.**—The number of hives and the production of honey and beeswax during the year 1936-37 are given in the following table. As these details have been collected from holdings of one acre and upwards, any production from smaller areas is omitted and consequently the production to that extent is understated. In Victoria and South Australia, however, the compulsory registration of beekeepers enables the collection to cover all producers and the production for these States is considered to be complete.

BEE-HIVES, HONEY AND BEESWAX, 1936-37.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Gross Value.	Quantity.	Gross Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	67,807	25,277	93,084	2,935,282	44,182	52,461	3,659
Victoria ..	65,379	34,239	99,618	3,439,262	53,738	40,612	2,707
Queensland ..	13,000	4,000	17,000	500,000	7,400	8,000	600
South Australia ..	64,001	18,810	82,811	3,273,441	30,689	41,660	2,474
Western Australia ..	16,515	1,175	17,690	1,601,161	18,482	26,424	1,321
Tasmania ..	5,372	2,443	7,815	154,931	2,740	2,171	137
Aus. Cap. Territory..	81	20	101	2,570	42	28	2
Australia ..	232,155	85,964	318,119	11,906,647	157,273	171,356	10,900

The table hereunder gives the production of honey and beeswax for the latest available five years :—

HONEY AND BEESWAX PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aust. Cap. Ter.	Australia.
HONEY.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1932-33	2,921,242	3,543,103	531,075	4,791,526	438,209	127,896	2,976	12,356,027
1933-34	1,397,426	1,133,279	610,330	2,561,057	621,275	168,334	..	6,491,701
1934-35	5,539,677	2,779,791	761,209	4,155,450	811,449	67,717	10,120	14,125,413
1935-36	4,577,097	5,901,463	584,288	4,160,006	916,929	238,055	7,000	16,384,838
1936-37	2,935,282	3,439,262	500,000	3,273,441	1,601,161	154,931	2,570	11,906,647
BEESWAX.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1932-33	38,715	41,827	9,948	52,273	7,343	2,741	50	152,897
1933-34	27,069	15,102	8,727	31,891	8,643	2,038	..	93,470
1934-35	70,564	30,351	9,745	45,515	11,222	1,475	22	168,894
1935-36	62,886	61,849	8,656	46,570	13,952	3,416	26	197,355
1936-37	52,461	40,612	8,000	41,660	26,424	2,171	28	171,356

The production of honey and beeswax varies greatly from year to year according to the favourableness or otherwise of the seasons. During the last five years New South Wales produced on the average 3,474,000 lb. of honey and 50,300 lb. of beeswax; Victoria produced 3,359,000 lb. of honey and 37,900 lb. of wax; and South Australia 3,788,000 lb. of honey and 43,600 lb. of wax. These States together accounted for 86.6 per cent. of the total Australian production of honey and 84.0 per cent. of the beeswax. Next in order of importance were Western Australia, Queensland and Tasmania.

3. **Value of Production.**—The following table shows the gross, local and net values of production which have been compiled by the Statisticians of the several States on uniform methods. These data are based upon actual records but as previously explained it is known that the production in some States is understated. No production costs are taken into account and consequently the gross production valued at the farm and net values are identical.

GROSS, LOCAL AND NET VALUE OF BEE PRODUCTS, 1936-37.

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Net Value of Production (a)
	£	£	£	£
New South Wales	48,000	5,000	43,000	43,000
Victoria	56,445	11,085	45,360	45,360
Queensland	8,000	3,000	5,000	5,000
South Australia	33,163	5,110	28,053	28,053
Western Australia	19,803	..	19,803	19,803
Tasmania	2,880	140	2,740	2,740
Total				
{ 1936-37	168,291	24,335	143,956	143,956
{ 1935-36	233,906	34,662	199,244	199,244
{ 1934-35	235,027	31,520	203,507	203,507
{ 1933-34	99,757	13,871	85,886	85,886

(a) No account has been taken of maintenance costs and depreciation.

4. **Oversea Trade in Bee Products.**—In normal years the production of honey exceeds Australian requirements, and a small quantity is available for export. The imports into the United Kingdom average 80,000 cwt. annually, of which Australia supplies approximately 1,200 cwt. At the Imperial Economic Conference at Ottawa in 1932 the representatives of the United Kingdom, on behalf of their Government, agreed to the imposition of an import duty of 7s. per cwt. on foreign honey. For the year 1937-38 the exports from Australia amounted to £21,100 compared with a total of £30,400 in the preceding year. The more general use of frame hives has reduced the production of wax, and as a result the quantity imported has exceeded that exported during each of the last five years.

For the year 1937-38, the imports of honey amounted to 6,687 lb. and the exports to 1,365,364 lb. The imports of beeswax amounted to 51,686 lb. in 1937-38 and the exports to 21,109 lb.

§ 8. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during each of the last five years are shown below:—

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS.—EXPORTS.

Particulars.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
QUANTITY.					
Beeswax	lb. 1,451	957	395	48,656	21,109
Butter	244,299,732	262,518,906	212,646,177	174,309,396	197,345,647
Cheese	9,313,714	16,829,351	12,972,627	13,924,572	27,245,638
Eggs not in shell	(a)	(a)	290,612	652,858	426,320
Eggs	19,617,032	21,718,740	17,365,132	16,473,894	11,287,363
Feathers, Undressed	(a)	(a)	(a)	(a)	(a)
Honey	lb. 351,674	388,761	764,696	1,934,162	1,365,364
Lard	1,483,456	2,523,749	2,792,008	4,051,472	3,852,835
Meats—					
Bacon and Ham	1,664,501	1,562,498	1,701,575	1,752,518	1,675,969
Frozen Poultry	pair 33,538	39,310	52,377	49,754	35,358
Frozen Pork	lb. 8,663,864	15,636,132	23,577,743	26,816,453	33,959,412
Milk, concentrated and preserved	19,771,958	16,553,864	16,961,023	22,169,680	24,717,435
Pigs, living	No. 201	239	131	164	152
Poultry, living	2,047	1,233	1,733	1,099	2,175
VALUE.					
	£	£	£	£	£
Beeswax	94	76	28	2,934	1,322
Butter	8,194,220	9,586,776	9,832,733	8,801,643	10,781,124
Cheese	229,313	403,977	337,467	384,027	845,130
Eggs not in shell	8,484	9,360	7,170	19,756	19,926
Eggs	1,058,164	1,149,254	910,892	954,578	686,713
Feathers, undressed	694	1,491	2,257	3,110	1,192
Honey	6,458	6,828	12,840	39,380	21,081
Lard	25,963	41,758	53,603	69,374	60,249
Meats—					
Bacon and Ham	96,579	98,825	109,760	112,680	117,654
Frozen Poultry	16,798	20,490	36,078	35,432	36,803
Frozen Pork	210,793	401,306	587,410	687,043	934,575
Milk, concentrated and preserved	730,000	710,166	722,301	851,760	963,873
Pigs, living	809	899	708	607	979
Poultry, living	986	799	973	572	860
Total	10,588,355	12,425,014	12,614,220	11,953,905	14,468,381

(a) Quantity not available.

Butter figures most largely in the list of exports shown above, and is consigned mainly to the United Kingdom. During the latest year under review 184,170,000 lb. were shipped thereto, representing 93 per cent. of the total exports. Shipments to the principal Eastern countries were approximately 9,672,000 lb., or nearly 5 per cent. of the total.

§ 9. British Imports of Dairy Products.

1. Quantities and Values.—The following table gives the quantities and values of the principal dairy products imported into the United Kingdom during the years 1933 to 1937:—

DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM.

Products.	1933.	1934.	1935.	1936.	1937.
Butter	cwt. 8,831,686	9,695,394	9,608,016	9,752,043	9,416,366
.. .. .	£ 34,349,921	33,271,706	39,328,128	44,424,184	47,359,297
Cheese	cwt. 3,939,450	2,988,539	2,714,351	2,676,489	2,956,879
.. .. .	£ 7,611,726	7,014,517	6,649,093	7,789,591	9,256,941
Milk, concentrated and preserved	cwt. 2,730,385	2,344,678	2,005,528	1,926,803	1,977,323
.. .. .	£ 3,549,210	3,269,918	2,435,822	2,407,277	2,812,140
Bacon and Ham	cwt. 9,953,167	8,326,535	7,603,672	7,241,397	7,600,387
.. .. .	£ 32,993,984	33,172,222	30,462,249	30,256,502	32,447,948
Pork (a)	cwt. 643,777	1,105,420	915,098	1,025,212	1,057,416
.. .. .	£ 1,620,323	2,926,863	2,509,315	2,779,906	3,251,559

(a) Frozen, chilled and salted.

2. **Butter.**—(i) *Imports.* Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity in 1937 amounted to 1,491,937 cwt., or 16 per cent. of the total importation. The Australian contribution was valued at £7,521,585 and was exceeded only by that received from New Zealand and Denmark. These three countries combined supplied 71 per cent. of the total imports compared with 68 per cent. in 1936 :—

BUTTER IMPORTS.—UNITED KINGDOM, 1937.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	cwt.	£		cwt.	£
New Zealand ..	2,950,963	15,352,026	Argentine Republic	129,652	505,757
Denmark ..	2,256,490	11,900,574	Estonia ..	159,882	781,341
Australia ..	1,491,937	7,521,585	Union of South Africa ..	69,126	312,553
Netherlands ..	716,614	3,292,116	British Possessions, n.e.i. ..	78,601	446,353
Ireland (Eire) ..	319,957	1,311,304	Foreign Countries, n.e.i. ..	80,602	383,067
Soviet Union ..	273,365	1,258,328			
Lithuania ..	204,540	975,576			
Latvia ..	216,830	1,043,831			
Poland ..	105,395	485,566			
Finland ..	157,872	762,202			
Sweden ..	204,490	1,027,118	Total ..	9,416,366	47,359,297

(ii) *London Prices.* The average price of first quality Australian salted butter in London during the last ten years is shown in the following table :—

AUSTRALIAN BUTTER.—LONDON PRICES.

Year.	Average Price, first quality, per cwt.	Year.	Average Price, first quality, per cwt.
	s. d.		s. d.
1928	171 0	1933	87 0
1929	175 0	1934	75 6
1930	135 6	1935	94 6
1931	116 6	1936	104 6
1932	105 0	1937	115 6

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1937 was £9,256,941, of which £5,392,128 was received from New Zealand, and £2,459,716 from Canada. Small experimental shipments from Australia were made in 1908 and following years, fair prices being realized. The value of the imports from Australia during 1937 amounted to £351,914.

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1937 at £32,447,948, the United Kingdom received imports to the value of £15,366,125 from Denmark, £7,117,767 from Canada, £2,071,492 from the Netherlands, £1,840,093 from Poland and £1,688,847 from Eire. The import from Australia was small.

5. **Pork.**—The value of the United Kingdom imports of pork (frozen and chilled) was £3,251,559 in 1937. Imports from Australia were valued at £691,393, showing a further increase over the imports in previous years. The bulk of the supplies were received from New Zealand, namely £1,740,074.

6. **Other Products.**—The imports to the United Kingdom from Australia of beeswax, poultry, game, lard and honey in 1937 were unimportant, but frozen rabbits to the value of £154,920 and eggs in shell to the value of £721,530 representing 84 per cent. and 7 per cent. respectively of the total imports were imported during the year.