

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 decided upon by the Commonwealth Government in 1929, the task of making the necessary inquiries being referred to the Development and Migration Commission and the Council for Scientific and Industrial Research for joint action. The first report, which relates to farm production, was completed by the Federal Dairy Investigation Committee 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 *materiel*, 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. In the latter State, however, as a result of a referendum among producers held in 1936, Tasmania has withdrawn from the plan and the State Act has 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 controlled 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.

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 2½ gallons.

6. *Butter and Cheese Factories.*—The factories in Australia for the manufacture of butter, cheese and condensed milk numbered 544 in 1934-35 as compared with 563 in 1927-28. The factories were distributed among the States as follows:—New South Wales, 136; Victoria, 179; Queensland, 116; South Australia, 42; Western Australia, 21; and Tasmania, 50. 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 the terms of this agreement free entry into the United Kingdom of eggs, poultry, butter, cheese and other milk products of Australian origin was continued for three years to 15th November, 1935, and subsequently until further arrangements have been made, while similar goods imported from foreign countries were subjected to customs duties. The rate imposed on the undermentioned items was 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 right to review the basis of preference of these items at the end of this period is reserved by the Government of the United Kingdom. The granting of new or additional preferences on some of these items by Crown Colonies and Protectorates should further benefit these industries. 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 will be 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.
1914-15	Males	23,435	24,771	13,805	1,400	534	1,212	65,157
	Females	15,917	16,589	12,774	8,629	438	2,256	56,603
1924-25	Males	30,329	33,804	19,424	1,933	1,697	2,573	89,760
	Females	14,707	18,960	14,321	2,928	528	2,581	54,025
1930-31	Males	33,977	36,383	25,794	2,770	3,619	2,848	105,391
	Females	8,735	9,479	16,145	2,125	972	932	38,388
1931-32	Males	36,601	40,630	27,349	3,220	3,838	3,565	115,203
	Females	7,923	8,407	18,123	2,398	1,123	1,163	39,137
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	1,296	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	1,305	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	20,493	3,244	1,189	1,916	42,196

The employment of males shown in the above table gives some indication of the expansion of the dairying industry since 1914-15. 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.
1914-15	1,938,834	193,970,412	1,664,000	65,157
1924-25	2,444,637	313,952,291	3,341,000	89,760
1934-35	3,396,331	472,247,805	4,176,000	124,762

§ 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 1934 there were 3.4 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 154,535.

CATTLE AND DAIRY CATTLE.—NUMBER.

State.	1930.	1931.	1932.	1933.	1934.
New South Wales	{ All Cattle .. 2,840,473	{ Dairy Cows .. 2,993,586	{ 3,141,174	{ 3,361,771	{ 3,482,331
	{ Dairy Cows .. 964,739	{ 1,020,947	{ 1,068,605	{ 1,097,842	{ 1,112,801
Victoria	{ All Cattle .. 1,429,920	{ Dairy Cows .. 1,637,530	{ 1,900,922	{ 2,002,235	{ 2,085,080
	{ Dairy Cows .. 669,132	{ 775,538	{ 887,996	{ 910,187	{ 951,849
Queensland	{ All Cattle .. 5,463,724	{ Dairy Cows .. 5,550,399	{ 5,535,065	{ 5,781,170	{ 6,052,641
	{ Dairy Cows .. 724,323	{ 775,301	{ 792,943	{ 877,409	{ 939,254
South Australia	{ All Cattle .. 218,985	{ Dairy Cows .. 265,324	{ 312,932	{ 352,728	{ 345,479
	{ Dairy Cows .. 109,672	{ 127,756	{ 149,172	{ 163,875	{ 170,250
Western Australia	{ All Cattle .. 812,844	{ Dairy Cows .. 826,532	{ 857,473	{ 885,660	{ 911,940
	{ Dairy Cows .. 85,725	{ 99,527	{ 114,022	{ 121,818	{ 129,875
Tasmania	{ All Cattle .. 230,254	{ Dairy Cows .. 232,444	{ 250,807	{ 262,256	{ 261,588
	{ Dairy Cows .. 76,825	{ 81,800	{ 87,854	{ 94,375	{ 91,223
Northern Territory	{ All Cattle .. 720,476	{ Dairy Cows .. 749,745	{ 780,121	{ 859,867	{ 899,670
	{ Dairy Cows .. (a)	{ (a)	{ (a)	{ (a)	{ (a)
Federal Capital Territory	{ All Cattle .. 4,240	{ Dairy Cows .. 5,395	{ 4,643	{ 6,790	{ 8,433
	{ Dairy Cows .. 788	{ 643	{ 411	{ 426	{ 1,019
Australia	{ All Cattle .. 11,720,916	{ Dairy Cows .. 12,260,955	{ 12,783,137	{ 13,312,486	{ 14,048,671
	{ Dairy Cows .. 2,631,204	{ 2,881,272	{ 3,101,003	{ 3,265,932	{ 3,396,331

(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 of the last nine seasons, the yield of 392 gallons in 1931 constituting a record. The annual average 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.	Fed. Cap. Ter.	Australia. (b)
1930-31—								
Dairy Cows (a) .. No.	880,079	644,274	671,803	98,502	75,465	74,530	614	2,445,267
Production 1,000 gals.	298,111	313,815	224,085	39,035	24,329	31,165	238	930,778
Aver. per cow .. gal	339	487	334	396	322	418	388	381
1931-32—								
Dairy Cows (a) .. No.	935,438	722,335	718,677	107,075	87,275	79,312	614	2,650,726
Production 1,000 gals.	332,293	362,868	231,688	50,001	29,890	31,306	280	1,038,326
Aver. per cow .. gal.	355	502	322	466	342	395	456	392
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	878,972	799,537	139,482	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	53,339	36,758	31,840	297	1,184,925
Aver. per cow .. gal.	340	454	347	354	306	343	435	373

(a) Mean for the year.

(b) Exclusive of Northern Territory.

3. **Butter and Cheese.**—Although the quantity of dairy production is largely affected by the nature of the season, a large increase in the output of butter has taken place in recent years. The average annual production rose from 263,000,000 lb. for the quinquennium 1921-1925 to 416,000,000 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. The previous highest figure was in 1933-34 when the total amounted to 451,000,000 lb. Preliminary data for 1935-36 indicate a reduction in the yield of about 49,000,000 lb., the production being forecast at 420,000,000 lb.

The output of cheese is also largely dependent upon seasonal conditions. The production in 1934-35 was 39,975,185 lb. as compared with 38,476,493 lb. during the previous year and was the greatest quantity produced in any year.

The development in dairy production since 1896, and in the exports of butter from 1901 onwards are shown in the graphs hereinafter. The production of butter and cheese for the last five years was as follows:—

BUTTER AND CHEESE PRODUCTION.

State.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.
BUTTER.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	113,237,295	123,252,722	128,210,092	147,963,411	145,277,595
Victoria	110,006,619	132,131,812	144,564,666	134,942,177	147,651,179
Queensland	95,719,316	98,013,043	103,032,474	127,343,160	133,624,597
South Australia	12,961,231	17,663,029	21,310,006	19,755,685	18,513,229
Western Australia	8,666,399	10,109,795	11,469,661	11,911,912	13,308,003
Tasmania	9,802,261	9,462,866	11,071,631	9,003,800	10,689,043
Federal Capital Territory ..	11,983	20,803	16,273	16,283	15,086
Australia	350,405,104	390,654,070	419,674,803	450,936,428	469,078,732
CHEESE.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	6,516,065	6,590,357	7,193,806	9,072,508	8,445,468
Victoria	8,064,463	7,723,328	9,189,018	8,363,233	10,095,139
Queensland	13,648,038	11,021,963	13,083,959	13,887,320	12,192,383
South Australia	3,901,159	5,096,731	6,093,170	5,316,971	6,649,661
Western Australia	528	909	138,051	285,461	643,571
Tasmania	969,528	989,685	1,235,302	1,551,000	1,948,963
Australia	33,099,781	31,422,973	36,933,306	38,476,493	39,975,185

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 1930-31 to 45,665,474 lb.; in 1931-32 to 41,409,540 lb.; in 1932-33 to 44,186,979 lb.; in 1933-34 to 41,899,267 lb.; and in 1934-35 to 51,390,850 lb. Production in New South Wales during 1934-35 was 8,660,208 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 milk. In each of the five years dealt with the exports of butter, cheese and condensed milk exceeded the imports :—

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

Australian Currency Values.

Products.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
IMPORTS.					
Butter lb.	1,525	2,359	2,471	2,096	3,826
.. .. . £	110	150	199	113	309
Cheese lb.	13,695	86,892	58,453	74,791	88,511
.. .. . £	1,482	8,205	5,283	5,949	7,052
Milk—concentrated and preserved lb.	393,953	312,730	260,311	60,289	12,886
.. .. . £	11,162	12,016	9,408	2,342	942
EXPORTS.					
Butter lb.	201,639,404	226,329,334	244,299,732	262,518,906	212,646,177
.. .. . £	9,812,827	9,264,665	8,194,220	9,586,776	9,028,243
Cheese lb.	7,267,727	11,799,265	9,314,529	16,829,780	12,973,627
.. .. . £	212,871	320,084	229,388	404,024	337,467
Milk—concentrated and preserved lb.	15,996,464	24,452,610	19,773,041	16,593,664	16,961,023
.. .. . £	642,036	927,558	739,031	711,242	722,301
NET EXPORTS.					
Butter lb.	201,639,879	226,326,975	244,297,261	262,516,810	212,642,351
.. .. . £	9,812,717	9,264,515	8,194,021	9,586,663	9,027,934
Cheese lb.	7,254,032	11,712,373	9,256,076	16,754,989	12,884,116
.. .. . £	211,389	311,879	224,105	398,075	330,415
Milk—concentrated and preserved lb.	15,602,511	24,139,880	19,512,730	16,533,375	16,948,137
.. .. . £	630,874	915,542	729,623	708,900	721,359

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 last five years ended 1934-35 are as follows :—

BUTTER AND CHEESE.—LOCAL CONSUMPTION.

* Products.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.
	lb.	lb.	lb.	lb.	lb.
Butter .. Total ..	187,227,425	189,016,191	193,347,828	206,639,167	206,561,922
.. .. Per head of population ..	28.91	28.96	29.27	31.05	30.82
Cheese .. Total ..	24,535,118	24,168,941	25,220,933	29,220,417	23,220,196
.. .. Per head of population ..	3.79	3.70	3.82	4.39	3.46

Consumption in 1934-35 averaged 31 lb. of butter and 3½ lb. of cheese per head of population. The consumption of butter in the United Kingdom, Canada and New Zealand is given at 25.2 lb., 31.1 lb., and 40.0 lb. per head per annum respectively, while that of cheese amounted to 9.5 lb., 3.6 lb., and 5.0 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. During the last five years the number of pigs has been maintained at slightly more than 1,000,000 which is still slightly below the record of 1,169,000 of 1917. The distribution of pigs among the States and Territories in 1934 was—New South Wales, 397,535; Victoria, 265,006; Queensland, 269,873; South Australia, 86,297; Western Australia, 97,997; Tasmania, 40,291; Northern Territory, 626; Federal Capital Territory, 649; Total, 1,158,274. The figures for New South Wales, Victoria and the Federal Capital Territory represent the number as on the 31st March, 1935.

2. **Bacon and Ham.**—The highest production of bacon and ham was reached in 1927-8 with an output of 75,000,000 lb. During the last three years the average was about 70,000,000 lb. The production in the several States in 1934-35 was as follows:—New South Wales, 19,667,619 lb.; Victoria, 16,334,018 lb.; Queensland, 21,751,444 lb.; South Australia, 6,497,111 lb.; Western Australia, 4,730,504 lb.; Tasmania, 2,022,717 lb.; Federal Capital Territory, 1,250 lb.; Total, 71,004,663 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 69,000,000 lb. per year, or 10.4 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.**—Data available regarding the consumption of pork (excluding bacon and ham) indicate an average for Australia in 1934-35 of 9.31 lb. per head of population, as compared with 6 lb. per head in New Zealand, 66.36 lb. in Canada and 72 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.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
Pigs.					
Imports ..	No. 4	6	12	11	39
" ..	£ 159	242	291	257	2,124
Exports ..	No. 274	28	201	239	131
" ..	£ 1,074	192	809	799	708
Net Exports ..	No. 270	22	189	228	92
" ..	£ 915	—50	518	542	—1,416
BACON AND HAM.					
Imports ..	lb. 1,191	7,135	11,014	11,712	5,168
" ..	£ 97	468	803	774	313
Exports ..	lb. 1,429,367	1,598,106	1,664,501	1,562,498	1,701,575
" ..	£ 87,213	95,128	96,579	98,825	109,760
Net Exports ..	lb. 1,428,176	1,590,971	1,653,487	1,550,786	1,696,407
" ..	£ 87,116	94,660	95,776	98,051	109,447
LARD.					
Imports ..	lb. 15,244	24,644	17,973	25,718	6,963
" ..	£ 492	694	481	493	301
Exports ..	lb. 2,924,492	1,620,590	1,483,680	2,523,749	2,792,008
" ..	£ 43,498	27,385	25,969	41,758	53,603
Net Exports ..	lb. 2,909,248	1,595,946	1,465,707	2,498,031	2,785,045
" ..	£ 43,006	26,691	25,488	41,265	53,302
FROZEN PORK.					
Imports ..	lb. 706	180	..	150,032	85,942
" ..	£ 32	10	..	6,703	3,513
Exports ..	lb. 7,383,355	6,703,234	8,663,864	15,636,132	23,577,743
" ..	£ 173,373	154,163	210,793	401,306	587,410
Net Exports ..	lb. 7,382,649	6,703,054	8,663,864	15,486,100	23,491,801
" ..	£ 173,341	154,153	210,793	394,603	583,897

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 1935-36, however, overseas exports of frozen pork showed a remarkable increase averaging

12.3 million 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 1935 amounted to 7.6 million cwt., valued at £30,500,000, 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 for 1935 was 8,400,000 lb., which indicates a steady expansion of this trade in bacon pigs. In Victoria particularly the tendency toward export of bacon pigs as against porkers is in evidence.

§ 4. Total Dairy Production.

The total dairy production for each State in 1934-35 is shown below :—

PRINCIPAL DAIRY PRODUCTION.—1934-35.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Total.
MILK.								
Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	284,551,258	324,092,595	274,621,644	38,123,241	24,953,856	24,276,618	55,372	970,674,534
Cheese ..	8,681,908	10,037,743	11,969,819	6,415,745	590,160	2,028,167	..	39,723,542
Condensing and concentrating	7,222,232	15,103,018	22,325,250
Other purposes ..	57,003,761	53,805,274	15,581,664	18,820,580	11,214,177	5,535,061	241,162	152,201,679
Total ..	357,459,159	403,038,630	302,173,127	53,359,566	36,758,193	31,839,846	296,534	1,184,925,055
BUTTER.								
In factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
On Dairy and other Farms ..	139,329,393	142,999,641	130,233,768	14,157,280	11,183,018	8,227,004	..	446,130,104
Total ..	5,948,202	4,651,538	3,390,820	4,355,949	2,124,985	2,462,039	15,086	22,948,628
Total ..	145,277,595	147,651,179	133,624,597	18,513,229	13,308,003	10,689,043	15,086	469,078,732
CHEESE.								
In Factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
On Dairy and other Farms ..	8,220,229	9,954,668	12,186,283	6,648,281	641,242	1,874,191	..	39,524,894
Total ..	225,239	140,471	6,100	1,380	2,329	74,772	..	450,291
Total ..	8,445,468	10,095,139	12,192,383	6,649,661	643,571	1,948,963	..	39,975,185
CONDENSED, CONCENTRATED, OR POWDERED MILK.								
In Factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
	8,660,208	51,390,850	(a)	(a)	(a)	(b)63,511,315

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

(b) Including States marked (a).

(c) Includes

PRINCIPAL DAIRY PRODUCTION, 1934-35—*continued.*

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Total
BACON AND HAM.								
In Factories: On Dairy and other Farms ..	lb. 18,709,766	lb. 15,189,047	lb. 21,474,749	lb. 5,936,357	lb. 4,558,113	lb. 1,467,556	lb. ..	lb. 67,335,588
Total ..	957,853	1,144,971	276,695	560,754	172,391	555,161	1,250	3,669,075
Total ..	19,667,619	16,334,018	21,751,444	6,497,111	4,730,504	2,022,717	1,250	71,004,663

Particulars in regard to the production of other milk products are not available for all the States, but casein amounting to 2,424,284 lb., valued at £45,682, was manufactured in Victoria during 1934-35.

§ 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, 1934-35.

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	11,368,000	1,401,000	9,967,000	1,117,000	6,000	8,844,000
Victoria	9,368,531	446,229	8,922,302	1,320,182	70,705	7,531,415
Queensland	7,068,216	218,898	6,849,318	947,904	102,618	5,798,796
South Australia	1,545,320	54,660	1,490,660	332,623	36,948	1,121,089
Western Australia	1,326,434	57,155	1,269,279	649,469	..	619,810
Tasmania	697,270	37,500	659,770	199,710	14,930	445,130
Total ..	31,373,771	2,215,442	29,158,329	4,566,888	231,201	24,360,240

(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. The previous year in which a complete census was taken was in 1913 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	450,120
. 1934-35.				
	No.	No.	No.	No.
New South Wales ..	5,250,702	219,345	31,278	243,523
Victoria (b) ..	5,496,969	292,882	39,283	113,966
Queensland ..	1,159,642	46,100	4,591	12,376
South Australia ..	2,088,133	57,475	18,434	58,458
Western Australia ..	1,310,671	40,107	2,712	37,265
Tasmania (a) ..	450,000	35,000	10,000	10,000
Total ..	15,756,117	690,909	106,298	475,588

(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, 1934-35.

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 ..	3,058,000	235,000	2,823,000	974,000	1,849,000
Victoria ..	3,562,594	267,195	3,295,399	1,110,352	2,185,047
Queensland ..	516,580	112,233	404,347	155,668	248,679
South Australia ..	813,374	100,458	712,916	373,581	339,335
Western Australia ..	622,867	113,505	509,362	186,884	322,478
Tasmania ..	382,400	28,700	353,700	36,580	317,120
Total ..	8,955,815	857,091	8,098,724	2,837,065	5,261,659

(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 in 1935-36 amounting to £918,062. 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 in 1935-36 exports declined to 17.4 million dozen valued at £910,000. The exports of frozen poultry have increased considerably in recent years as the following table shows. The oversea trade during the last five years was as follows :—

POULTRY PRODUCTS, TRADE.—AUSTRALIA.

Australian Currency Values.

Particulars.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
LIVE POULTRY.					
Imports No.	164	253	77	137	154
" £	292	788	239	401	605
Exports No.	2,067	1,742	2,047	1,233	1,733
" £	1,039	896	986	799	973
Net Exports .. . No.	1,903	1,489	1,970	1,096	1,579
" £	747	108	747	398	368
FROZEN POULTRY.					
Imports lb.	49	20,486	13,290	3,129	11,671
" £	2	809	919	147	467
Exports pair	32,597	60,921	33,538	39,310	52,377
" £	33,366	40,266	16,798	20,490	36,078
Net Exports .. .	(a)	(a)	(a)	(a)	(a)
" £	33,364	39,457	15,879	20,343	35,611
Eggs.					
Imports doz.	8,513	6,722	6,003	7,002	7,311
" £	443	397	333	408	397
Exports doz.	9,921,829	16,844,288	19,617,032	21,718,740	17,365,132
" £	494,032	958,065	1,058,164	1,148,254	910,892
Net Exports .. . doz.	9,913,316	16,837,566	19,611,029	21,711,738	17,357,821
" £	493,589	957,668	1,057,831	1,147,846	910,495
EGG-CONTENTS.					
Imports lb.	13,219	9,470	24,173	31,257	46,917
" £	1,706	1,755	3,491	3,388	3,957
Exports lb.	(a)	(a)	(a)	(a)	290,612
" £	60,926	60,549	8,484	3,479	7,170
Net Exports .. . lb.	(a)	(a)	(a)	(a)	243,695
" £	59,220	58,794	4,993	91	3,213

(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 1934-35 gave an average of 65.3 lb. per hive, while the average quantity of wax was 0.78 lb. per hive.

2. **Production of Honey and Beeswax.**—The number of hives and the production of honey and beeswax during the year 1934-35 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, 1934-35.

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 ..	67,170	15,193	82,363	5,539,677	100,176	70,564	5,586
Victoria ..	50,329	13,442	63,771	2,779,791	48,502	30,351	2,023
Queensland ..	12,208	3,633	15,841	761,209	11,844	9,745	614
South Australia ..	67,712	13,334	81,046	4,155,450	47,615	45,515	2,892
Western Australia ..	15,295	1,250	16,545	811,449	13,737	11,222	300
Tasmania ..	3,557	2,845	6,402	67,717	1,410	1,475	90
Fed. Cap. Territory ..	52	65	117	10,120	183	22	2
Australia ..	216,323	49,768	266,091	14,125,413	223,467	168,894	11,507

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.	Fed. Cap. Ter.	Australia.
HONEY.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1930-31	2,643,871	2,804,186	555,244	1,717,442	641,969	102,540	10,600	8,475,852
1931-32	2,123,233	2,159,770	283,022	1,240,525	250,146	52,559	1,480	6,110,735
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
BEESWAX.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1930-31	36,460	30,478	8,579	16,832	9,911	2,008	139	104,407
1931-32	27,933	26,239	6,082	17,253	4,251	644	80	82,482
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

The production of honey and beeswax varies greatly from year to year according to the seasons. During the last five years New South Wales produced on the average 2,925,090 lb. of honey and 40,148 lb. of beeswax; Victoria produced 2,484,026 lb. of honey and 28,799 lb. of wax; and South Australia 2,893,200 lb. of honey and 32,753 lb. of wax. These States together accounted for 87.28 per cent. of the total Australian production of honey and 84.22 per cent. of the beeswax. Next in order of importance were Queensland, Western Australia 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, 1934-35.

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Net Value of Production.(a)
	£	£	£	£
New South Wales	106,000	11,000	95,000	95,000
Victoria	50,525	10,985	39,540	39,540
Queensland	12,458	2,000	10,458	10,458
South Australia	50,507	7,455	43,052	43,052
Western Australia	14,037	..	14,037	14,037
Tasmania	1,500	80	1,420	1,420
Total	235,027	31,520	203,507	203,507

(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, which should assist Australia to procure a larger proportion of the trade. During the five years ended 1935-36 the value of the exports amounted to only £39,782, or an annual average of £7,956, owing to the decrease in production. 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 years 1934-35 and 1935-36, the imports of honey amounted to 14,995 lb. and 7,697 lb., respectively, and the exports to 388,761 lb. and 764,696 lb. The imports of beeswax amounted to 95,616 lb. in 1934-35 and to 74,389 lb. in 1935-36, and the exports to 3,211 lb. and 395 lb. respectively for the same years.

§ 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.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
QUANTITY.					
Beeswax lb.	2,888	2,081	1,451	957	395
Butter "	201,639,404	226,329,334	244,299,732	262,518,906	212,646,777
Cheese "	7,267,719	11,785,156	9,313,714	16,829,351	12,972,627
Eggs not in shell "	(a)	(a)	(a)	(a)	290,612
Eggs doz.	9,921,829	16,844,288	19,617,032	21,718,740	17,366,132
Feathers, undressed "	(a)	(a)	(a)	(a)	(a)
Honey lb.	251,857	406,851	351,674	388,761	764,696
Lard "	2,924,492	1,620,590	1,483,456	2,523,749	2,792,008
Meats—					
Bacon and Ham "	1,429,367	1,596,706	1,664,501	1,562,498	1,701,575
Frozen Poultry pair	32,597	60,921	33,538	39,310	52,377
Frozen Pork lb.	7,383,355	6,703,234	8,663,864	15,636,132	23,577,743
Milk, concentrated and preserved "	15,996,318	24,452,509	19,771,958	16,553,864	16,961,023
Pigs, living No.	274	28	201	239	131
Poultry, living "	2,067	1,738	2,047	1,233	1,733
VALUE.					
	£	£	£	£	£
Beeswax "	178	143	94	76	28
Butter "	9,812,827	9,264,665	8,194,220	9,586,776	9,028,243
Cheese "	212,870	318,895	229,313	403,977	337,467
Eggs not in shell "	60,896	60,549	8,484	3,369	7,118
Eggs "	494,032	958,065	1,058,164	1,148,254	910,892
Feathers, undressed "	229	400	694	1,491	2,214
Honey "	5,642	8,014	6,458	6,828	12,840
Lard "	43,497	27,385	25,963	41,758	53,603
Meats—					
Bacon and Ham "	87,213	95,093	96,579	98,825	109,760
Frozen Poultry "	33,366	40,266	16,798	20,490	36,078
Frozen Pork "	173,373	154,163	210,793	401,306	587,419
Milk, concentrated and preserved "	642,016	927,546	739,000	710,166	722,301
Pigs, living "	1,074	192	809	899	708
Poultry, living "	1,039	846	986	799	973
Total "	11,568,252	11,856,222	10,588,355	12,425,014	11,809,635

(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 196,939,653 lb. were shipped thereto, representing 93 per cent. of the total exports. Exports to the principal Eastern countries were approximately 13,000,000 lb., or 6 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 1931 to 1935:—

DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM.

Products.	1931.	1932.	1933.	1934.	1935.
Butter cwt.	8,060,068	8,364,367	8,831,686	9,695,394	9,608,620
" £	46,297,585	41,055,142	34,340,921	33,271,706	39,337,657
Cheese cwt.	2,885,794	3,003,113	3,039,450	2,988,539	2,713,322
" £	9,062,707	9,089,757	7,611,726	7,014,517	6,647,344
Milk, concentrated and preserved cwt.	3,164,618	3,073,980	2,730,385	2,344,678	2,005,541
" £	5,093,616	4,252,202	3,549,210	3,269,918	2,436,915
Bacon and ham cwt.	11,964,825	12,192,188	9,953,167	8,326,535	7,602,433
" £	36,346,943	32,913,045	32,993,984	33,172,222	30,469,079
Pork (a) cwt.	432,513	375,259	643,777	1,105,420	915,210
" £	1,282,774	983,548	1,620,323	2,926,863	2,509,736

(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 1935 amounted to 2,113,650 cwt., or 22 per cent. of the total importation. The Australian contribution was valued at £8,391,009 and was exceeded only by that received from New Zealand and Denmark. These three countries combined supplied 72 per cent. of the total imports:—

BUTTER IMPORTS.—UNITED KINGDOM, 1935.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	cwt.	£		cwt.	£
New Zealand ..	2,637,535	11,575,756	Poland.. ..	99,158	341,176
Denmark ..	2,186,350	9,966,184	Union of South Africa ..	82,349	343,822
Australia ..	2,113,650	8,391,009	Argentine Republic ..	69,354	229,405
Soviet Union ..	503,192	1,669,721	Canada ..	63,463	344,012
Irish Free State ..	488,476	1,505,197	British Possessions, n.e.i. ..	49,964	201,788
Netherlands ..	464,508	1,551,482	Foreign Countries, n.e.i. ..	58,351	225,403
Latvia ..	192,500	697,809			
Sweden ..	184,385	751,244			
Lithuania ..	180,499	633,887			
Estonia ..	119,179	423,864			
Finland ..	115,707	485,898	Total ..	9,608,620	39,337,657

(ii) *London Prices.* The average price of first quality Australian butter in London during the last eleven 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.
	<i>s.</i> <i>d.</i>		<i>s.</i> <i>d.</i>
1924	189 6	1930	135 6
1925	184 0	1931	116 6
1926	169 6	1932	105 0
1927	169 6	1933	87 0
1928	171 0	1934	75 6
1929	175 0		

3. *Cheese.*—The value of cheese imported into the United Kingdom in 1935 was £6,647,341, of which £4,198,400 was received from New Zealand, and £1,233,560 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 1935 amounted to £303,768.

4. *Bacon and Ham.*—Of a total import of bacon and ham valued in 1935 at £39,469,070, the United Kingdom received imports to the value of £15,963,963 from Denmark, £4,397,973 from Canada, £2,068,858 from the Netherlands, and £1,709,499 from Poland. The import from Australia was small.

5. *Pork.*—The value of the United Kingdom imports of pork (frozen and chilled) was £2,509,736 in 1935. Imports from Australia were valued at £388,865, showing a marked increase over the imports in the previous two years. The bulk of the supplies, however, were received from New Zealand, £1,279,236, and the Argentine Republic, £549,732.

6. *Other Products.*—The imports to the United Kingdom from Australia of beeswax, poultry, game, lard and honey in 1935 were unimportant, but frozen rabbits to the value of £222,637 and eggs in shell to the value of £1,092,220 representing 82 per cent. and 14 per cent. respectively of the total imports were imported during the year.