

## 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 has 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 adoption 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. The subjects covered in this report included the extent and value of the industry, existing conditions and practices, and the possibilities of improvement. Further reports are to be submitted regarding manufacture and marketing of dairy products.

2. **Official Supervision of Industry.**—Dairy experts, under the supervision 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 *matériel*, 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 certificated by the inspector.

3. **Stabilization Scheme.**—A scheme for the stabilization of prices of butter and cheese advocated by the Hon. Thomas Paterson, M.H.R., was introduced in January, 1926. The working of the scheme, which is purely voluntary, is controlled by a body known as the Australian Stabilization Committee. Provision is made for levies on all butter and cheese produced within the Commonwealth sufficient to pay a bounty of not less than 3d. per lb. on butter exported and of 1½d. per lb. on cheese exported. Up to the present, however, cheese has not been included in the scheme. The rate of levy charged and the amount of bounty payable on butter exported since 1st January, 1926, are shown in the statement hereunder:—

Period.	Rate of Levy on Butter produced.	Rate of Bounty paid on Butter Exported.
	per lb. d.	per lb. d.
1st January, 1926 to 11th December, 1927 ..	1½	3
12th December, 1927 to 31st December, 1927 ..	1½	4
1st January, 1928 to 31st August, 1928 ..	1½	3
1st September, 1928 to 31st December, 1928 ..	1½	4
1st January, 1929 to 31st December, 1930 ..	1¾	4½
1st January, 1931 to 31st March, 1931 ..	1¾	3½
1st April, 1931 to 11th April, 1931 ..	1¾	3
12th April, 1931 to 2nd April, 1932 ..	1¾	2½
2nd April, 1932 to latest available date (November)	1¾	3

The bounty results in an automatic increase in the local price up to the amount of bounty paid, while the average return to the producer on all butter produced is increased by approximately the amount of the bounty less the rate of levy charged.

On an average annual production of 265,000,000 lb., of which it is estimated that 180,000,000 lb. constitute the requirements for local consumption, leaving a balance of 85,000,000 lb. available for export—the extent to which the producer would benefit from an export bounty of 3d. per lb. is shown hereunder—

Increased value of 3d. per lb. on total production of 265,000,000 lb.	..	£3,313,000
Less amount required to provide export bounty of 3d. per lb. on 85,000,000 lb. exported	..	1,063,000
Estimated net gain to producer	..	£2,250,000

It should be noted that the above figures do not take into consideration any consequent increases in the price of milk or other milk products, nor any decrease in consumption resultant thereon.

Allowance must be made also for the fact that the plan, though voluntary, depends upon adequate tariff protection of the "home price". The duty on imported butter was raised to 6d. in 1927 to safeguard the scheme against imports from New Zealand.

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 may be profitably worked at the larger establishments. The product is also of a more uniform quality and the number of farmers who adhere to hand processes is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires less than 2½ gallons.

6. **Butter and Cheese Factories.**—The factories in Australia for the manufacture of butter, cheese, and condensed milk numbered 506 in 1930–31, as compared with 579 in 1926–27. These were distributed in the various States as follows:—New South Wales, 138; Victoria, 165; Queensland, 117; South Australia, 39; Western Australia, 15; and Tasmania, 32. 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, should materially assist the dairying, bee, and poultry industry. Under the terms of this agreement free entry into the United Kingdom of eggs, poultry, butter, cheese and other milk products of Australian origin will be continued for three years from 15th November, 1932, while similar goods imported from foreign countries are to be subjected to customs duties. The rate to be imposed on the undermentioned items is as follows:—butter, 15s. per cwt.; cheese, 15 per cent. ad valorem; eggs in shell, 1s. to 1s. 9d. per great hundred; honey, 7s. per cwt.; milk powder, 5s. 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 quantitative regulation of supplies of bacon and ham coming on to the market in Great Britain is to be arranged after the receipt of the report of the Commission investigating the reorganization of the pig industry in the United Kingdom. The granting of new or additional preferences on some of these items by Crown Colonies and Protectorates should add further benefits to these industries. Details of imports into the United Kingdom are given in § 9 hereafter.

## § 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 substantial increases have taken place, and the number recorded in 1930 represents a gain of more than 576,000 in the past decade. In New South Wales, Victoria, South Australia, and Tasmania the proportion of dairy cattle to all cattle is high.

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. In Southern Queensland, however, dairying has developed remarkably during the past decennium, and the progress attained in that area has been largely responsible for the Australian increases since 1916. The returns for 1930 include heifers intended for milking and being within three months of calving. Details were not collected for Victoria or Tasmania; but the total of such heifers in the other States amounted to 107,575.

CATTLE AND DAIRY CATTLE.—NUMBER.

State.		1926.	1927.	1928.	1929.	1930.
New South Wales	All Cattle ..	2,813,144	2,848,654	2,784,615	2,686,132	2,840,473
	Dairy Cows ..	885,238	894,440	907,774	913,555	964,739
Victoria	All Cattle ..	1,435,761	1,327,077	1,304,426	1,335,242	1,429,929
	Dairy Cows ..	673,089	626,139	615,092	619,416	660,132
Queensland	All Cattle ..	5,464,845	5,225,804	5,128,341	5,208,588	5,463,724
	Dairy Cows ..	611,227	645,316	670,805	680,577	724,323
South Australia	All Cattle ..	340,007	316,314	263,016	204,516	218,985
	Dairy Cows ..	127,292	117,580	108,969	104,255	109,672
Western Australia	All Cattle ..	827,303	846,735	837,527	836,646	812,844
	Dairy Cows ..	69,627	70,880	69,047	74,223	85,725
Tasmania	All Cattle ..	213,112	210,894	208,812	214,643	230,254
	Dairy Cows ..	67,457	66,902	94,268	72,235	76,825
Northern Territory	All Cattle ..	863,597	835,390	768,751	711,607	720,476
	Dairy Cows ..	(a)	(a)	(a)	(a)	(a)
Federal Capital Territory	All Cattle ..	5,509	6,188	5,269	4,760	4,240
	Dairy Cows ..	815	1,417	704	679	788
Australia..	All Cattle ..	11,963,278	11,617,056	11,309,757	11,203,134	11,720,916
	Dairy Cows ..	2,434,745	2,422,674	2,466,659	2,464,940	2,631,204

(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 more scientific methods have been adopted in the industry generally, and the 300 gallon average has been exceeded in each of the last six seasons, the yield of 381 gallons in 1930 constituting a record. The best yields over a series of years were in Victoria, Tasmania, South Australia and New South Wales, while Queensland in normal years shows a higher average than Western Australia. In the following table the annual average yields per cow 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, naturally, far below that for cows which were yielding during the greater part of the year.

MILK PRODUCTION.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia. (b)
1926-27—								
Dairy Cows (a) .. No.	837,373	700,515	553,472	123,066	63,768	68,920	730	2,347,844
Production 1,000 gals.	277,917	258,437	130,416	40,434	15,553	21,009	198	749,904
Aver. per cow .. gals.	322	369	246	329	244	305	271	319
1927-28—								
Dairy Cows (a) .. No.	837,617	649,614	565,913	114,459	65,701	67,180	585	2,301,069
Production 1,000 gals.	283,046	260,648	180,679	37,947	17,359	22,556	220	802,255
Aver. per cow .. gals.	338	401	319	332	261	336	376	349
1928-29—								
Dairy Cows (a) .. No.	849,769	620,616	606,637	105,800	65,982	67,491	567	2,316,862
Production 1,000 gals.	277,378	279,032	186,307	35,701	18,252	24,444	245	821,359
Aver. per cow .. gals.	326	450	307	337	277	362	432	354
1929-30—								
Dairy Cows (a) .. No.	858,194	617,254	643,272	98,969	67,592	70,157	550	2,355,988
Production 1,000 gals.	283,947	274,172	188,520	34,774	21,366	25,466	276	828,521
Aver. per cow .. gal.	331	444	293	351	316	363	502	352
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

(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 205,000,000 lb. for the quinquennium 1917-1921 to 294,000,000 lb. for the latest five years. Queensland was responsible for the largest share of the increased output during recent years. The largest production of butter in Australia was recorded in 1930-31, when, as a result of a specially favourable season, 350,000,000 lb. were manufactured. The previous highest figure was in 1924 when the total amounted to 314,000,000 lb. It is anticipated that this record will be broken by the return for the season 1931-32. Preliminary data indicate a total production for the season of 390,000,000 lb.

The manufacture of cheese is also largely dependent upon seasonal conditions. The production in 1930-31 of 33,099,781 lb. is the highest yet recorded, exceeding that of 1921 by 500,000 lb..

The development in dairy production since 1896, and in the exports of butter from 1901 onwards are shown in the graphs on page 602. Particulars for the past five years are as follow :—

## BUTTER AND CHEESE PRODUCTION.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
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## BUTTER.

	lb.	lb.	lb.	lb.	lb.
New South Wales .. ..	95,832,624	100,794,838	95,337,240	104,175,340	113,237,295
Victoria .. ..	81,995,815	84,270,812	93,728,516	90,639,652	110,006,619
Queensland .. ..	51,402,633	72,039,151	77,044,859	78,796,483	95,719,316
South Australia .. ..	13,416,904	12,136,638	11,315,714	10,789,706	12,961,231
Western Australia .. ..	3,829,728	4,265,258	5,051,088	6,179,489	8,666,399
Tasmania .. ..	6,032,597	6,514,642	7,395,689	8,488,932	9,802,261
Federal Capital Territory .. ..	20,758	16,065	10,094	10,943	11,983
<b>Australia .. ..</b>	<b>252,531,059</b>	<b>280,037,404</b>	<b>289,883,200</b>	<b>299,080,545</b>	<b>350,405,104</b>

## CHEESE.

	lb.	lb.	lb.	lb. °	lb.
New South Wales .. ..	6,735,960	7,284,622	6,339,052	6,345,785	6,516,065
Victoria .. ..	5,997,648	5,621,945	5,595,932	6,953,949	8,064,463
Queensland .. ..	9,260,043	14,128,420	14,391,910	12,380,882	13,648,038
South Australia .. ..	3,708,730	3,465,456	2,975,095	3,536,943	3,901,159
Western Australia .. ..	5,172	5,088	7,526	998	528
Tasmania .. ..	971,644	1,029,344	997,586	954,463	969,528
<b>Australia .. ..</b>	<b>26,679,197</b>	<b>31,534,875</b>	<b>30,217,101</b>	<b>30,173,020</b>	<b>33,099,781</b>

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 nearly doubled that of the previous year. Thenceforward rapid progress was made, the greatest development taking place in Victoria. The output of this State in 1926-27 amounted to 48,186,040 lb.; in 1927-28 to 53,876,662 lb.; in 1928-29 to 53,948,559 lb.; in 1929-30 to 51,581,802 lb., and in 1930-31, to 45,665,474 lb. There is still an import of milk into Australia, but the exports in each year far outweigh the quantity imported. No condensed or concentrated milk is made in South Australia, Western Australia, or Tasmania. Information regarding production in New South Wales and Queensland is not available for publication, but the volume is not very large.



### § 3. Pigs and Pig Products.

1. Pigs.—The number of pigs in Australia for the years 1926 to 1930 is shown below :—

#### PIGS.—NUMBER.

State.	1926.	1927.	1928.	1929.	1930.
New South Wales(a) ..	332,827	301,819	311,605	323,499	334,331
Victoria .. .. .	284,271	212,785	222,084	265,978	281,245
Queensland .. .. .	183,662	191,947	215,764	236,037	217,528
South Australia .. ..	79,108	69,733	62,723	74,906	82,991
Western Australia .. ..	69,798	59,810	49,243	64,522	100,664
Tasmania .. .. .	38,906	41,752	48,304	52,899	54,556
Northern Territory .. ..	343	292	407	359	327
Federal Capital Territory (a)	94	69	51	124	37
<b>Australia .. .. .</b>	<b>989,009</b>	<b>878,207</b>	<b>910,181</b>	<b>1,018,324</b>	<b>1,071,679</b>

(a) As on 30th June of year following.

The numbers have fluctuated considerably. There was a heavy falling off in 1915, followed by substantial increases during the next two years, the number in 1917, viz., 1,169,365, being the highest recorded in Australia. From 1917 onwards the numbers remained fairly constant at about 900,000, but an upward tendency is shown by the totals for the latest three years.

2. <sup>o</sup>Bacon and Ham.—(i) *Production.* The production of bacon and ham is increasing fairly rapidly, the averages for the past three quinquennia being 58,000,000, 66,000,000, and 73,000,000 lb. respectively. No increase in the volume of exports has taken place, the extra production being needed to supply the local demand.

#### BACON AND HAM.—PRODUCTION.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lb.	lb.	lb.	lb.	lb.
New South Wales .. ..	24,600,275	25,479,208	23,087,271	21,616,472	21,901,194
Victoria .. .. .	20,952,310	20,605,148	19,401,447	18,888,537	18,232,219
Queensland .. .. .	18,288,690	18,264,855	22,043,114	19,195,176	20,177,550
South Australia .. .. .	5,165,670	5,111,465	5,110,352	5,232,878	5,710,784
Western Australia (a) ..	2,678,830	2,760,694	2,557,068	2,713,127	3,042,702
Tasmania .. .. .	1,946,323	2,780,304	2,298,745	2,454,548	1,984,454
Federal Capital Territory .. ..	2,790	..	1,400	1,243	1,230
<b>Total .. .. .</b>	<b>73,634,888</b>	<b>75,001,674</b>	<b>74,499,397</b>	<b>70,101,981</b>	<b>71,050,133</b>

(a) Includes a certain quantity made from imported green bacon.

(ii) *Local Consumption.* From the year 1904 onwards the production of bacon and ham has been sufficient to meet the local demand and provide a small surplus for export. Figures showing consumption for the last five years are given hereunder :—

#### BACON AND HAM.—LOCAL CONSUMPTION.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lb.	lb.	lb.	lb.	lb.
<b>Total .. .. .</b>	<b>72,175,870</b>	<b>73,823,995</b>	<b>73,441,419</b>	<b>68,829,105</b>	<b>68,975,088</b>
Per head of population .. ..	11.81	11.84	11.59	10.73	10.65

3. **Pork Consumption.**—Data available regarding the consumption of pork indicate an average for Australia in 1930-31 of 6.44 lb. per head of population, as compared with 13 lb. per head in New Zealand, 82 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.**

Particulars.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>Pigs.</b>						
Imports	.. No.	8	..	85	59	7
"	.. £	223	..	707	2,603	222
Exports	.. No.	418	328	201	325	280
"	.. £	2,506	1,294	934	1,365	1,186
Net Exports	.. No.	410	328	116	266	273
"	.. £	2,283	1,294	227	-1,238	904
<b>BACON AND HAM.</b>						
Imports	.. lb.	374,814	356,288	406,335	209,021	25,245
"	.. £	23,101	21,108	23,405	12,325	1,413
Exports	.. lb.	1,833,832	1,533,967	1,464,313	1,481,897	2,100,290
"	.. £	147,886	129,073	122,929	116,709	115,278
Net Exports	.. lb.	1,459,018	1,177,679	1,057,978	1,272,876	2,075,045
"	.. £	124,785	107,965	99,464	104,384	113,805
<b>LARD.</b>						
Imports	.. lb.	575,293	712,307	420,609	206,037	101,391
"	.. £	17,169	20,092	11,188	5,157	2,633
Exports	.. lb.	1,334,421	1,380,960	1,609,914	969,512	1,043,930
"	.. £	38,839	38,209	41,741	26,664	26,189
Net Exports	.. lb.	759,128	668,653	1,189,305	763,475	942,539
"	.. £	21,670	18,117	30,553	21,507	23,556
<b>FROZEN PORK.</b>						
Imports	.. lb.	733,179	2,112,595	2,288,385	413,949	46,695
"	.. £	31,657	67,876	76,141	13,486	1,492
Exports	.. lb.	481,330	159,494	199,336	934,149	8,629,901
"	.. £	16,608	6,183	7,856	32,735	235,999
Net Exports	.. lb.	-251,849	-1,953,101	-2,089,049	520,200	8,583,206
"	.. £	-15,049	-61,693	-68,285	19,249	234,507

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

The output of pig products in Australia is usually sufficient to meet local requirements and provide a small surplus for export. Exports of frozen pork showed a remarkable increase in 1930-31, when more than 8.6 million lb. were sent overseas, as compared with an average of 373,000 lb. for the five preceding years. Heavy exports continued during 1931-32, the chief forwarding States being Queensland and Victoria. During the last five years the value of the average annual net export amounted to £155,625, the bulk of the shipments consisting of bacon, ham and lard. The chief pig product consumed in the United Kingdom is bacon and ham, the imports of which during 1930 amounted to 10 million cwt., valued at £46,000,000, obtained chiefly from Denmark. With the regulation of supplies from foreign countries to the United Kingdom under the terms of the agreement at the Ottawa Conference in 1932, Australia should gain a larger share in this important market.

§ 4. Total Dairy Production.

The total dairy production of Australia in 1930-31 is shown below:—

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1930-31.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Total.
<b>MILK.</b>								
Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	233,337,900	243,610,946	197,818,888	27,502,912	17,960,791	23,926,351	37,432	744,195,220
Cheese ..		7,855,050		3,650,003		951,499		
Condensing and concentrating ..	9,039,670	12,114,734	13,525,525					47,136,481
Other purposes ..	55,733,430	50,234,280	12,740,797	7,882,138	6,367,908	6,287,150	200,703	139,446,406
Total ..	298,111,000	313,815,010	224,085,210	39,035,053	24,328,699	31,165,000	238,135	930,778,107

BUTTER.

	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories On Dairy and other Farms ..	108,327,574	106,245,532	92,895,809	9,695,732	7,102,515	7,550,206	..	331,817,368
Total ..	4,909,721	3,761,087	2,823,507	3,265,499	1,563,884	2,252,055	11,983	18,587,736
Total ..	113,237,295	110,006,619	95,719,316	12,961,231	8,666,399	9,802,261	11,983	350,405,104

CHEESE.

	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories On Dairy and other Farms ..	6,425,093	7,845,833	13,642,488	3,897,064	..	883,968	..	32,694,446
Total ..	90,972	218,630	5,550	4,095	528	85,560	..	405,335
Total ..	6,516,065	8,064,463	13,648,038	3,901,159	528	969,528	..	33,099,781

CONDENSED, CONCENTRATED, OR POWDERED MILK.

In Factories	lb. (b)	lb. 45,665,474	lb. (b)	lb. ..	lb. ..	lb. ..	lb. ..	lb. 45,665,474
Total ..								

BACON AND HAM.

	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories On Dairy and other Farms ..	20,984,266	17,340,287	19,842,633	5,208,597	2,912,772	1,213,343	..	67,501,898
Total ..	916,928	891,932	334,917	502,187	129,930	771,111	1,230	3,548,235
Total ..	21,901,194	18,232,219	20,177,550	5,710,784	3,042,702	1,984,454	1,230	71,050,133

(a) Including milk used for making cheese. (b) Figures not available for publication. (c) A portion only from pigs slaughtered in the State, the balance being imported and subsequently cured.

Particulars in regard to the production of other milk products are not available for all the States, but the following articles were made in Victoria during 1930-31:—Casein, 2,555,410 lb.; other milk products, 634,402 lb.



### § 5. 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 States Governments for scientific breeding, experts have been appointed to advise and instruct in the care and management of the various kinds of poultry raised, 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. **Poultry Products.**—Difficulty is experienced in obtaining complete figures for the yield of poultry products. The following values relate to poultry and eggs:—

#### POULTRY AND EGGS.—VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Qland.	S. Aust.	W. Aust.	Tasmania. (a)	Australia.
	£	£	£	£	£	£	£
1926-27 ..	3,807,500	4,819,500	500,237	1,046,056	330,903	300,000	10,804,196
1927-28 ..	3,924,350	4,700,000	598,467	1,234,532	426,422	300,000	b11,247,869
1928-29 ..	3,329,000	4,348,000	619,329	1,053,939	456,242	300,000	b10,109,695
1929-30 ..	3,471,000	4,638,000	635,145	950,542	542,291	300,000	b10,541,053
1930-31 ..	2,886,000	3,926,000	556,620	831,020	399,430	300,000	b 8,904,600

(a) Estimated. (b) Includes Federal Capital Territory, 1927-28 £4,098, 1928-29 £3,185, 1929-30 £4,075, and 1930-31 £5,530.

3. **Oversea Trade in Poultry Products.**—The Australian oversea trade in poultry products is confined chiefly to eggs, which are mainly consigned to the United Kingdom. New South Wales, Victoria, and Queensland are participating in this trade, which, during 1930-31, amounted to £326,743. 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 should assist Australia to obtain a larger share in this valuable market. Exports from Australia have risen from slightly more than 1 million dozen valued at £85,000 in 1927-28 to nearly 10 million dozen valued at £494,000 in 1931-32. The exports of frozen poultry have fluctuated considerably in recent years, being valued at £11,729 during 1930-31, as compared with £50,205 for 1921-22. The oversea trade during the past five years was as follows:—

#### POULTRY PRODUCTS, TRADE.—AUSTRALIA.

Particulars.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>LIVE POULTRY.</b>						
Imports	.. No.	281	264	310	424	176
"	.. £	1,604	1,002	1,244	1,512	516
Exports	.. No.	1,847	2,585	2,116	2,165	1,526
"	.. £	1,311	1,837	1,757	1,821	1,147
Net Exports	.. No.	1,566	2,321	1,806	1,741	1,350
"	.. £	-293	835	513	309	631
<b>FROZEN POULTRY.</b>						
Imports	.. lb.	12,340	66,677	14,315	1,097	1,695
"	.. £	749	4,766	1,055	86	107
Exports	.. pair	19,880	9,570	12,419	13,908	14,553
"	.. £	30,259	8,930	15,341	17,118	11,729
Net Exports	.. ..	(a)	(a)	(a)	(a)	(a)
"	.. £	29,510	4,164	14,286	17,032	11,622

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

(a) Quantity not available.

POULTRY PRODUCTS, TRADE.—AUSTRALIA—*continued.*

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Eggs.					
Imports .. doz.	24,182	25,752	21,349	16,568	10,828
" .. £	1,507	1,579	1,210	873	406
Exports .. doz.	3,151,990	1,104,005	2,916,338	3,570,219	5,970,696
" .. £	233,672	85,844	218,929	255,571	321,627
Net Exports .. doz.	3,127,808	1,078,253	2,894,989	3,553,651	5,959,868
" .. £	232,165	84,265	217,719	254,698	321,221

## EGG-CONTENTS.

Imports .. lb.	39,675	38,858	39,483	29,693	11,108
" .. £	6,382	6,531	5,147	3,901	892
Exports .. lb.	(a)	(a)	(a)	(a)	(a)
" .. £	97	17	127	354	5,116
Net Exports .. lb.	(a)	(a)	(a)	(a)	(a)
" .. £	-6,285	-6,514	-5,020	-3,547	4,224

NOTE.—The Minus (—) signifies net imports.

(a) Quantity not available.

## § 6. 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 1930-31 gave an average of 62.56 lb. per hive, while the average quantity of wax was 0.77 lb. per hive.

2. **Production of Honey and Beeswax.**—The number of hives and the production of honey and beeswax during the year 1930-31 are given in the following table:—

## BEE-HIVES, HONEY, AND BEESWAX, 1930-31.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Value.	Quantity.	Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	36,800	8,585	45,385	2,643,871	48,470	36,460	2,582
Victoria ..	45,620	15,541	61,161	2,804,186	52,578	30,478	2,032
Queensland ..	12,930	3,390	16,320	555,244	9,845	8,579	620
South Australia ..	25,245	6,587	31,832	1,717,442	19,679	16,832	1,122
Western Australia ..	10,806	919	11,725	641,969	10,723	9,911	687
Tasmania ..	3,901	1,497	5,398	102,540	2,528	2,008	192
Fed. Cap. Territory..	188	17	205	10,600	194	139	10
<b>Australia ..</b>	<b>135,490</b>	<b>36,536</b>	<b>172,026</b>	<b>8,475,852</b>	<b>144,017</b>	<b>104,407</b>	<b>7,245</b>

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.
1926-27	1,510,420	2,370,310	461,009	1,918,195	553,238	75,876	12,120	6,901,168
1927-28	1,154,201	2,992,860	394,960	931,711	366,286	88,419	..	5,928,437
1928-29	2,354,845	4,181,571	667,846	3,047,421	509,415	89,969	12,900	10,863,967
1929-30	2,101,619	3,097,805	714,068	678,348	611,938	115,845	4,170	7,323,793
1930-31	2,643,871	2,804,186	555,244	1,717,442	641,969	102,540	10,600	8,475,852
BEESWAX.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1926-27	22,532	33,238	8,785	22,368	5,190	1,224	104	93,441
1927-28	17,139	34,358	7,504	13,069	5,501	1,337	..	78,908
1928-29	30,064	49,675	13,629	28,041	6,555	1,465	162	129,591
1929-30	35,493	29,682	10,739	7,924	10,419	1,779	65	96,101
1930-31	36,460	30,478	8,579	16,832	9,911	2,008	139	104,407

The production of honey and beeswax varies greatly from year to year according to the condition of the seasons. During the last five years New South Wales produced 9,764,956 lb. of honey and 141,688 lb. of beeswax, while the Victorian figures amounted to 15,446,732 lb. and 177,431 lb. respectively for honey and beeswax. These States together accounted for 63.84 per cent. of the total Australian production of honey, and 63.51 per cent. of the beeswax. Next in order of importance were South Australia, Queensland, and Western Australia.

3. **Oversea Trade in Bee Products.**—In normal years the local production of honey exceeds Australian requirements, and a small quantity is available for export. The imports into the United Kingdom average 70,000 cwt. annually, of which Australia supplies less than 1,000 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, and Australia should, therefore, gain a larger proportion of the trade. During the past five years the value of the exports amounted to only £26,188, or an annual average of £5,238, owing to the decrease in production. The more general use of frame hives has affected the production of wax, and as a result the quantity imported has exceeded that exported during each of the past five years.

### BEE PRODUCTS.—IMPORTS, EXPORTS, ETC., AUSTRALIA.

Particulars.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
HONEY.						
Imports	.. lb.	657	922	11,142	13,950	9,177
"	.. £	20	43	349	332	250
Exports	.. lb.	402,745	281,090	83,418	122,524	138,491
"	.. £	9,157	6,912	2,856	3,631	3,632
Net Exports	.. lb.	402,088	280,168	72,276	108,574	129,314
"	.. £	9,137	6,869	2,507	3,299	3,382
BEESWAX.						
Imports	.. lb.	75,104	96,101	82,261	54,475	36,245
"	.. £	6,951	8,413	8,118	4,875	2,753
Exports	.. lb.	326	3,596	1,659	1,411	1,934
"	.. £	29	346	149	115	79
Net Exports	.. lb.	-74,778	-92,505	-80,602	-53,064	-35,211
"	.. £	-6,922	-8,067	-7,969	-4,760	-2,674

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

§ 7. Value of Farmyard, Dairy, and Bee Products.

The value of the farmyard, dairy and bee products raised in Australia in 1930-31 was as follows:—

FARMYARD, DAIRY, AND BEE PRODUCTS.—VALUE, 1930-31.

Products.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£	£
Milk, consumed as such ..	2,452,376	2,075,720	537,460	325,696	263,127	259,790	..	8,293	5,922,462
Butter ..	6,775,699	6,572,529	5,979,329	893,397	602,780	623,505	..	717	21,447,856
Cheese ..	227,952	328,960	385,416	112,528	15	27,828	..	..	1,032,699
Condensed & concentrated milk	(a)	b1,266,497	(a)	..	..	..	..	..	1,266,497
Bacon and ham	806,553	706,815	799,900	216,280	139,491	74,118	..	45	2,743,202
Pork ..	302,792	348,934	359,626	141,497	84,866	52,990	500	900	1,292,105
Lard ..	17,723	36,013	31,103	6,204	2,843	5,719	..	..	99,605
Live Stock ..	10,832	38,168	..	16,170	90,355	1,243	..	..	156,768
Poultry and eggs	2,886,000	3,926,000	556,620	831,020	399,430	300,000	..	5,530	8,904,600
Honey and wax	51,052	54,610	10,465	20,801	11,410	2,720	..	204	151,262
<b>Total ..</b>	<b>13,530,979</b>	<b>15,354,246</b>	<b>8,659,819</b>	<b>2,563,593</b>	<b>1,594,317</b>	<b>1,347,913</b>	<b>500</b>	<b>15,689</b>	<b>43,067,056</b>

(a) Included with milk consumed as such. (b) Includes casein £38,865, milk sugar and other milk products £14,408. (c) Includes condensed and concentrated milk.

§ 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.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>QUANTITY.</b>					
Beeswax .. .. .	lb. 326	3,596	1,659	1,411	1,020
Butter .. .. .	76,516,497	99,164,946	102,442,843	107,663,114	163,180,695
Cheese .. .. .	3,643,832	6,926,691	8,330,972	3,089,382	8,594,693
Egg albumen and yolk .. .. .	(a)	(a)	(a)	(a)	(a)
Eggs .. .. .	doz. 3,151,965	1,104,005	2,915,338	3,570,219	5,970,606
Feathers undressed .. .. .	(a)	(a)	(a)	(a)	(a)
Honey .. .. .	lb. 402,745	281,090	83,418	122,524	138,491
Lard .. .. .	1,315,831	1,359,746	1,599,050	969,512	1,043,930
Meats—					
Bacon and Ham .. .. .	1,833,468	1,533,967	1,461,313	1,473,036	2,100,290
Frozen Poultry .. .. .	pair 19,980	9,570	12,419	13,888	14,553
Frozen Pork .. .. .	lb. 481,330	158,327	158,975	932,297	8,623,651
Milk, concentrated and preserved .. .. .	17,752,506	20,622,779	25,385,174	16,493,546	12,351,024
Pigs, living .. .. .	418	28	201	325	280
Poultry, living .. .. .	No. 1,833	2,569	2,116	2,158	1,526
<b>VALUE.</b>					
Beeswax .. .. .	£ 29	£ 346	£ 149	£ 115	£ 77
Butter .. .. .	5,447,224	6,905,933	7,545,430	7,001,540	8,120,165
Cheese .. .. .	131,168	260,235	329,700	124,716	244,066
Egg albumen and yolk .. .. .	56	13	9	198	5,099
Eggs .. .. .	233,670	85,844	218,929	255,571	321,627
Feathers, undressed .. .. .	774	457	398	1,132	1,036
Honey .. .. .	9,157	6,912	2,856	3,631	3,632
Lard .. .. .	37,995	37,318	41,373	26,664	26,189
Meats—					
Bacon and Ham .. .. .	147,861	129,073	122,742	116,159	115,278
Frozen Poultry .. .. .	30,259	8,930	15,341	17,109	11,729
Frozen Pork .. .. .	16,608	6,152	6,773	32,683	235,857
Milk, concentrated and preserved .. .. .	1,080,963	1,188,504	1,424,313	997,512	610,653
Pigs, living .. .. .	2,506	1,294	934	1,365	1,186
Poultry, living .. .. .	1,281	1,817	1,757	1,801	1,147
<b>Total .. .. .</b>	<b>7,139,551</b>	<b>8,632,828</b>	<b>9,710,702</b>	<b>8,580,196</b>	<b>9,697,741</b>

(a) Quantity not available.

Butter figures most largely in the list of exports shown above, the United Kingdom being the principal country of destination. During the year 1930-31, exports thereto amounted to 146,409,027 lb., or 90 per cent. of the total. Exports to Eastern countries were 9,826,062 lb., or 6 per cent. of the total. Canada during the same year took 2,799,440 lb. Consignments to the countries mentioned accounted for 97 per cent. of the total exports of butter for the year specified.

### § 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 1926 to 1930:—

#### DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM.

Products.	1926.	1927.	1928.	1929.	1930.
Butter .. .. . cwt.	5,818,840	5,818,611	6,112,972	6,397,266	6,821,620
" .. .. . £	48,283,312	48,204,721	52,044,506	54,706,404	46,869,697
Cheese .. .. . cwt.	3,014,055	2,949,082	3,005,237	2,994,038	3,112,316
" .. .. . £	13,940,648	13,493,668	14,997,173	13,912,535	12,602,974
Milk, concentrated and preserved cwt.	2,556,890	2,684,019	2,907,225	2,935,151	2,869,229
" .. .. . £	5,420,167	5,561,726	5,978,958	5,608,354	5,033,570
Bacon and ham .. .. . cwt.	8,666,467	9,370,696	9,794,909	9,306,909	10,194,208
" .. .. . £	50,146,958	43,333,082	44,957,403	49,215,508	46,112,307
Pork (a) .. .. . cwt.	303,234	234,248	289,114	359,134	436,739
" .. .. . £	1,396,714	912,271	1,014,253	1,305,804	1,641,860

(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 shipped in 1930 amounted to 950,582 cwt., or 14 per cent. of the total importation. The Australian contribution was valued at £6,017,014, and was exceeded only by that shipped from Denmark and New Zealand.

#### BUTTER IMPORTS.—UNITED KINGDOM, 1930.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	cwt.	£		cwt.	£
Denmark .. .. .	2,318,525	17,102,544	Lithuania .. .. .	20,574	133,545
New Zealand .. .. .	1,564,436	10,785,724	Germany .. .. .	8,175	55,620
<b>Australia .. .. .</b>	<b>950,582</b>	<b>6,017,014</b>	France .. .. .	7,054	50,533
Irish Free State .. .. .	521,963	3,275,412	Norway .. .. .	2,077	16,655
Argentine Republic .. .. .	414,050	2,574,220	Canada .. .. .	210	1,466
Sweden .. .. .	279,565	1,970,773	United States of America .. .. .	134	998
Finland .. .. .	233,510	1,596,699	British Possessions, n.e.i. .. .. .		
Soviet Republics .. .. .	165,451	1,005,260	n.e.i. .. .. .	7,140	42,099
Netherlands .. .. .	89,094	659,401	Foreign Countries, n.e.i. .. .. .	2,720	17,830
Estonia .. .. .	96,338	640,875			
Poland .. .. .	64,997	398,526			
Latvia .. .. .	49,200	331,581			
Union of South Africa .. .. .	25,825	192,922	Total .. .. .	6,821,620	46,869,697

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

## AUSTRALIAN BUTTER.—LONDON PRICES.

Year.	Average Top Price per cwt.	Year.	Average Top Price per cwt.
	<i>s. d.</i>		<i>s. d.</i>
1919	(a) 252 0	1925	184 0
1920	(a) 299 9	1926	169 6
1921	234 0	1927	169 6
1922	183 0	1928	171 0
1923	184 6	1929	175 0
1924	189 6	1930	135 6

(a) Flat rate for all imported butter.

The surplus output of Australian butter was sold under contract to the British Government from 1st July, 1918, to 31st March, 1921, but thereafter it has been sold in the open market.

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1930 was £12,602,974, of which £7,821,634 was received from New Zealand, and £2,699,918 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 1930 amounted to £174,439.

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1930 at £46,112,307, the United Kingdom received imports to the value of £27,651,123 from Denmark, £6,156,693 from the United States, and £937,003 from Canada. The import from Australia was small, experimental shipments only having been made during recent years.

5. **Pork.**—The value of the United Kingdom imports of pork (frozen and salted only) was £1,641,860 in 1930. There was only a small importation from Australia, the bulk of the supplies being forwarded from New Zealand, the United States, and Argentine Republic.

6. **Other Products.**—The shipments to the United Kingdom from Australia of beeswax, poultry, game, lard, or honey in 1930 were unimportant, but frozen rabbits to the value of £435,227 and eggs to the value of £425,835 were exported during the year.